



Strategy for Stopping Steroids



Strategy for Stopping Steroids

Published by

Anti Doping Denmark
Idraettens Hus
Broendby Stadion 20
2605 Broendby
Denmark

E-mail

info@antidoping.dk

Web

www.antidoping.dk
www.steroids.dk

ISBN

978-87-983673-3-8

First edition, Copenhagen, March 2012

Editors

Anti Doping Danmark (Danish National Anti-Doping Agency)

Malene Radmer Johannisson

Mathias Warnecke

Jakob Berget

Dopingautoriteit (Anti-Doping Authority, The Netherlands)

Bart Coumans

Hans Wassink

STAD (Stockholm Prevents Alcohol and Drug Problems, Sweden)

Charlotta Rehnman Wigstad

Erika Sjöblom

Polish Institute of Sport (Polish Commission Against Doping in Sport)

Michal Rynkowski

CyADA (Cyprus Anti-Doping Authority)

Michael Petrou

Design, layout and printing

Cool Gray

Circulation

1000 pieces

The report can be downloaded free in pdf format from infoteket on www.antidoping.dk

© 2012 Anti Doping Denmark





CONTENTS

PREFACE	7	2.5. Opportunity for doping control (for AAS) of persons arrested in connection with violence	47
SUMMARY	10	Denmark	47
1. DOPING IN FITNESS CENTRES AND RISK FACTORS	14	The Netherlands	47
1.1. Studies of the extent of the problem.	14	Sweden	47
Denmark	14	Summary of Chapter 2	47
The Netherlands	14	3. FITNESS CENTRES IN THE COUNTRIES	50
Sweden	16	3.1. How many fitness centres are registered in the country?	50
Poland.....	18	Denmark	50
Cyprus.....	18	The Netherlands	50
1.2. Studies of the attitude to doping in fitness centres 19		Sweden	50
Denmark	19	Poland	50
The Netherlands	21	Cyprus	50
Sweden	22	3.2. How are they organised – under organised sports, as commercial centres or both?	51
Poland	23	Denmark	51
Cyprus	23	The Netherlands	51
1.3. Risk factors	23	Sweden	51
1.4. The bodybuilding environment	27	Poland	51
1.5. Knowledge about the use of supplements	27	Cyprus	52
1.6. Knowledge about young drug abusers in general 28		3.3. Do fitness centres carry out preventive anti-doping work?	52
Denmark	29	Denmark	52
The Netherlands	30	The Netherlands	53
Sweden	32	Sweden	53
Poland	32	Poland	53
Summary of Chapter 1	36	Cyprus	53
2. ANTI-DOPING LEGISLATION	38	3.4. National certification schemes according to e.g. doping prevention, nutritional supplements policy, etc. 53	
2.1. National legislation concerning doping	38	Denmark	53
Denmark	38	The Netherlands	54
The Netherlands	39	Sweden	54
Sweden	40	Poland	55
Poland	40	Cyprus	55
Cyprus	41	Summary of Chapter 3	55
2.2. Is it legal for different authorities and organisations to exchange data on persons who have tested positive for doping?	41	4. DOPING CONTROL IN FITNESS CENTRES	56
Denmark	41	4.1. Is doping control done in fitness centres?	56
The Netherlands	42	Denmark	56
Sweden	42	The Netherlands	56
Poland	43	Sweden	58
2.3. Penalty for distribution, possession, use, etc. of doping substances	43	Cyprus	58
Denmark	43	4.2. Is doping control obligatory or voluntary?	58
The Netherlands	44	Denmark	58
Sweden	44	The Netherlands	59
Poland	45	Sweden	59
Cyprus	46	4.3. Procedure for doping control in fitness centres ... 60	
2.4. Opportunity for IT monitoring and closure of websites used as sales channels	46	Denmark	60
Denmark	46	The Netherlands	64
The Netherlands	47	Sweden	64
Sweden	47		



4.4. Possible analysis options – WADA laboratories or other laboratories?	65
Denmark	65
The Netherlands	65
Sweden	65
Poland	65
4.5. Who finances doping control at fitness centres (NADO, Ministries, others)?	65
Denmark	65
The Netherlands	66
Sweden	66
Summary of Chapter 4	66
5. DOPING CONTROL – OTHER PLACES	68
5.1. Has doping control been done in prisons?	68
Denmark	68
The Netherlands	69
Sweden	69
5.2. Who finances doping control in prisons etc. (prison service, ministries, others)?	69
Denmark	69
Sweden	70
5.3. Do the police test for anabolic steroids in connection with arrests for e.g. violence?	70
Denmark	70
Sweden	70
Poland	70
5.4. Possible analysis options – WADA laboratories or other laboratories?	71
Denmark	71
Sweden	71
Summary of Chapter 5	71
6. PREVENTIVE WORK	73
6.1. Preventive work and Information campaigns	76
Denmark	73
The Netherlands	76
Sweden	79
Poland	88
Cyprus	88
6.2. Other national prevention projects for young people implemented by other relevant authorities (e.g. concerning similar risky behaviour) which in the future could include information about anabolic steroids	90
Denmark	90
The Netherlands	94
Sweden	94
6.3. Information and prevention work in other relevant groups	95
Denmark	95
The Netherlands	96
Summary of Chapter 6	96
7. TRAFFICKING	100
7.1. Customs	100
Denmark	100
The Netherlands	101
Sweden	101
Poland	102
Cyprus	102
7.2. Seizures	102
Denmark	102
The Netherlands	104
Sweden	104
Poland	105
7.3. Workflows (e.g. does seizure at customs lead to a police case?)	105
Denmark	105
The Netherlands	105
Sweden	106
Poland	106
7.4. Dialogue and cooperation with the customs and police services in neighbouring countries/EU countries	106
Denmark	106
Sweden	107
Poland	107
7.5. What is the role of the police in connection with AAS?	108
Denmark	108
The Netherlands	108
Sweden	108
Poland	110
Cyprus	111
7.6 Knowledge of distributors (i.e. gangs)	111
Denmark	111
The Netherlands	112
Sweden	112
Poland	112
7.7 Evaluation of projects and general experience ...	113
The Netherlands	113
Summary of Chapter 7	114
8. TREATMENT OF STEROID ABUSE	116
8.1. Specialized treatment options	116
Denmark	116
The Netherlands	116
Sweden	121
Poland	123
Cyprus	123
Summary of Chapter 8	124
9. THE IMPACT ON SOCIETY	126



10. OVERVIEW AND ANALYSIS	132
The community systems perspective	133
Consumption subsystem	134
Marketing, Sale and Distribution subsystem	135
Formal Regulation and Control subsystem: Rules, administration and enforcement	136
Social Norms subsystem: Community values and social influences that affect the use of PIEDs	138
Legal Sanctions subsystem: Prohibition of production, distribution, buying, selling, use and possession of PIEDs	139
Social, Economic and Health Consequences subsystem: Community identification of and organised responses to problems related to use of PIEDs	139
Summary of Chapter 10	140
11. PERSPECTIVES AND RECOMMENDATIONS	142
1. General coordination of national work	142
2. Updating of anti-doping legislation to combat distribution ..	142
3. Including the fitness sector in the preventive work	143
4. Regulation of nutritional supplements	143
5. Knowledge about the effect of preventive work targeting the use of AAS	144
6. Coordination of international customs and police collaboration	144
7. Focus on abuse of AAS in the treatment system	144
8. Staff education	144
9. Development and implementation of a standardised data collection system	145
APPENDIX	147
REFERENCES	154





PREFACE

Use of Anabolic Androgenic Steroids (AAS) and other similar doping substances is a substantial problem in Europe – primarily among young men – which until recently has not been given much attention.

AAS and similar doping substances can have serious physical, psychological and social side-effects for the individual user, but the substances also constitute a societal problem due to the user's health problems and behaviour. The substances are either imported from non-European countries or produced within Europe and they are distributed across borders within the EU on a daily basis.

In the White Paper on Sport launched in 2007, the European Commission (EC) points out that doping constitutes a threat to sport and a serious threat to the health of the individual using doping. The EC also states that one must focus upon the fight against doping both in law enforcement initiatives as well as in health and prevention, and do so at a European level. The Commission also recommends that trade in illicit doping substances be treated in the same manner as trade in illicit drugs throughout the EU.

The experience of different countries with their work to combat fitness doping in Europe is relevant and important for future local, national and international work in this field. It is therefore relevant to bring together EU Member States to share knowledge and experience in the field. The focus of the collaboration among the five partners in the Strategy for Stopping Steroids project has been specifically to describe the work carried out in all relevant areas relating to the fitness doping issue. It is the aim that the report should represent “good practice” and serve as inspiration for other countries in the EU keen on working with doping in the fitness sector. The project does not try to identify “best practice”. First, in our opinion, there is not yet enough empirical material on which to base such an assessment. Second, the great diversity in, for example, legislation, culture and financial backgrounds within the anti-doping work in Europe does not allow for one “best practice” model that will work in all settings and countries.

This report on the current status of the fitness doping issue and strategies to stop the spread of AAS and similar doping substances has been prepared in collaboration among the following parties:

- Anti Doping Danmark (Anti Doping Denmark)
- Dopingautoriteit (Anti-Doping Authority, the Netherlands)
- STAD (Stockholm Prevents Alcohol and Drug Problems, Sweden)
- Instytut Sportu (Polish Institute of Sport, represented by Polish Commission Against Doping in Sport)

- CyADA (Cyprus Anti-Doping Authority).

These five organisations are the participants in the Strategy for Stopping Steroids project.

The composition of the Strategy for Stopping Steroids project group reflects, on the one hand, the wish to include anti-doping organisations and countries that are among the leaders in anti-doping work in the fitness sector and, on the other, a wish to give organisations from countries facing major challenges an opportunity to present their situation and experiences and contribute constructively to discussions about the fundamental need to combat steroids and similar doping substances.

The report illustrates the current situation and the work performed in relation to all aspects of fitness doping – from production and trafficking to young men's focus on the muscular body and prevention to health risks and treatment of users in the five participating countries: Denmark, the Netherlands, Sweden, Poland and Cyprus. The report adopts a comprehensive view, and the participants have endeavoured to base the report on the latest statistical data and current information about focus areas, activities and strategies within anti-doping work. In addition, the report contains descriptions of current legislation in the field.

Anti Doping Denmark has been responsible for coordinating the report. The different partners have collected data and written their own contributions and therefore carry the main responsibility for the content of the corresponding parts of the report.

The report was prepared from the beginning of 2011 and the first quarter of 2012.

The SPORTVISION2012 Conference and the Fitness Doping track in Copenhagen on 19–20 March 2012

The Strategy for Stopping Steroids project will end with the SPORTVISION2012 conference at the Bella Centre on 19–20 March 2012 on the subject of “Fitness Doping”. At this conference, Anti Doping Denmark and the other four partners in the project will bring together the European National Anti Doping Organisations (NADO's), scientists, politicians and other relevant organisations and authorities to discuss possible solutions to the challenges of doping abuse and the criminal environments associated with this abuse.

The SPORTVISION2012 conference will be held in collaboration with the Ministry of Culture, Denmark, the International Sport and Culture Association (ISCA), the Danish Gymnastics and Sports Associations (DGI), the National Olympic Committee and Sports Confederation of Denmark (DIF) and the



Danish Federation for Company Sports (DFIF), as part of the Danish Presidency of the Council of the European Union 2012. To read more about SPORTVISION2012, go to: www.sportvision2012.eu.

Acknowledgements

Anti Doping Denmark and the other four partners would like to thank the European Commission for supporting the Strategy for Stopping Steroids project. The project was selected for funding under the European Commission's programme on grants Preparatory Action in the Field of Sport. The project could not have been carried out without the financial support of the Commission. We would also like to thank the National Board of Health, Denmark, for supporting the project financially.

Definitions

Anabolic Androgenic Steroids (AAS)

Anabolic androgenic steroids are synthetic hormones that imitate male sex hormones (androgens) in the body. They can influence the development of primary and secondary sex characteristics such as body hair, deepening of the voice, development of the male sex organs and sex drive (androgenic effects) as well as the development of lean body mass (anabolic effects). AAS were originally developed to treat medical conditions. Anabolic properties relate to the ability to enhance muscle growth. None of the drugs currently available are purely

anabolic – all AAS are virilising if administered for long enough at high enough doses.

Performance and Image Enhancing Drugs (PIEDs)

PIED is a collective name covering all substances that are generally used to enhance muscle growth (anabolic effects) or to reduce body fat (slimming effects). The expected benefits of using these types of substances range from increasing the size and definition of muscles and reducing water retention and body fat to increasing physical strength and endurance. The major substances of concern are human and veterinary anabolic androgenic steroids (AAS), growth hormones, other reproductive hormones, diuretics, beta-2 agonists (e.g. clenbuterol) and hormones such as insulin and thyroxin. The most commonly used PIEDs are AAS. The term PIEDs is used with two different meanings in the report. In text describing Denmark and Sweden, the term does not include stimulants such as amphetamines, ecstasy and cocaine, whereas in text regarding the Netherlands, Poland and Cyprus the term does include such stimulants.

Report overview

The problem of fitness doping is not limited to young men using AAS in connection with their training at fitness centres. The fitness doping issue should be seen in the context of social, cultural, political and economic structures and processes in society such as the attitude to AAS and similar doping substances, the existing body culture and the availability of the



substances. In addition, a number of factors and players and their mutual relationships/dependencies should be taken into consideration when combating the abuse of AAS and similar doping substances. Examples are anti-doping legislation, doping control models, preventive work, police and customs action and treatment.

Chapter 1 provides an overview on the prevalence of use of steroids and other PIEDs and the attitude to doping in the population in general and more specifically in the fitness centres. The chapter examines the influence of masculinity, body ideals and body image as underlying risk factors, and whether it is possible to point out reasons for the use of steroids. Insight into the bodybuilding environment shows that it is a relatively small sport, and although it has a poor image in regard to doping, it can be stated, that fitness doping is a problem that should be viewed from a much broader perspective. Finally, the potential risks of dietary supplements are described and abuse of drugs and substances is explored in order to obtain knowledge that can be used in the steroid field.

In Chapter 2 the legislation concerning doping and the anti-doping action is described. The chapter includes the anti-doping efforts aimed at fitness centres and discusses doping control, the possibility of sanctions, and the possibility for authorities and organisations to exchange data. The chapter also examines legislation and penalty range for distribution, possession, use, etc. of doping substances, and the available investigative tools for the police and other authorities in the field.

Chapter 3 gives an overview of the numbers of fitness centres and how there are organised – under organised sport, as commercial centres or in other ways. The chapter pays attention to, if the fitness centres carry out preventive anti-doping work, which can be seen as an indication on whether the industry takes on a social responsibility. Finally, it examines in which extent national certification programmes exist, concerning doping prevention, nutritional supplements, anti-doping policy etc.

Chapter 4 looks at the experiences with doping control in fitness centres, including how it is done, how many centres have control on a regular basis and what the test statistic look like. The chapter presents, the fitness centres own views and reasons for and against choosing doping control. The existing practical procedures for doping control are described in the last part of the chapter.

Chapter 5 goes outside the fitness centres to other areas employing doping controls such as prisons. It is relevant to look at steroid abuse and its health consequences wherever it takes place. The chapter addresses the experiences including test statistics and financing models.

Chapter 6 contains insight on a wide range of preventive work and information campaigns including the financing, target groups, media-channels and evaluation. The text is supplemented with images from the campaigns. The aim is to provide a visual insight and inspire. In the last part of the chapter, other national prevention projects and the methods are described and discussed.

Chapter 7 addresses trafficking in general, customs administrations and the police action against production, distribution and sale of doping substances. In the first part the focus is on customs administrations. The chapter outlines the number of doping seizures, shipping, transit and destination countries and which doping substances the seizures contain. The action against doping substances calls for a joint and cohesive effort, and the chapter describes the workflow between the customs administrations and the police as well as the dialogue and cooperation between authorities in the EU. In the second part the focus is on the police action against doping and the available investigative tools.

In chapter 8, the treatment options for abusers are examined. The chapter describes the experiences in form of number of clients, symptoms, diagnoses and treatment. At present, just a few specialised treatment options are available. An issue here can be, that offering treatment to abusers in some cases can seem to conflict with the desire to keep society free of steroid abuse.

In chapter 9, the impact on society of steroid abuse is made visible. The chapter introduces socio-economic methods of analysis and describes how the abuse affects the socio cost in form of the health sector, the police and the prison and probation service. At present, there is a lack of available data that makes it difficult to measure the economic impact of steroid abuse on society. To gain a better understanding of the scope and to set the right priorities, there therefore is a need to develop statistics in the field.

Chapter 10 provides a coherent overview of the situation in terms of the use of AAS and other similar doping substances. How different subsystems such as consumption, distribution and sale, social norms, legal sanctions and social, economic and health consequences interact is analysed. This chapter is inspired by Harold D. Holder's system theory approach to achieve a coherent insight in terms of prevention of abuse.

In chapter 11, perspective and recommendations on further efforts in the field are described. The recommendations take into account the fact that the European countries are at different stages in terms of the initiatives deployed. The recommendations are thus not all equally relevant for the challenges and work currently carried out in the individual countries.



SUMMARY

The current situation with Anabolic Androgenic Steroids (AAS) and other PIEDs

According to an estimate based on existing surveys, 1–2% of the population in the participating countries – Denmark, the Netherlands, Sweden, Poland and Cyprus – currently use or have experience with Anabolic Androgenic Steroids (AAS) and other illegal Performance and Image Enhancing Drugs (PIEDs). A Danish study also shows that 6.5% have never used such substances but are considering it (Singhammer et al., 2010). A Dutch study shows that the starting age for the use of doping substances is 18 and that the average age of the users is 28 (Rodenburg et al., 2007).

A general perception shows that body ideals and a distorted perception of one's own body, may result in a body and training culture that focuses on an exceptionally muscular body. In this context, steroids and similar substances can be perceived as a shortcut to visible results, and there is a significant predominance of users of AAS and other PIEDs among fitness centre members. But the use of AAS can be an extremely dangerous shortcut. AAS can have both physical and psychological consequences to health, including conditions such as heart failure, arteriosclerosis, reduced renal function, liver damage, loss of libido, anxiety, depression, etc. Known side effects of steroids include aggressiveness, lack of impulse control and reduced empathy.

AAS abuse is both a health problem and a societal problem in which fitness centres act as a central arena for the abusers, but the issue also involves the supply chain from the production and trafficking of the substances to preventive work and treatment.

Legislation

Legislation is a tool to regulate the fight against AAS and doping in general. In some areas, legislation contributes to the anti-doping work. One example is the Danish Smiley scheme, which gives fitness centre members the option to actively choose fitness centres that cooperate with Anti Doping Denmark. Another is the penalty range in the Netherlands and Sweden, where they have higher maximum penalties than in Denmark, and the police are in a better position to put manufacturers and dealers out of action with imprisonment and substantial fines. In other areas, legislation can limit the possibilities for anti-doping work, and therefore a review of the legislation is appropriate. An example is the wording of the Polish anti-doping legislation, which only allows doping control on individuals who take part in or prepare for sporting competitions. This hampers the doping control of normal fitness centre members, as they do not necessarily exercise in order to take part in sporting competitions. In Denmark, the rules on IT monitoring in combination with the relatively light

maximum penalty prevents the police from accessing information that is not publicly available, such as private emails, which hampers the investigation of matters relating to, for example, the distribution of steroids.

In general, the maximum penalty for violations relating to doping substances is lighter than for narcotics. This appears to apply despite the European Commission's White Paper on Sport from 2007, which recommends a focus on the use of legislative measures to combat doping. In this regard, the Commission recommends that the trade in illegal doping substances be treated on par with the trade in illegal narcotics throughout the EU (European Commission, 2007).

Doping control and preventive work

The fitness centre constitutes an essential arena for the abuse of PIEDs, as training is a condition for achieving the desired result in terms of a changed appearance. Therefore, doping control at fitness centres can help change the behaviour of established steroid users. Due to their long-term use, this "hard core" group is not necessarily receptive to information, but is influenced by the risk of exclusion. A positive doping test prevents a member not just from training in familiar, quality facilities, but also from training in a social environment that may play a key role in the member's everyday life. Doping controls can also have a preventive effect. Doping control in fitness centres is used to send a clear signal to those who might consider steroid use that unnatural muscle development leads to selection for doping control, with the concurrent risk of exclusion from training. In addition, when unnaturally build fitness centre members are excluded from training, they are simultaneously removed as role models for young people.

In Denmark, legislation makes it compulsory for fitness centres under national sports federations to carry out anti-doping work, including doping control. Legislation also encourages Anti Doping Denmark to enter into collaboration agreements with the fitness sector within areas such as doping control. As a result, Anti Doping Denmark has made doping control agreements with the fitness centre industry organisation as well as with individual privately owned commercial fitness centres. In Sweden, doping control is also carried out at training facilities under the Swedish Sports Confederation and among "Sport for all" participants. But in general, doping control is not encouraged in the legislation of the other participating countries.

It is generally recognised that the use of steroids in connection with regular training results in a more muscular body and increased aggressiveness, a short fuse, lack of impulse control and reduced empathy are some of the side-effects. In recent years, safety concerns have led to the inclusion of doping controls in the drug tests performed on groups of inmates in prisons in

Denmark and Sweden. In addition, studies have shown that criminals use AAS in connection with criminal acts due to the above-mentioned properties. Today, it is standard practice in most countries to test for the influence of alcohol and/or stimulants and drugs, especially in connection with traffic violations, but also in connection with arrests for violence. Despite the connection between the use of AAS and criminal acts, no tests for AAS are normally performed in these situations.

Many different organisations carry out preventive work and campaigns, such as NADOs, national health organisations and local preventive institutions. However, it is important that the parties involved in the prevention of risky behaviour in areas such as drugs, alcohol and smoking start regarding steroids as an equally important problem. The preventive work involves campaigns but also includes initiatives and interventions such as information about the side-effects of fitness-doping substances, guidelines for doctors, parents and partners if steroid use is suspected, an anti-doping hotline, advice on natural ways to increase muscle mass by means of training and diet, advice on good anti-doping programmes in fitness centres etc.

Despite fitness centres constituting a central arena for the abuse of PIEDs and surveys indicate that members have a more liberal attitude to the substances and are over-represented among users, the centres in many cases doesn't seem to show the necessary responsibility by implementing good anti-doping work. However, there are certainly some positive cases and tendencies. For example, the Danish Fitness & Health Organisation (DFHO) has concluded a collaboration agreement with Anti Doping Denmark on information material and doping control of DFHO members, not to mention organised sport in Denmark, which has compulsory doping control and actively takes part in the anti-doping work. The fitness sector is perhaps the most important communication platform for anti-doping messages in the form of general information material, as this is where the target group can be found. It is therefore important to get the fitness sector more actively involved in the anti-doping work.

Production, distribution and trafficking

There are huge differences between how legislation in the different countries treats doping substances and in the maximum penalty for breaking the law. In general, however, it is illegal to manufacture, import, export, buy and sell the substances in the countries involved. The maximum penalty for breaking the law regarding doping substances often determines the amount of attention relevant authorities, customs officers and police devote to the area. The maximum penalty also determines the powers of the police and others in relation to investigation, including the possibility of phone tapping and surveillance. In several countries, the authorities appear to lack knowledge and

education in AAS and other PIEDs, and the area also appears to have low priority. The current situation is that PIEDs are often found by accident in connection with searches for weapons or drugs, both of which has higher maximum penalty, and in these cases, the doping substances often “drown” among other offences on the charge sheet, if they are included at all, due to the lower maximum penalty.

Due to the free movement of goods within the EU, shipments within the EU normally attract little attention. The free movement of goods in combination with the differences in maximum penalty and prioritisation in the different countries means that it “pays” to carefully select the EU country into which the goods are imported, as the goods can subsequently be distributed around Europe without any major controls.

Customs officers are aware of the problems with the trafficking of steroids etc., but the level of special procedures and a focus on the trafficking of doping substances in the participating countries are very different. To stop cross-border distribution, there is room for improvement of the collaboration between relevant organisations such as the customs authorities, the police, and organisations within the pharmaceutical industry. Networks of relevant organisations already exist in this area, but the prioritisation of the fight against steroid abuse and other forms of doping in the networks remains a challenge, and it is significant to ensure that the networks have the necessary expertise and resources.

Treatment

There are no national surveys of the need for treatment among current or former users of steroids. However, enquiries to anti-doping help lines from users of steroids and their families and the experience of general practitioners with the health issues and steroid-related dependency problems among citizens, show that there is a group of patients with steroid-related health problems that may be neglected. There is often no knowledge or limited knowledge about this group of patients among general practitioners and specialists. As far as the use of alcohol, tobacco and other substances is concerned, most European countries have for many years focused on research, prevention and the treatment of sequelae, including the treatment of abuse. Many countries have also focused on research and treatment of the eating disorders anorexia and bulimia – while little attention has generally been paid to Body Dysmorphic Disorder (BDD) or megarexia, the eating or body disorder that affects men, and which can be linked to the use of PIEDs. As a result, there are a limited number of treatment options to which individuals in need of treatment can be referred. However, the Dutch anti-doping authorities cooperate with general practitioners by preparing information material and organising training courses for use in connection with the compulsory



continuing education of general practitioners. The anti-doping authorities in other countries have also prepared pamphlets etc. for general practitioners about steroids and the health consequences of steroid abuse. Since 2010, the Netherlands has had an anabolic clinic that focuses on examining and treating symptoms relating to the use of steroids. Sweden also has several facilities for treatment of hormone preparation abuse where several hundred patients have been treated in recent years. It is important to point out that the treatment facilities do not prescribe steroids for cosmetic or performance-enhancing purposes or give advice about the use of steroids. The purpose of the treatment facilities is to help the patients stop using steroids.

Lack of available data

There is no doubt that the abuse of AAS and other PIEDs is a major health and societal problem. A study by Donati (2007) shows that the global doping market can be compared with the drug market. However, there is a lack of available data that could give a precise picture of the problems and measure the socio-economic costs. The authorities do not keep records of diseases or deaths caused by doping, so deaths caused by doping-related health issues are not recorded. There are also no records that show how often the perpetrators of violent crime are under the influence of steroids, and no estimates of the amount of money criminal organisations earn on the production and sale of steroids. To gain a better understanding of the scope of the problem and to set the right priorities, there is a need to develop standards and statistics in the field.

Readers of this report should be aware that besides the summary, Chapter 10 “Overview and Analysis” and Chapter 11 “Perspective and Recommendations” should also be read to get a more complete overview of the fitness Doping issue.





1. DOPING IN FITNESS CENTRES AND RISK FACTORS

The chapter provides an overview on the prevalence of use of steroids and other PIEDs and the attitude to doping in the population in general and more specifically in the fitness centres. The chapter examines the influence of masculinity, body ideals and body image as underlying risk factors, and whether it is possible to point out reasons for the use of steroids. Insight into the bodybuilding environment shows that it is a relatively small sport, and although it has a poor image in regard to doping, it can be stated, that fitness doping is a problem that should be viewed from a much broader perspective. Finally, the potential risks of dietary supplements are described and abuse of drugs and substances is explored in order to obtain knowledge that can be used in the steroid field.

Denmark

1.1. Studies of the extent of the problem

In the general population

A white paper from 1999 (Saltin et al., 1999) estimated the number of users of anabolic steroids in Denmark to be between 10,000 and 15,000. In addition, 2 % of the population in the white paper stated that they had considered using PIEDs.

In 2010, J. Singhammer and B. Ibsen from the University of Southern Denmark published the report *“Motionsdoping i Danmark”* (Fitness doping in Denmark), which investigates the use of and attitude to performance and image enhancing drugs (PIEDs) in the Danish population. The report shows that 1.5% of the survey's 1,673 respondents aged 15–60 either have used or currently use illegal PIEDs, which corresponds to approximately 44,000 people having experience with these substances (Singhammer et al., 2010: 23). The study also shows that among those respondents, who have never previously used such substances, 6.5% are considering doing so. Based on the total population, this corresponds to approximately 190,000 Danes currently considering using the substances (Singhammer et al., 2010: 22). Thus, in just 10 years, the number has multiplied more than threefold.

The study from 2010 also shows that it is mainly men aged between 17 and 45 who report having experience with PIEDs. A total of 3.4% in this group state that they have used or currently use illegal PIEDs, which corresponds to approximately 31,000 men in this age group having experience with these substances (Singhammer et al., 2010: 22-23).

In fitness centres

For the fitness sector specifically, 3.3% of fitness centre users indicate that they have used PIEDs at some stage (Singhammer et al., 2010: 23). This corresponds to approximately 23,000 out of the 700,000 fitness centre members (Kirkegaard, 2011) having experience with the substances in 2010.

The Netherlands

1.1. Studies of the extent of the problem

In the general population

Every four years since 1997, a National Prevalence Study on Substance Use (NPO) has been undertaken into substance use in the general Dutch population between 15 and 65 years of age. In addition to tobacco, alcohol, cannabis, hard drugs (ecstasy, cocaine, amphetamines, LSD, heroin), sleeping pills and/or tranquillisers, performance-enhancing drugs have also been investigated. Performance-enhancing drugs were described in the questionnaire as: “muscle-strengthening drugs and drugs to improve sports performance. Examples of these are anabolic steroids, growth hormones, EPO (erythropoietin) thyroid preparations, clenbuterol and stimulants such as amphetamine, cocaine, ephedrine and caffeine in high doses”.

Figures are available for 1997, 2001, 2005 and 2009 (CEDRO 1999; CEDRO 2002; Rodenburg et al., 2007; Van Rooij et al., 2011 respectively). In 2005, in addition to the usual questionnaire, an online study of 20,000 people, was also carried out via a pollster. All of the studies asked whether there had used during their life and used during the previous year. In the studies in 2005 and 2009, estimates were also made regarding the absolute number of users. Table 1.1 shows the prevalence and estimates of the absolute number of persons for the various research years.

It emerged from the 2005 NPO study that the average age of doping users is 28 years and that the average age at which people begins to use doping-related substance is 18 years (Rodenburg et al., 2007).

Since 2007, the questions from the NPO have been incorporated into the National Permanent Lifestyle Study (Permanent Onderzoek Leefsituatie–POLS; CBS, 2011). This involves an annual online study of 10,000 people. The results (only use during life) of the questions regarding performance-enhancing substances were collated in 2007, 2008 and 2009. This also involves the age group from 15 to 65 years (see Table 1.2).

In fitness centres

In the Netherlands, an estimated 2 million people are active in more than 2,000 fitness centres (Lucassen & Schendel 2008). The studies undertaken in the Netherlands have been restricted to the prevalence of doping use in fitness centre users.

In 1994 a qualitative study was undertaken for the first time in the Netherlands into the use of performance-enhancing substances by young people between the ages of 16 and 25 years (Vogels et al., 1994). In two regions, fitness centres owners, students in the upper classes in further education and young attendees of fitness centres were questioned regarding the use

Year	During life (%)	Number of persons	Previous year (%)	Number of persons
1997	1.0	n/a	0.4	n/a
2001	0.7	n/a	0.2	n/a
2005	1.5	150,000	0.5	55,000
2005 (online)	2.7	297,000	1.3	143,000
2009	1.6	177,000	0.3	33,000

Table 1.1 Prevalence of doping use (in %) and estimated numbers of users in the general Dutch population (15–65 years of age)

Year	During life (%)
2007	1.5
2008	1.5
2009	1.6

Table 1.2 Prevalence of use during life (in %) of performance-enhancing substances in the general Dutch population from 2007–2009 from the POLS.

Substance(s)	Prevalence (%)	Numbers of fitness centre users
Stimulants	4.8	92,000
Anti side-effect substances	1.3	26,000
Insulin and/or growth hormones	1.1	22,000
Anabolic steroids	1.0	20,000
Prohormones	0.8	16,000
Other (including diuretics, thyroid hormones, clenbuterol)	2.8	52,000
Total	8.2	164,000

Table 1.3 Prevalence of doping use (in %) and estimated absolute numbers of users based on 2 million fitness centre users in the Netherlands.

Year	Year 9 of secondary school Ever used AAS (%)		Year 2 of upper secondary school Ever used AAS (%)	
	Boys (%)	Girls (%)	Boys (%)	Girls (%)
2004	2	1	2	0
2005	2	1	2	1
2006	1	1	1	0
2007	2	1	2	1
2008	2	1	1	0
2009	1	1	2	0
2010	2	1	1	0

Table 1.4 Proportion of school students in Sweden in year 9 of secondary school and year 2 of upper secondary school respectively who indicated that they had tried AAS at some point. Percentage distribution among boys and girls respectively, 2004–2010



of performance-enhancing substances. It was evident from the results that around 1% of the students were currently using performance-enhancing substances or had done so in the past. This primarily involved the older part of the youth who visited the fitness centres. From this group of fitness centre members, it was evident that around 6% used or had used doping. This mainly involved male fitness centre users. The substances primarily used were: Anabolic steroids, amphetamines, growth hormones and clenbuterol. Among the fitness centre members who take part in bodybuilding the percentage of users appears to be higher, namely 16%. It was also discovered that 1 in 8 fitness centre members consider and/or are in two minds about doping use (Vogels et al., 1994).

During the Dutch bodybuilding championships in 1994, a study was undertaken into the use of performance-enhancing substances in bodybuilders (De Boer et al., 1996). Both bodybuilders visiting the national championships and those participating in the competition were asked to participate in the study. A total of 1,200 questionnaires were handed out, of which 291 (24%) were returned with useful information. The following prevalence of those who had ever used anabolic steroids was found:

- recreational bodybuilders: 37% (males 45%, females 12%)
- competition bodybuilders: 77% (males 79%, females 57%)
- total group: 44% (males 52%, females 17%)

The most recent, and also the most extensive, study within the fitness sector dates from 2009 (Stubbe et al., 2009). The aim of that study was to determine the prevalence of doping use amongst members (aged 15 and over) of fitness centres in the Netherlands.

For the research, a separate questionnaire was developed for owners of fitness centres and fitness centre members. A total of 500 fitness centres, out of the estimated 2,000 in the Netherlands, were randomly selected from Chamber of Commerce records. 188 owners were reached by telephone, of which 92 were willing to participate in the study. This sample was representative of the fitness sector in the Netherlands.

Cooperating in a study into doping use can be misleading for fitness centre members. Potential respondents may interpret questions about doping use as being very personal, a taboo and in several countries illegally. This kind of social desirability means that you answer what is socially acceptable (as society's rules and norms suggests) although that in fact is not correct. For instance, you say that you did not take steroids, even though you actually did. In order to record the extent of social desirability in fitness centre members, two web-based questionnaire studies were carried out in parallel. The first study was

intended to enable a comparison with the study conducted earlier into doping use in the Netherlands and to undertake an extensive determinant study. This is the classic method. The second questionnaire study was intended to investigate whether or not there was an underestimate of actual prevalence caused by the provision of socially acceptable responses by respondents. This method is termed the randomised response method. If there was evidence of social desirability, the second questionnaire would provide a reliable and more valid estimate of doping use than the initial questionnaire study.

Within the 92 fitness centres, a total of 718 fitness centre members completed a questionnaire. A total of 246 respondents participated in the study using the classic method and 447 people in the randomised response method study. One in every ten members knows people in their environment who use these substances. The classic method shows an individual prevalence of the substances which varied from 0.0% to 0.4% with a general prevalence of 0.4%.

The randomised response method showed individual prevalence for the substances of between 0.8% and 4.8% with a general prevalence of 8.2% (see Table 1.3). The general prevalence differed significantly between the two methods. It can be concluded that the classic method leads to an underestimation of the general prevalence in comparison with the prevalence obtained using the randomised response method.

It is striking that the number of users of stimulants is so high – over 4½ times the number of anabolic steroid users.

Of the fitness centre owners, 8.8% stated that they considered there was a high likelihood that their members use performance-enhancing substances (Stubbe et al., 2009).

Sweden

1.1. Studies of the extent of the problem

The review *“Dopningen i Sverige – en inventering av utbredning, konsekvenser och åtgärder”* (Doping in Sweden – an inventory of prevalence, consequences and measures – Swedish National Institute of Public Health, 2009) reviews the national surveys which have taken place to examine the prevalence of doping in Sweden. This document observes that the prevalence of doping has been examined in a few studies among a representative nationwide selection of adults and young adults, and that four of the studies date back to the 2000s. Below is a report on the studies included in the review.

Surveys of adults and young adults

A Sub-study in the Swedish National Institute of Public Health prevalence project

In autumn 2008, the Swedish National Institute of Public Health worked in cooperation with Lund University and Statistics Sweden (SCB) to produce a questionnaire survey involving 58,000 people aged between 15 and 64 (Swedish National Institute of Public Health, 2009b). In addition to questions relating to alcohol, narcotics and tobacco habits, questions on AAS were included. As the selection was stratified, some groups (based on age and gender, for example) which were not included in the representative national percentage were afterwards weighted. The weighted response frequency was 52%. This result shows that 0.9% of men and just a few women aged 15–54 have tried AAS at some time. Nobody over 54 indicated any experience of AAS. Looking at the group of men aged 18–34, the lifetime experience was 1.4% and 0.9% had used AAS in the past year. If the percentage of people who admitted to having tried AAS over the past year is extrapolated to relate to the population of Sweden, the result means that more than 9,000 men aged 18–34 have tried AAS in the past year.

Study by STAD of the use of doping preparations in the Swedish population

In 2008, Stockholm *förebygger alkohol och drogproblem* (“Stockholm prevents alcohol and drug problems”, STAD) conducted a survey of the use of doping agents. The sample population consisted of two random selections of 5,000 people each; one including people registered in Stockholm, and the other representative of the rest of the country. A total of 10,000 people aged 18–50 received a postcard by mail, asking them to respond to an online questionnaire on training and health. The response frequency was 31%. The data was weighted to give a representative national result. Of the respondents, 0.6% of the men said that they had tried AAS or growth hormones at some time in their life. Divided over the two groups, the proportion was 1.1% for men in the Stockholm sample and 0.4% for men in the rest of the country. Among women, the lifetime prevalence was 0.0–0.1%. The twelve-month prevalence was almost zero; only a few women and 0.1% of men said that they had used AAS or hormone preparations in the past year. A dropout analysis was conducted in which the authors indicate that around 1.5% of the men have ever used AAS. (Leifman & Rehnman, 2008).

Population studies on behalf of the Swedish Council for Information on Alcohol and Other Drugs, the Swedish Alcohol Retail Monopoly and the Swedish National Institute of Public Health

Under various commissions from the Swedish Council for Information on Alcohol and Other Drugs (CAN), the Swedish Alcohol Retail Monopoly and the Swedish National Institute of

Public Health, TEMO conducted home visit interviews within representative national selections of the adult population (aged 15–75) in 1993, 1994, 1996 and 2000 (TEMO, 1993, 1994a, 1996a, 2000). These studies included 1,000–2,000 people, and questions on doping were included among other questions. In 1994, 1% of 15–49-year-olds admitted that they had tried AAS at some time in their lives. None of the people over 50 and just a few women said they had tried it. For the other three years, less than 0.5% of both men and women admitted to ever having tried AAS.

Survey by the Doping Commission

Focusing on a slightly younger population and the male part of the population, TEMO (SOU 1996:126 part A; TEMO, 1995) conducted a doping survey for the Doping Commission. Telephone interviews were conducted with 10,000 men aged 18–30, constituting 79% of respondents. Of the people who responded, 1.3% had tried AAS or growth hormone (1.1% admitted that they had tried AAS and 0.3% admitted that they had tried growth hormones). Distributed over the population in 1995, more than 10,000 men aged 18–30 had tried AAS or growth hormones at some time.

Drug habit studies for young people and young adults on behalf of the Swedish Council for Information on Alcohol and Other Drugs

Young adults have also been in focus during the drug habit surveys carried out by TEMO with others. Different clients commissioned these surveys: the Swedish Alcohol Retail Monopoly, CAN, Swedish National Institute of Public Health, the Alcohol Committee and Mobilisation against Narcotics. On five occasions between 1993 and 2003, the lifetime prevalence of doping agents was surveyed for 16–25-year-olds through telephone interviews with representative national samples varying from around 800 to 3,000 people. More than 2% of men admitted they had tried AAS, along with 1% and less of the women. (Guttormsson, Andersson & Hibell, 2004; SKOP, 1993; TEMO, 1994b, 1996b, 1998).

School surveys in secondary and upper secondary schools

CAN's representative national school surveys currently constitute the longest ongoing time series illustrating the prevalence of use of doping agents. The doping questions were added to the regular questionnaires about drugs for youths at year 9 (15–16-year-olds) in 1993. Nine years later, in 2004, drug habit surveys started to be carried out in upper secondary school year 2 (17–18-year-olds) as well. Around 5,500 secondary students and almost 5,000 upper secondary students took part each year.



Each year between 1993 and 2003, about 1% of boys in year 9 admitted that they had used AAS at some time. When the questionnaire was altered in 2004, the number of boys who had tried AAS at some time increased to 2%. This level – with the occasional exception – has been stable between 2004 and 2010 (Table 1.4). The same increase in the value was seen for girls. Between 1993 and 2003, less than 0.5% of girls said that they had tried AAS: but between 2004 and 2010 this level stood at 1%. In upper secondary school year 2 (Table 1.4), the number of boys who had tried AAS at some time varied between 1 and 2% in the period 2004 to 2010. Among girls, just less than 1% had tried AAS at some time (Hvitfeldt & Gripe, 2010).

Student survey among university and college students

To find out about the drug habits of university and college students, the Swedish National Institute of Public Health worked in cooperation with Lund University and Statistics Sweden in 2008 to produce a questionnaire study (Swedish National Institute of Public Health, 2009a) of 4,000 people aged between 16 and 64. The weighted response frequency was 55%. 90% of respondents were in the 18–34 age group, and of these, 1.1% of men and just a few women had tried AAS at some time. In the same age group, 0.3% of men admitted that they had tried AAS over the past year.

Military enrollee studies

The group of young adults also includes people enrolled prior to military service, mostly men aged 18. Being responsible for the surveys, CAN included a question about AAS beginning in 1994, and in 1995–1999 a question about growth hormones was included in the drug habit surveys carried out within the group since 1970 (Guttormsson, 2007). 40,000–50,000 men participated each year. The small numbers of women enrolling for voluntary military service are not included in the figures. The number of men admitting to trying AAS at some time fell gradually from 1.4% in 1994 to 0.6% in 2006. The number of enrolled men who admitted to using growth hormone in the late 1990s was less than 0.5%. Around half of the men who admitted some form of experience of these drugs said that they tried them only once. Prior to 2007, the enrolment procedure was altered to such an extent that the study was terminated.

Conclusion: Adults, young adults and young people

The representative national surveys carried out involving various age groups among the population of Sweden indicate that around 1% of men and less than 0.5% of women have tried doping agents at some time in their lives. For younger men, the percentage is slightly higher. Statistics do not indicate any clear increasing or declining trends over the 15 years in which the question was included in individual questionnaires. Extrapolating the percentages for the respective age categories and genders among the population gives us a perception of the

number of individuals to which the percentages correspond. These estimates should be viewed with caution. This is partly due to the fact that the percentages do not use decimal places in quite a few instances, and partly due to the fact that because the age ranges vary enormously and tight age ranges may exclude prospective users.

However a more promising approach to estimate the number of users in Sweden today is to look at how many people have used doping agents over the past year. There is scant comparable data for this. The latest figures originate from a representative national survey by the Swedish National Institute of Public Health. Looking at the group where use is considered to be most prevalent, namely among men aged 18–34, it is estimated that around 9,000 men have used doping agents at some time over the past year. Given the low degree of inclination to respond to questions and the methodological difficulties mentioned above, the results indicate that at least 10,000 people in Sweden have used doping agents over the past year (Swedish National Institute of Public Health, 2009).

Poland

1.1. Studies of the extent of the problem

There are a few professional publications in which the problem of illegal use of AAS in fitness centres is described. Their authors usually write about the use, abuse and distribution of illegal substances, among them mainly drugs and stimulants. Also it is hard to find published data specifically referring to use of doping in fitness centres. What we can find are publications about general drug consumption among the whole population. One of them is by J. Sieroslawski. Here, figures for the period from 1997 to 2007 show use of anabolic steroids by 1 to 3% of youngsters aged 15 and 16 years old (Sierslawski, 2007).

Cyprus

1.1. Studies of the extent of the problem

In Cyprus, the study of the use of doping in fitness centres is limited. In particular, the extent of the use of anabolic steroids and other doping substances by people exercising at fitness centres has only been studied by Kartakoullis et al. (2008) in a sample from the entirety of Cyprus and Agathangelou (2010) in a sample provided by only one province.

According to Kartakoullis et al. (2008) in a study of a sample of 22 fitness centres from the entirety of Cyprus, with the participation of 532 individuals of both genders, 11.6% of the respondents stated that they use or have used doping substances. The use of doping substances, as shown in the study, was more frequent in individuals with certain common characteristics, such as gender (more frequent in males), age (more frequent in participants aged 14–18 and 26–35), educational level (university graduates) or socio-financial level (working class (D)

or specialised working class (C2)). Finally, as expected, the use of doping substances was more frequent among body-building athletes.

Agathangelou (2010) studied the use of anabolic steroids in only a small sample (n= 100 men, aged 18–30), from 3 fitness centres in the city of Pafos. The study results show that the use of anabolic steroids begins in adolescence, with the main reason being the improvement of their body musculature. The study sample showed that up to 18% use anabolic substances

Denmark	The Netherlands	Sweden	Poland	Cyprus
1.5%	1.6%	0.5-1.0%	n/a	n/a

Table 1.5: Estimated prevalence during life (in %) in all 5 countries – in the population

Denmark	The Netherlands	Sweden	Poland	Cyprus
3.3%	8.2%	5%	n/a	11.6%

Table 1.6: Estimated prevalence during life (in %) in all 5 countries – in fitness centres

Denmark

1.2. Studies of the attitude to doping in fitness centres

The study by Singhammer et al. (2010) shows that among the respondents training at fitness centres a vast majority of fitness centre members take exception to the use of PIEDs and do not accept the arguments sometimes proffered that the use of PIEDs is a private matter (83 % disagrees to this argument); that it is acceptable if one does not take part in competitions (95 % disagrees), and that it is acceptable as long as it is not detrimental to health (84 % disagrees) (Singhammer et al., 2010: 31).

Another recent study, Kirkegaard's *Portræt af de aktive fitnesskunder – træningsmotive, tilfredshed og selv vurderet sundhed* (2009) (A portrait of active fitness customers – training motives, satisfaction and own perception of health), looks at whether it is important to fitness centre members that their fitness centre is a member of the signage scheme, known as the Smiley scheme, which took effect on 1 July 2008. The scheme makes it a legal requirement for fitness centres to signal whether or not they cooperate with Anti Doping Denmark regarding doping control. Fitness centres must clearly indicate with a happy smiley or a frowning smiley at their entrance (and on their website, if applicable) whether they carry out doping control (see 2.1). The study shows that 66% of men and 73% of women indicate that it is either very important or somewhat important to them that their fitness centre is a member of Anti Doping Denmark's doping control scheme. 15% of the men and 10% of the women say that it is not important. Only 1%

of the men and none of the women do not want their centre to be or become a member of Anti Doping Denmark's scheme. The study also shows that among the respondents who do not want their centre to be or become a member of Anti Doping Denmark, a significant number have indicated that their training consists of "weight training only (using fitness equipment, free weights and similar)". Thus, there appears to be a correlation between an interest in weight training and resistance to the doping control scheme (Kirkegaard, 2009: 70–71).

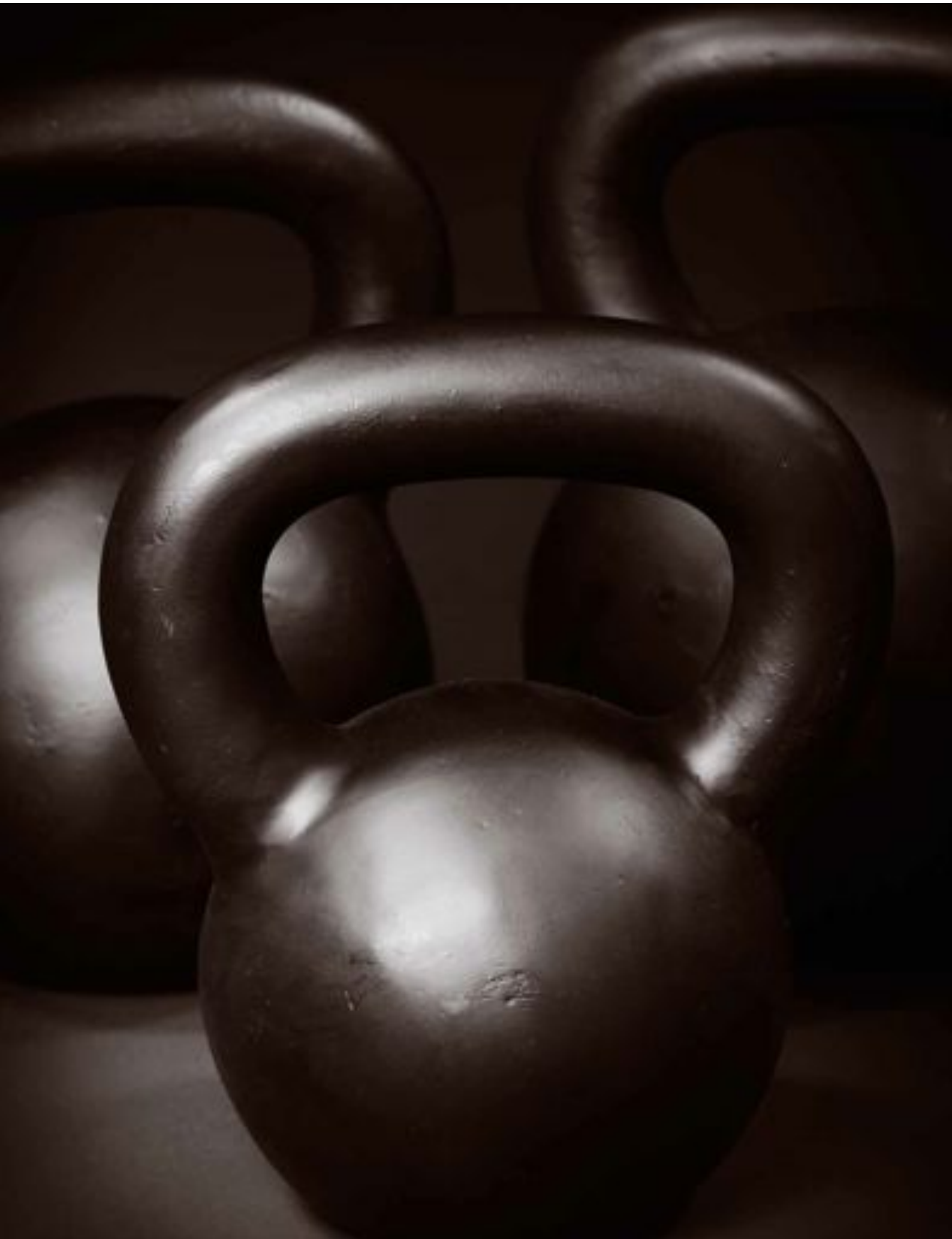
The study by Singhammer et al. (2010) also analyses differences in attitudes to the use of PIEDs in the population following experience with the use of the substances. The report divides the respondents into "experienced", "have considered" and "non-user" categories. The "experienced" are individuals who are current users of PIEDs or who have used PIEDs in the pasts. "Have considered" comprises individuals who indicate in the survey that they have considered using PIEDs, while "non-users" are people who have never considered using PIEDs.

Not surprisingly, the study shows that experienced individuals have the most liberal attitude to the use of PIEDs, while those who have considered using them have a more positive attitude towards it than non-users, who are therefore the most strongly opposed.

There is a widespread view among experienced respondents that doping is a private matter. Only 16% indicate that they disagree that the use of PIEDs is a private matter, whereas 35% of the respondents who have considered using PIEDs and 67% of non-users disagree with the statement. Only 23% of experienced users disagree that it is acceptable to use PIEDs if you do not take part in competitions. Among those who have considered using and the non-users, the proportions of respondents who disagree with the statement are 62% and 93%, respectively. Finally, only 18% of the experienced users state that they disagree that it is acceptable to use PIEDs if it is not detrimental to health, while 22% of those who have considered using them and 68% of non-users disagree with the statement (Singhammer et al., 2010: 11).

1.2.1. Among owners of fitness centres/fitness centre personnel

The Danish Institute for Sports Studies (IDAN) has assessed the Smiley scheme (see 2.1) and in 2010 published the report *Indsatsen mod motionsdoping i kommercielle motions- og fitnesscentre* (The work to combat fitness doping in commercial fitness centres). As part of the work on the report, IDAN carried out a questionnaire survey among fitness centres in Denmark. One of the aims of the survey was to map fitness centres' attitudes to and experience with doping. The survey was carried out among centre managers and owners of fitness centres, and



the attitudes are therefore not representative of fitness centre staff in general (IDAN, 2010: 52).

The survey shows that 52% of the respondents think that, in general, doping or performance-enhancing substances are a huge problem for fitness centres, while only 9% respond that it does not present a problem. When IDAN mapped the fitness sector in 2007, participating fitness centres were asked the same question. In this instance, just under half of the respondents (48%) answered “Yes, it’s a huge problem” while 20% answered “No, it’s not a problem” (Kirkegaard, 2007a: 73). The number of centres that think that doping in general does not present a problem for fitness centres has therefore halved since 2007. On the basis of the answers, the study also concludes that fitness doping is considered a huge problem at the centres, partly because fitness doping is detrimental to the health of the users and partly because it damages the image of the fitness sector (IDAN, 2010: 73–74).

The Netherlands

1.2. Studies of the attitude to doping in fitness centres

The attitude of fitness centre users

In 2003 a study was undertaken into the determinants of the use of performance-enhancing substances by fitness centre users in the Netherlands (Detmar et al., 2003). The research questions addressed the following:

1. Which socio-psychological determinants are linked to the use of performance-enhancing substances by fitness centre members?
2. How do the owners of fitness centres perceive the use of performance-enhancing substances by members to their fitness centres?
3. What is the extent of the support base amongst fitness centre owners for the introduction of (elements of) a focused prevention policy?

The research consisted of a questionnaire put to fitness centre users and owners/managers of fitness centres. Ultimately 190 fully completed questionnaires were received from fitness centre users. The number of owners of fitness centres who returned fully completed questionnaires was 255.

Of the fitness members in the sample, 30% declared that they had used performance-enhancing drugs in the past. This is probably a considerable overestimate of the number of users amongst all fitness centre users in the Netherlands. The reason for this is that the population for the survey are primarily recruited via channels which are primarily used by people who show some interest in the use of performance-enhancing substances. More male than female respondents appeared to use performance-enhancing drugs, with men mostly using muscle-

strengthening substances and women mainly using stimulants in order to lose weight.

Most users had used these substances on more than one occasion. It also appeared that users were more likely to use cannabis, cocaine and ecstasy or GHB than non-users. The intention to use performance-enhancing substances was significantly linked to:

- A permissive attitude to the use of performance-enhancing substances
- The expectation that the use of these substances has benefits for performance
- The suspicion that others in the immediate environment are using them
- Relatively frequent visits to the fitness centres and training facilities
- Use in the past

Other factors, such as anticipated changes in respect of health, well-being and appearance, influences from the immediate social environment, feelings of control and knowledge of performance-enhancing substances, appear also to be an influence, but this influence appears subordinate to the above-mentioned factors.

The results of this research evoke an image of users who ascribe benefits to performance-enhancing substances and rarely see the risks. For the majority, this leads to on-going use and it also appears difficult to change this behaviour (Delmar et al., 2003).

In the study by Stubbe et al. (2009), the prevalence of doping use appeared too low to allow a determinant analysis to be carried out. In order to be able to judge the determinants of doping use, a literature study was undertaken. The following determinants emerged: gender, level of education, substance use (drugs, cigarettes, alcohol, coffee, food supplements, intention in respect of doping use), sports behaviour (doing sport or otherwise, frequency of fitness centre visits, bodybuilding), body image (a wish to lose weight, self-confidence, mental health, fearful behaviour) and social network (being aware that other people have used these substances, having friends who use doping, and study choice).

1.2.1. Among owners of fitness centres/fitness centre personnel

In the study by Detmar et al. (2003) the attitude of fitness centre owners was also investigated. 24% of all of the fitness centre owners returned the questionnaire. The results from the fitness owners can therefore not be generalised to all of the fitness centre owners in the Netherlands without further research.



Most owners of fitness centres who cooperated with the research suspect that a small number of members use performance-enhancing substances, and almost all of them reject the use of these substances. They appear prepared to accept the introduction of measures which offer alternatives to the use of performance-enhancing substances such as an intake interview, training advice, diet advice and health testing. Not only are they prepared to implement these measures, they also consider them to be feasible and relevant. They also anticipate that the introduction of these measures will have a positive effect on member numbers. People also appear to be receptive to information activities and training of fitness instructors.

By contrast, they are mostly wary of measures aimed at “harm reduction”, i.e. the supervision of sports enthusiasts who use performance-enhancing substances in order to restrict health risks. They anticipate an adverse effect on member numbers if these measures were to be introduced. Furthermore, they consider these measures to be difficult to implement and irrelevant.

During a national fitness exhibition in 2005, a small-scale study was conducted into the attitude of fitness centre owners and fitness instructors regarding anti-doping policy (Schapendonk & Coumans, 2005). The questionnaire was completed by 34 fitness instructors and 12 fitness centre owners. Just as in the study by Detmar et al. (2003), a significant proportion of fitness centre owners (42%) state that they do not suspect anyone in their fitness centres of doping use. And where such suspicions did exist, it would only be carried out by a few individuals. Clear differences were found between the suspicions of the instructors and the suspicions of the owners in relation to the number of members using doping. The suspicions of the instructors were considerably greater. A large proportion of the owners and instructors stated that they currently have no anti-doping policy. If a policy exists, it involves access being denied in the event of use being discovered. Furthermore, it appears that there is a large support base for information regarding the introduction of an anti-doping policy. Around 90% of the owners declare a “probable” to “high degree of interest” in an anti-doping health mark.

In the study by Stubbe et al. (2009), questions were also put to fitness centre owners. Of the 92 centres which participated in the study, 36% state that they have an anti-doping agreement to combat the use of doping. In response to the question regarding how great they estimate the likelihood to be that members to their fitness centres use doping, 71% stated that they consider the likelihood to be very small. Nevertheless, 8.8% conceded that they considered the likelihood of doping use to be reasonable to very considerable.

Sweden

1.2. Studies of attitude to doping in fitness centres

Doping among people who work out at fitness centres

People who work out at fitness centres are more likely to have tried doping agents than people who do not work out at fitness centres. It is also common for the introduction to AAS to occur at training facilities (Skårberg, et al., 2009). Four questionnaire studies were carried out at training facilities in Sweden between 2007 and 2008.

Within the scope of the anti-doping project Kalmar växer utan dopning (“Kalmar grows without doping”), responses were given to a questionnaire by 327 fitness centre members at five different training facilities (Hoff & Herngren, 2008).

The STAD section at the Centre for Psychiatry Research Karolinska Institutet/Stockholm County Council Health Care Provision collected 1,687 questionnaires from people training at 34 fitness centres in Stockholm (Leifman et al., 2011).

A study was carried out on behalf of the county administrative board at 30 fitness centres in Kronoberg, where 462 questionnaire responses were received (Institute for local and regional democracy, 2009).

A questionnaire survey has also been carried out among 786 people over 35 fitness centres in Malmö (Malmö City Public Health Unit, 2008).

These studies show a lifetime prevalence of 2.7–4.8%, the highest figure relating to Malmö and the lowest relating to Stockholm. Divided according to gender, 3.8–6.0% of men and 0–4% of women admitted that they had tried AAS/doping agents at some time. Some studies also opted to illustrate the twelve-month prevalence, which in Kalmar amounted to 1% for all respondents and in Stockholm to 1.2% for men and almost 0 for women. To summarise, it may be stated that the typical AAS user is male, aged between 18 and 34 and works out regularly at a fitness centre.

As a complement to the questionnaire study, in 2009 STAD prepared an observation study which was implemented at training facilities in the county of Stockholm. Data collection took place by means of covert observations; the observers participated actively in the training at all training facilities, and data collection took place on the basis of an observation template. The observation template comprised the following variables: gender, age, use of doping agents, and 16 different variables relating to the fitness centre environment. 2,368 individuals were observed over 128 observation periods at 64 facilities. The average estimated occurrence of AAS use was 5.0% for men and 0.4% for women. At more strength-focused training facilities,

known as “hard core” fitness centres, 21% were estimated to use AAS. Training facilities which focus on power and strength in their equipment turned out to have more users (11%) than those which focus on health (3%) (Leifman et al., 2011).

When delimited age groups are study, even greater experience is found. Most of the people who train at fitness centres are aged 20–29 (Leifman et al., 2011; Swedish Sports Confederation, 2008). According to the STAD observation study in Stockholm, most of the people who use doping agents and exercise are aged between 20 and 39 (Leifman et al., 2011). In Kalmar (Hoff & Herngren, 2008), a study indicates that 15% of men aged 31–35 have tried AAS. In a Malmö survey, 12% of men working out at fitness centres and aged between 30 and 39 admitted to having tried AAS (Malmö City Office Public Health Unit, 2008).

1.2.1. Among owners of fitness centres/fitness centre personnel

No studies have been carried out in Sweden covering this area.

Poland

1.2. Studies of the attitude to doping in fitness centres

There are no data on the basis of which the attitude to doping in fitness centres or fitness centres could be described. In the past, studies were made involving amateur athletes active in sport.

Cyprus

1.2. Studies of the attitude to doping in fitness centres

The studies performed on the issue of doping in fitness centres have examined only the extent of the problem and not the attitudes to doping of either those exercising at the fitness centres or the owners of the fitness centres.

Common contribution

1.3. Risk factors

Masculinity, body ideals and body image

According to K. Reinicke, Associate Professor in Gender Studies at Roskilde University, Denmark, masculinity is closely associated with the male physique, and masculine stereotypes are often associated with the masculine body. In Reinicke’s opinion, to most people, a “real” man is a strong man (Reinicke, 2004: 53-55).

In recent decades, there has been a growing focus on the male body, which is becoming increasingly objectified. In a similar way to what women have experienced, the male body is now being scrutinised and assessed by others – although not to the same extent as the female body.

The increased focus on the male body has generally been ascribed to the influence of the fashion world and the consumer industry. Calvin Klein’s underwear advertisements from the 1980s with male models in sensual postures marked a turning point in the way the male body is used as an object, and the consumer industry increasingly promotes body maintenance and body improvement through its advertising. In addition, society now has a general health agenda, according to K. Mogensen, PhD at Roskilde University, which holds people responsible for their own health (Mogensen, 2011: 121; Bordo, 1999: 198).

There is general agreement that most men aim to achieve a “mesomorphous” body ideal characterised by a slender yet muscular and athletic body. According to sexuality researcher C. Graugaard, this body type is probably perceived as the ideal because a muscular yet slim body symbolises willpower, energy and control – values that are in demand in society (Christensen et al., 2005: 91). In certain social environments, the mesomorphous body is not regarded as sufficient; an even more muscular and bulky body is considered desirable. People in this environment frequent fitness centres with heavy weights and include both bodybuilders and individuals training without competitions in mind. Between those with the mesomorphous body type as an ideal and those who desire an even more muscular and bulky body, there is a large group of young men who generally practise weight training in order to acquire a more muscular and, in their view, attractive body (Singhammer et al., 2010: 42). As they continue to shape their bodies, some of the men in this group appear to modify their view of the ideal body; their ideal becomes ever bigger.

Sociologist T. Johansson is of the view that exposure of the body and the preoccupation with beauty in the public space has promoted a body culture that promises quick results and offers expert advice on how to eat, train and live to create the ideal body. He points out that, although we do not all frequent fitness centres, we are nevertheless influenced by the “fitness body”, which is consistently on display and in the public eye in more or less conspicuous ways. Johansson considers that fitness centres not only reflect existing body ideals but also actively produce images, ideas and perceptions of identity, gender and body (Bach, 2005: 87).

In this context, the concept of body image relates to what people think and feel and how they act in relation to their bodies. T.F. Cash, an American psychology professor and researcher of body image, thinks that the factors that affect a person’s body image include cultural socialisation, interpersonal experiences, physical characteristics and personal qualities. These factors should only be viewed as a simplified model of reality. They are the most important, but it cannot be excluded that other fac-



tors also play a role. In addition, the factors are often interconnected in real life, which is not fully described in the following.

Cultural socialisation describes how our culture has standards and expectations regarding appearance, including physical characteristics and the corresponding meanings that are either valued or not valued in society. In addition, our culture defines gender expectations whereby different physical features are associated with femininity and masculinity respectively. Interpersonal experiences with family and friends also impact on the importance we attach to our bodies. As an example, young people bullied because of their appearance by others of the same age can become unhappy with their bodies. Physical characteristics also have considerable influence on a person's body image, as an attractive and socially accepted appearance influences the way a person is perceived and treated by others. If a person's appearance matches the social standards, it can have an impact on the person's self-image. Lastly, Cash mentions personality as a factor. A positive perception of self-worth, for example, can act as a buffer against what would otherwise result in a negative body image, whereas perfectionism can cause people to base their self-worth on the pursuit of unrealistically high body ideals (Arnvig et al., 2006: 25-27).

In "*De grenzeloze Generatie*" (The Boundless Generation—Spangenberg and Lampert, 2009) the researchers at Motivation International examined the state of young people in the Netherlands (born after 1986). They also discovered that youth culture revolved strongly around appearance and that image culture, commerce, beauty ideals, television and the Internet have essentially contributed to this fixation with appearance. According to them, beauty is in the eye of the beholder but "it always wants more". They also cite issues such as less self-restraint and less attention to one's own wellbeing. Parents are less involved as educators, whereas society's increasing complexity demands this. In their sequel (Spangenberg and Lampert, 2011), the authors regard inflated egos and narcissism as the downsides of self-assuredness and enthusiasm. They argue for a return to education and guidance instead of being fully at the mercy of individual "self-sufficiency".

A 2009 Gallup survey shows that young men and women in Denmark aged 15–25 focus on and have a distorted perception of their own body. In the survey, 23% indicate that their weight is very important, and 60% indicate that they weigh themselves several times a week. 36% of the respondents state that it is important or very important what their friends think about their appearance, and 13% state that they talk about body and weight with their friends several times a week. In the survey, 41% of the young people indicate that they think they weigh too much. This is in stark contrast to the 2009 estimate of K.F. Michaelsen, Professor of Paediatric Nutrition at the University

of Copenhagen, that 14% of Danish teenagers were overweight (Krogsgaard, 2009). Although the age groups are not identical, the figures indicate that a large number of young people have an unrealistic body image.

In the Netherlands, the report "*Health, welfare and education of young people in the Netherlands*" (2009), issued by the Netherlands Institute for Social Research and the University of Utrecht, looked into the health behaviour of school children aged from 11 to 16. "A high level of dissatisfaction about their own bodies" was noted. It is striking that the body experiences of boys and girls differ greatly. Girls consider themselves to be too fat and boys not muscular or strong enough. By the age of 12, 36% of girls already considered themselves to be too fat, and the number increased to 47% amongst 16-year-olds. Of the 12-year-old boys, 12% considered themselves to be too thin, which increased to 18% amongst 16-year-olds. Thus, both boys and girls are increasingly concerned during adolescence about their physical shape, and dissatisfaction is growing. The report therefore includes recommendations that schools pay attention to beauty ideals and image culture by developing special teaching materials on this subject, for example.

The "Adonis complex" is a standard term used to describe men's special problems with body, weight and appearance. It generally refers to a disturbed body image in men who are obsessed with the idea that they are not sufficiently muscular (Pope et al., 2000). Men suffering from The Adonis complex perceive their body as too thin and not sufficiently muscular. They therefore train for hours every day, adhere to a special fat-free and protein-rich diet combined with protein powder and often supplemented by steroids. According to Bach, there is no one single explanation or cause of megarexia. As is the case with other eating disorders, the psychological problems and emotional conflicts can be rooted in a difficult childhood, mobbing, sexual abuse, violence, lack of care or lack of love (Bach, 2005: 115-117).

Reasons for use of AAS

A survey by I.K. Pedersen, PhD and Associate Professor at the University of Copenhagen, and L. Benjaminsen, PhD at the Danish National Centre for Social Research, shows that the use of doping primarily involves a wish to develop a more muscular body and slimmer body and that this practice can largely be explained by body ideals and the creation of an identity through body shaping (Pedersen et al., 2006: 52, 62–63). Additionally, Mogensen thinks that the use of anabolic steroids should perhaps be viewed as an integral part of the users' practice and construction of an identity (Mogensen, 2004: 48).

Population surveys done in Denmark shows that health aspects are the main reason why people train and do sports. In 2010,

94% thus indicated that they train for health reasons (The Danish Institute of Public Health, 2009: 143–144; Singhammer et al., 2010: 41). The survey by Singhammer et al. (2010) also shows that training motives differ depending on the respondents' experience with illegal muscle-building substances. While all respondents, regardless of their experience with doping, train to become more healthy, a larger number of respondents who have experience with doping train merely to get a more attractive, muscular body and more self-confidence (Singhammer et al., 2010: 42).

In an observation study in Sweden implemented by Söderström (1999) in his thesis entitled "*Gymkulturens logik*" (The logic of gym culture), social and cultural factors in fitness centre culture are cited as motives for use of AAS. The results show that the motives considered important and significant for working out in the fitness centre are the same for both men and women. People who work out at fitness centres want to become stronger and fitter and develop more muscle. Thus, working out in the fitness centre largely involves changing the body, strength and muscle being significant. This fixation on external appearance can be viewed as one reason why certain individuals who work out at fitness centres use AAS. Söderström's thesis and the observation study also indicate that the body has an important part to play in relation to both the self-identity of individuals and their social identity. Style and the ideal body are concepts seen throughout society, and an important part of individual style is based on the body. Most activities in society are arranged according to some form of hierarchy, deliberately or otherwise. In the fitness centre, the body helps to create the classification system on which the hierarchy of the fitness centre is based, where muscular exhibitionists are at the top and people undergoing rehabilitation are at the bottom. The hierarchy in fitness centres can also be seen as a reason why people fixate on external appearance and use of AAS.

In several articles, Mogensen discusses the inherent contradiction in the efforts of the steroid users to build an impressive and – according to their body ideal – magnificent body, while the methods and techniques they use – in particular the substances – break down and destroy the same body. Mogensen's studies indicate that groups in the bodybuilding environment in a Danish context perceive themselves as having an exemplary regime in terms of training, diet and health and think their steroid use is controlled and acceptable. They try to set themselves apart from what they perceive as losers; criminals, substance-abusers and others who do not play by the rules. On the contrary, they perceive themselves as modern society's new male type; "supermen" (Mogensen, 2004: 46).

Both Pedersen and Mogensen point out, on the basis of surveys, that users of steroids and similar substances are often

aware of the potential health risks and take a calculated risk with their own use based on this knowledge combined with control of side-effects. As Mogensen writes, the users thus accept the various consequences based on knowledge – and not due to a lack of knowledge (Mogensen, 2004: 20–21; Mogensen, 2011: 112; Pedersen, 2004: 72–73). T. Moberg and G. Hermansson, however, emphasise that the use of steroids and other substances is difficult to control. The body develops tolerance to the effect of steroids, which means that the user has to increase the doses over time in order to achieve the same effect. In addition, users of anabolic steroids generally develop distinctive withdrawal symptoms after completing a course. They therefore often begin a new course earlier than planned to avoid these withdrawal symptoms (Moberg et al., 2006: 79–80).

The current section, "Risk factors", mainly focuses on how the existing body culture with its masculinity concept and body ideals affect people's body image, and on the fact that it is especially individuals with a desire for a specific aesthetic appearance with larger muscles who are steroid users. However, there are two other main user groups: Sports people and violent people. Sportsmen and sportswomen are the original group that started using doping agents. The primary objective over the years of sportsmen and sportswomen who use doping agents has been to increase their own sporting performance due to improved strength, power, speed, increased muscle size and greater aggressiveness. Violent people use doping agents to achieve both a physical and a psychological change in themselves. They seek to achieve bigger bodies, greater strength, aggression and a feeling of omnipotence to enhance their ability to fight and frighten people. Their "manliness" is made clear, and this group includes professional criminals, among others (Moberg & Hermansson, 2006).

However, users rarely belong to just one group. Users may have different motives for their use of doping agents, and these motives may also change during the period of use. Besides the above group divisions, there are other motives for use: Using doping agents as a drug, bringing about a psychological change, and becoming intoxicated (Kindlundh, Isacson, Berglund & Nyberg, 1998). AAS is used to strengthen the effect of amphetamines, for example, and there is clear mixed substance abuse when doping agents are taken with other drugs. Two-thirds of urine samples analysed in 2008 in connection with people's own use of AAS also showed the presence of other substances such as alcohol, narcotics and pharmaceuticals. The use of other preparations may arise after starting to take doping agents, with the motive of increasing the effect of AAS, for example, or of reducing the side-effects arising during and after the treatments (Sjöqvist, Garle & Rane, 2008).



In a Danish context, Singhammer et al. (2010) shows that there is a connection between co-habitation status and experience with muscle-building substances. Among people who have experience with muscle-building substances, a larger number live alone and fewer are in a relationship with children compared with people who do not have experience with PIEDs. The figures also show that, of those who have considered using PIEDs, a significant proportion live at home with their parents or alone, primarily because this group largely consists of young men (Singhammer et al., 2010: 10).

Singhammer et al. (2010) also shows that a large number of the individuals who have experience with PIEDs have no further education beyond lower secondary school, and a large number have vocational training, for example a trade, as their highest level of education. The level of education among non-users is much more varied. Non-users, for example, are more likely to have a different vocational background, such as a qualification in social work or health, or short-term further education (Singhammer et al., 2010: 10). A survey by I.K. Pedersen, PhD and Associate Professor at the University of Copenhagen, and L. Benjaminsen, PhD at the Danish National Centre for Social Research, also shows that experience with doping is more prevalent among groups with a low level of education than among other groups. More specifically, a much higher proportion of young male fitness centre members with lower secondary school, technical upper secondary school or vocational training as their highest level of education have experience with doping compared with men who have standard upper secondary school or short-term, medium-term or long-term further education as their highest level of education (Pedersen et al., 2006: 56–57).

It is emphasised that there is no evidence that the above-mentioned demographical connections apply in countries other than Denmark.

Common contribution

1.4. The bodybuilding environment

Surveys of members in bodybuilding organisations in Denmark, the Netherlands, Sweden, Poland and Cyprus show, that the number of practising bodybuilders is fairly limited. The latest figures in Denmark show that the Danish Bodybuilding and Fitness Association (DBFF) has 316 members. In the Netherlands, approximately 700 bodybuilders are members of a club or association linked with one of the different bodybuilding organisations. In Sweden, 333 people are registered as holders of competition licences. In Poland there are approximately 500 active bodybuilders, according to information from the Polish Bodybuilding, Powerlifting and Fitness Association, while the Pan-Cypriot Amateur Federation advises that Cyprus has approximately 300 registered bodybuilders. Of course, it should be remembered that the above-mentioned figures exclude a cer-

tain proportion of fitness centre members training in a similar manner to bodybuilders. They do not necessarily participate in competitions, and are therefore not part of the official bodybuilding environment.

There are no surveys that give an accurate picture of the extent of use of AAS and other doping substances in the bodybuilding environment. Bodybuilding is very much focused on developing a considerable muscle mass, and the fact that AAS and similar substances promote such development makes bodybuilding a very vulnerable environment. In the past, doping controls have been carried out in Denmark in connection with events such as the national bodybuilding championships. All medalists were tested, and a number of random tests were carried out among the remaining participants at the national championships in 2003. A total of nine participants tested positive, of which eight were medalists who subsequently had to forfeit their medals (A.R. Bach, 2005: 57). In 2003, a total of 32 controls were carried out at competitions and during training, of which 11 were positive. A total of 39 controls were carried out in 2004 and 2005, with nine positive tests in both years. Anti Doping Denmark and DBFF are in 2011 working on resume the cooperation. In addition, a book on the bodybuilding environment has been published in Denmark. It contains a number of stories from people involved in this field which give the impression that steroids and other substances are used on a large scale (A.R. Bach 2005).

In the light of the relatively few practising bodybuilders compared with the number of members at fitness centres and the estimated number of people who have experience with AAS and other doping substances, it is important to point out that bodybuilding is not responsible for the problem with fitness doping. Fitness doping is a problem that should be viewed in a much broader perspective. It mainly involves issues relating to body ideals, body identity and appearance, and the fact that the average young man in the street supplements his training by using AAS and other doping substances. However, as role models for young fitness centre members, bodybuilders and fitness members who train in similar ways present a potential risk of spreading a training practice that involves the use of AAS.

Common contribution

1.5. Knowledge about the use of supplements

Today, a large number of products are marketed with promises of positive effects on performance and muscle growth, among other things. “Nutritional supplements” is an overall term used for these products. Besides vitamins and energy drinks, popular nutritional supplements in connection with fitness and weight training include creatine, protein bars or protein powders and fat burners.

In the study conducted into the use of performance-enhancing drugs by fitness centre users (Stubbe et al., 2009) a question was also asked about nutritional supplements. Of the 718 respondents, 57% stated that they had used nutritional supplements during the previous year.

Nutritional supplement	% users
Vitamins and/or mineral supplements	43.3
Energy drinks	18.9
Thirst quenchers	10.2
Protein drinks	6.3
Other (please specify)*	5.7
Creatine	3.2
Glutamine	1.9
Fat burners	1.5
Carnitine	1.0
Fat preparations	0.6
HMB	0.1
Tribulus terrestris	0.0
None of the above drugs	42.6

* Those most frequently mentioned were fish oil, extensive descriptions of vitamin preparations and glucosamine

Table 1.7 Percentage of people who answered Yes when asked if they had used the nutritional supplement concerned in the previous year (n=718) (Stubbe et al., 2009).

Marketing that promotes larger muscles and endurance often contains what appears to be scientifically documented information about the effectiveness of the products. However, this “documentation” rarely stands up to close scrutiny. In other instances, it is unclear what the products actually contribute, and in what contexts it is relevant to use them.

In many cases, prohibited substances such as prohormones have been found in legal nutritional supplements, without being mentioned in the list of ingredients. The reason may be that some manufacturers of nutritional supplements also manufacture steroids and do not clean their machinery and containers sufficiently after steroid production before starting the production of nutritional supplements. As a result, the food supplement can be contaminated by steroids in concentrations that are high enough to produce a positive result in a doping test (The Danish Exercise and Nutrition Council, 2008: 26-27). In 2004, a study by H. Geyer et al. examined the occurrence of prohibited substances in what appeared to be pure nutritional supplements according to the lists of ingredients. The products were bought in 13 countries from 215 different companies, some of which also sold prohormones. The study showed that 14.8% of 634 nutritional supplements were contaminated by prohormones not mentioned in the list of ingredients. A total of 21% of nutritional supplements from companies that also sold prohormones contained steroids, compared with 10% of the supplements from companies that did not sell prohormones (Geyer et al., 2004). This is a very high proportion, considering that many of the nutritional supplements tested were harmless

vitamin supplements not normally suspected of containing doping substances.

A study on illegal weight-loss substances was published in 2009 (Venhuis et al., 2009). Illegal weight-loss products identified in the Netherlands became increasingly dangerous between 2002 and 2007. Analyses showed increasing numbers of counterfeit medicines and of nutritional supplements adulterated with drug substances. In addition, herbal ingredients that were banned because of safety concerns are being replaced by pharmaceutical drugs. Unknowing use of these products may lead to psychosis, cardiovascular problems and even death. This is shown by a trend analysis on 256 suspect samples gathered by four national laboratories in the Netherlands. Internationally, the use of illegal weight-loss medicines and nutritional supplements has led to many cases of serious health damage and occasionally even to death. Because the active ingredients detected in the Netherlands are largely the same as those found in other countries, similar events may occur in these countries. It is therefore recommended that such health complaints should be registered in order to gain insight into the scale and severity of the problem. Adulterated nutritional supplements pose the greatest health risks. Because the drugs used in the product are not mentioned on the labels, consumers are unaware of the risks. Consumers assume they are taking a natural product but are unwittingly exposed to dangerous drugs. If adverse effects cannot be readily attributed to an adulterated nutritional supplement, adequate medical treatment may be delayed. Health risks are also high for counterfeit medicines because their composition and quality are unreliable and they are taken without prescription.

There is a general perception that the use of nutritional supplements like creatine, protein bars or protein powders is common among both adults who compete and adults who exercise recreationally (The Danish Exercise and Nutrition Council, 2008). In this context, it is of great concern that a study by T.L. Dodge and J.J. Jaccard (2006) has shown that the likelihood of a person starting the use of steroids is 26 times greater for a person using legal performance-enhancing nutritional supplements compared with someone training without nutritional supplements. Taking nutritional supplements therefore significantly increases the risk that a person will start using steroids.

Common contribution

1.6. Knowledge about young drug abusers in general Introduction

The reason for taking a closer look at the use of drugs is, first of all, that the use of AAS is often accompanied by other substance abuse, which will be discussed further below. Secondly, the use of performance and image enhancing substances (PIEDs) is a social problem just like the use of drugs. The use

of PIEDs largely has its roots in society's body culture, and has serious social consequences such as violence, illness and health problems, loss of productivity, costs relating to the police force and the legal system as well as costs in the health sector. It is therefore relevant to look at the use of PIEDs – fitness doping – in the context of the use of substances in general.

The different sections of the text mainly focus on young substance abusers, not only because the use of drugs is largely a youth phenomenon, but also because users of PIEDs generally start using these substances in their late teens and early twenties. This age group should therefore be targeted in the efforts to prevent people from starting and continuing the use of PIEDs.

Denmark

1.6. Knowledge about young drug abusers in general

K. Møller and J. Demant from the Centre for Alcohol and Drug Research at Aarhus University have published the paper “*Unge påbegyndelse af illegalt rusmiddelbrug*” (Why young people start using illegal drugs). Based on their study of available literature, the authors provide a summary of research-based knowledge about why young people in the Nordic countries start using illegal drugs. The paper includes a summary of the risk factors that can affect the tendency of an individual to start using drugs.

First, the paper describes how the individual's network (parents, friends and acquaintances) can be a risk factor. One network theory explains that young people are inclined to overestimate the drug use of their contemporaries. A second theory relates to the parents' parenting style. It appears that children of authoritative, i.e. demanding but accepting, parents generally are less likely to use drugs than young people with indulgent, and especially neglectful, parents. The extent to which a young person identifies with a social role is also a factor. As traditional societal roles have gradually dissolved, it has become increasingly important for young people to actively seek their own identity. Most young people regard drug abuse as something that is youth-related and irreconcilable with career dreams and self-realisation. However, in some sub-cultures and youth cultures, the use of illegal drugs is seen as a symbolic identity marker. The use of different substances is also encountered in nightlife cultures. A third theory describes personality as a factor. Theories about personality show that sensation-seeking young people, for example, are more likely to use drugs. A fourth theory describes genetic disposition as a factor (Møller et al., 2011: 10–11).

In their study, Møller and Demant refer to a survey concerning cannabis and amphetamines, according to which a much higher number of 15–16-year-olds in Denmark experience the availa-

bility of these drugs as “very easy” or “relatively easy” compared with 15–16-year-olds in the other Nordic countries and the EU in general (Møller et al., 2011: 38–39). The same surveys show that fewer 15–16-year-olds in Denmark think there is considerable risk associated with the use of cannabis compared with young people in the other Nordic countries and the EU in general. Møller and Demant conclude that there is a lack of recent research about how current control policies influence the spread and use of the drugs (Møller et al., 2011: 40–42).

The National Board of Health, Denmark issues an annual report on the drug situation in Denmark, the Danish “Focal Point”, to the European Monitoring Centre for Drugs and Drug Addiction, EMCDDA. According to the report, the desire to try drugs is typically a youth phenomenon, and most do not continue using drugs. Surveys covering the entire population show that the experimental use of drugs peaks in the 16–19-year age group and that very few try drugs for the first time after the age of 20. In the over-40 age group, only a few per cent have used any form of drugs in the past year. This is largely the same group of young people who get involved in different forms of risky behaviour: Studies have documented that it is often young people with high alcohol consumption who also use tobacco daily and smoke cannabis (hashish). There is also a correlation between those who have smoked cannabis and those who have used one or more other illegal substances (The National Board of Health, Denmark, 2010: 13).

The report shows that the proportion of 16–24-year-olds who are current users – defined as having been users within the past year – of both cannabis and other illegal substances, such as cocaine, amphetamines and ecstasy, is higher than among the 25–34 and 35–44-year-olds. The report also shows that the proportion using more than one type of drug is highest among 16–24-year-old men. In 2010, 23% of 16–24-year-old men state that they have used cannabis within the last year, and 5.3% and 4.9% respectively state they are also current users of cocaine and amphetamines (The National Board of Health, Denmark, 2010: 15–16, 101).

1.6.1. The extent of abusers

In 2010, the National Board of Health, Denmark estimated that the number of substance abusers in Denmark was 33,000, of which 11,000 only used cannabis. Compared with previous years, this amounts to an increase in the number of substance abusers in Denmark. In 2006, the number of substance abusers was estimated at 28,000, of which slightly less than 8,000 only used cannabis. The survey did not cover experimental substance abuse but gives an estimate of the number of people with more permanent use of substances that causes physical or psychological damage and/or social problems (The National Board of Health, Denmark 2010: 6).



Since the year 2000, population surveys in Denmark have generally shown a consistent level of experimental use of both cannabis and other illegal substances. The curve shows a kink after the year 2000 after marked increases in the use of illegal substances throughout the late nineties. A new population survey from 2010 now shows a decline in the use of substances – especially in the under-25 age group. This declining trend applies to all substances, even cocaine, which otherwise showed a marked increase in use between 2000 and 2010 (The National Board of Health, Denmark, 2010: 6).

1.6.2 Which drugs do they use?

Cannabis is still the most popular substance. There are far fewer current users of cocaine and amphetamines, and even fewer users of ecstasy. The report of the National Board of Health, Denmark shows that 8.9% of 16–44-year-olds are current users of cannabis and that 2.4% are current users of illegal substances other than cannabis. In this age group, 1.6% are current users of cocaine, 1.3% are current users of amphetamines and 0.5% are current users of ecstasy. The proportion of people who are current users of cannabis decreased by 0.2% between 2008 and 2010, and by 0.9% between 2000 and 2010. The use of other substances as a whole decreased considerably: By 1.2% between 2008 and 2010 and by 1.0% since 2000 (The National Board of Health, Denmark, 2010: 14, 101).

The EMCDDA publishes an annual report on drug use in Europe. The report shows that the proportion of Danes who are current users of cannabis, cocaine and amphetamines is higher than the EU average, whereas the proportion using ecstasy is lower than the EU average. According to the EMCDDA, 13.3% of 15–34-year-olds are current users of cannabis. The EU average is 12.6%. In addition, 3.4%, 3.1% and 1.1% respectively are current users of cocaine, amphetamines and ecstasy. The EU average for these substances is 2.3%, 1.2% and 1.7% respectively. It should be noted that the Danish figures used in the EMCDDA report are 2008 figures (EMCDDA, 2010a: 43, 54, 56, 63; EMCDDA, 2010b).

In their study, Møller and Demant point out that an individual's use of different drugs follows a typical sequence. According to this study, the sequence in which an individual starts using the different drugs is: alcohol, nicotine, cannabis, amphetamines, cocaine, ecstasy and finally heroin (Møller et al., 2011: 15). Although steroids are not included, some studies show a link between the use of steroids and the use of various other substances. An earlier study (Middleman and DuRant, 1996) shows that young users of steroids are more inclined to also use other substances and generally show a higher degree of risky behaviour. A Swedish survey (Gårevik and Rane, 2010) also concludes that the combined use of steroids and narcotics is

common among young people arrested or investigated in connection with criminal activities in Sweden.

Animal testing on rats and mice has shown that endorphins in the brain can create dependency in connection with the use of steroids and make the brain “open” to other substances such as opiates, amphetamines and alcohol. Moberg and Hermansson conclude on the basis of different studies that steroids can be regarded as a probable precursor of other forms of substance abuse (Moberg et al., 2006: 60, 70). Similarly, other studies show that the use of steroids can lead to the use of opiates such as heroin (e.g. Kanayama et al., 2003; Arvary and Pope, 2000). According to Moberg et al., one of the explanations is that many users of steroids use stimulating substances to alleviate withdrawal symptoms between treatments, which is also the case with cannabis users, and that an existing use of steroids psychologically acts as a driving force for the use of other substances (Moberg et al., 2006: 79–80).

The Netherlands

1.6. Knowledge of young drug abusers in general

1.6.1. The extent of abusers

Prevalence figures for various types of substances emerged from the NPO studies (amongst the general Dutch population between the ages of 15 and 65). These substances are: tobacco, alcohol, cannabis, hard drugs (ecstasy, cocaine, amphetamines, LSD, heroin) and sleeping pills and/or tranquillisers. Only the prevalence figures for illegal drugs (i.e. cannabis and hard drugs) are stated here (see Table 1.8 and Table 1.9).

Because this study is conducted every four years and has so far been conducted four times, trends can also be represented.

The research by Van Rooij et al. (2011) also investigated different age groups. The results for the 15–24 age group are showed in Table 1.10.

1.6.2. Which drugs do they use?

Section 1.6.1 describes the general prevalence for cannabis, hard drugs and doping. This section makes a distinction between the different types of hard drugs. These are divided into five groups (see Table 1.11).

In several studies which examined the determinants of doping use, a correlation was established with drug use. In the study by Vogels et al. (1994) it was discovered that one in five young people (aged 15–25) had used cannabis on more than one occasion; 5% had used ecstasy more frequently and admitted to having used hard drugs. The use of performance-enhancing substances and the interest in them is clearly higher among these young people than among students who do not use drugs.

Type of drug	Period	Prevalence (%)	Population estimate
Cannabis	Lifetime/during life	25.7	2,850,000
	Previous year	7.0	776,000
	Previous month	4.2	466,000
Hard drugs*	Lifetime/during life	8.6	954,000
	Previous year	2.2	244,000
	Previous month	0.9	100,000

* ecstasy, cocaine, amphetamines, LSD and/or heroin

Table 1.8 Prevalence of drug use in percentages and absolute numbers in the general Dutch population (15–65 years) in 2009 (Van Rooij et al., 2011)

Substance	1997	2001	2005	2009
Cannabis	19.1 %	19.5 %	22.6 %	25.7 %
Hard drugs	4.7 %	5.0 %	6.1 %	8.6 %
Doping	1.0 %	0.5 %	1.5 %	1.6 %

Table 1.9 Use during life in % in the general Dutch population (15–65 years) (Van Rooij et al., 2011)

Substance	1997	2001	2005	2009
Cannabis	28.8 %	32.2 %	28.3 %	31.1 %
Hard drugs	6.5 %	10.2 %	5.6 %	8.3 %
Doping	1.4 %	NA	3.3 %	2.5 %

Table 1.10 Use during life in % in Dutch population (15–24 years) (Van Rooij et al., 2011)

Type of drug	Period	Prevalence	Population estimate
Ecstasy	Lifetime/During life	6.2 %	688,000
	Previous year	1.4 %	155,000
	Previous month	0.4 %	44,000
Cocaine	Lifetime/During life	5.2 %	577,000
	Previous year	1.2 %	133,000
	Previous month	0.5 %	55,000
Amphetamines	Lifetime/During life	3.1 %	344,000
	Previous year	0.4 %	44,000
	Previous month	0.2 %	22,000
LSD	Lifetime/During life	1.5 %	166,000
	Previous year	0.1 %	11,000
	Previous month	0.0 %	0
Heroin	Lifetime/During life	0.5 %	55,000
	Previous year	0.1 %	11,000
	Previous month	0.1 %	11,000

Table 1.11 Prevalence of use of various types of hard drugs and absolute numbers in the general Dutch population (15–65 years) in 2009



Detmar et al. (2003) also found a correlation between doping and illegal drugs. Users and ex-users of doping-designated substances also use cannabis, cocaine and ecstasy or GHB more frequently than non-users.

Sweden

1.6. Knowledge of young drug abusers in general

1.6.1. The extent of abusers

CAN has run annual surveys since 1971 of the alcohol, drug and tobacco habits of school students. These surveys have been carried out involving a representative national selection of Year 9 students. Students in Year 2 of upper secondary schools have also participated since 2004. These surveys were implemented as anonymous group questionnaires in classrooms. 4,829 students from Year 9 and 3,936 from upper secondary school Year 2 took part in the 2010 survey. The dropout rate was 16% and 17% respectively (Hvitfeldt & Gripe, 2010).

The number of Year 9 students who had used drugs at some time fell considerably in the 1970s and 1980s. In 1989, the number of people who used drugs was at its lowest level (3%), but it then increased continuously up to 2001 (approx. 10%). The number of people who used drugs then fell up to 2008. However, in the latest surveys, the number of Year 9 students who had used drugs had increased and in 2010 9% of boys and 7% of girls admitted that they had used drugs at some time. In the 2010 survey, as in earlier surveys, drug use was clearly greater in upper secondary schools than among Year 9 students. A larger proportion of boys than girls tried drugs in upper secondary school (21% and 14%, respectively).

1.6.2. Which drugs do they use?

Table 1.12 shows that cannabis is by far the most common drug among Year 9 students. In the early 2000s, more than 5% of students had used marijuana and/or hash. Just as the total number of people using drugs fell slightly in the years following 2000, so the figures for cannabis also fell. In the latest survey, around 7% of Year 9 students had used cannabis. The number of students who over the period had tried some other kind of drug essentially varies between 0% and 1% (Hvitfeldt & Gripe, 2010).

Among upper secondary students' experience of various drugs, cannabis was also the most common option. In the latest survey, 19% of boys and 13% of girls stated this. The most common drugs after cannabis were ecstasy, benzodiazepines, cocaine and amphetamines, each of which were stated to by 2% of students (see Table 1.13).

The currently national questionnaire survey on drug use among adults is the annual national public health questionnaire which was started in 2004 by the Swedish National

Institute of Public Health. This collates information on living habits via postal questionnaires aimed at people aged 16–84. The drug queried in the survey is cannabis, and, as Table 1.14 shows, around 12% of people in the age group state that they have tried this at some time. The highest percentage (around 20%) of people admitting to having tried cannabis is found in the 16–29 age range, and this figure falls gradually among the older age groups. 2% responded that they had used cannabis over the past year, and 1% said that they had done so over the past month. Again, these figures are highest among people aged 16–29. Table 1.15 shows the annual prevalence by age group, and for people aged 16–29 these values were 9% for men and 6% for women (Hvitfeldt & Gripe, 2010).

Poland

1.6. Knowledge about young drug abusers in general

The information below is based on the publication by Janusz Sierosławski of the Institute of Psychiatry and Neurology on drugs and drug addiction in Poland.

Recreational drug use

Information about experimental and recreational use of psychoactive substances is obtained from questionnaires administered to representative samples of the population at large or some of its groups, e.g. school students. Such studies have been conducted in Poland many times. The results below come from the studies conducted in schools in 1995, 1999, 2003 and 2007 by the Institute of Psychiatry and Neurology within the framework of ESPAD (European School Survey Project on Alcohol and Other Drugs) (Hibell, 2004, Sierosławski, 2007) and from a study of the population at large conducted in 2002 and 2006 by the National Office Against Drug Addiction (Sierosławski, 2006).

The school study comprised two nationally representative random samples of students aged 15–16 and 17–18. Since the methodology of each study was the same, the data is comparable and it is also possible to analyse the trends. The use of psychoactive substances was studied in the following way: The respondents were presented with a list of substances and asked to tick those which they have ever used. The results obtained can be treated as an indication of at least experimental use of the substances. The other questions asked were about the use of individual substances in the last twelve months prior to the study, and the answers can be treated as an indication of current use of substances. The results have revealed that the majority of the respondents have never used illegal substances. Among those who have had some experience with them, the majority treated the use of marijuana or hashish as an experiment. The 2007 study revealed that 16% of third grade middle school students used these two substances at least once a year (see Table 1.16). Inhalants were the second most popular substance (8%)

Boys	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Hashish	7	6	6	5	5	4	4	.	.	.	.
Marijuana	5	5	5	4	4	3	3	.	.	.	.
Cannabis	.	.	.	.	.	.	.	5 ^{a)}	6	8	8
Amphetamines	2	1	1	1	1	1	1	1	1	1	1
Smoked heroin	1	1	0	0	1	0	1	0 ^{b)}	1	1	1
Injected heroin	0	0	0	0	0	0	0	.	.	.	.
Cocaine	0	1	1	0	1	0	1	1	1	1	1
LSD	1	1	1	1	1	0	1	0	1	1	1
Benzodiazepines etc.c)	.	.	.	.	.	.	.	1	1	1	1
Ecstasy	1	1	1	1	2	1	1	1	1	1	1
GHB	1	1	0	0	0	0	0	0	0	1	1
Other	0	1	0	0	0	1	0	1	1	1	1

Girls	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Hashish	6	6	6	5	5	5	3	.	.	.	.
Marijuana	4	4	4	3	3	3	2	.	.	.	.
Cannabis	.	.	.	.	.	.	.	4 ^{a)}	4	6	5
Amphetamines	1	1	1	1	1	1	1	1	1	1	1
Smoked heroin	0	1	0	0	1	0	0	1 ^{b)}	0	0	0
Injected heroin	0	0	0	0	0	0	0	.	.	.	.
Cocaine	1	1	1	1	0	1	0	1	0	1	1
LSD	1	1	0	0	0	0	0	1	0	0	0
Benzodiazepines etc.c)	.	.	.	.	.	.	.	1	1	1	1
Ecstasy	1	1	1	1	1	1	1	1	0	1	1
GHB	1	1	0	0	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	0	0	0	0	0

a) From 2007, the response option was "Hashish/marijuana (cannabis)"; b) From 2007, the response option was "Heroin"; c) From 2007: "Tranquilliser means of benzodiazepine without medical advice (e.g. Rohypnol, Propavan, Imovane and Stilnoct)".

Table 1.12 Experience of different types of drugs. Year 9 students in Sweden. Percentage distribution among boys and girls respectively, 2000–2010

Boys	2004	2005	2006	2007	2008	2009	2010
Hashish	14	15	13	.	.	.	.
Marijuana	11	12	11	.	.	.	.
Cannabis	.	.	.	16 ^{a)}	17	17	19
Amphetamines	2	2	2	1	2	2	2
Smoked heroin	0	0	0	.	.	.	.
Injected heroin	0	0	0	1 ^{b)}	1	0	1
Cocaine	1	1	2	1	2	1	2
LSD	1	1	1	1	0	1	2
Benzodiazepines etc.c)	.	.	.	2	2	2	3
Ecstasy	3	3	2	2	2	1	2
GHB	1	1	0	1	0	0	0
Other	1	1	1	1	1	1	1

Girls	2004	2005	2006	2007	2008	2009	2010
Hashish	11	10	11	.	.	.	.
Marijuana	7	8	8	.	.	.	.
Cannabis	.	.	.	12 ^{a)}	14	14	13
Amphetamines	2	2	11	2	2	2	1
Smoked heroin	1	0	0	.	.	.	.
Injected heroin	0	0	0	0 ^{b)}	0	0	0
Cocaine	1	1	10	1	2	1	1
LSD	1	0	1	0	0	1	1
Benzodiazepines etc.c)	.	.	.	2	2	2	2
Ecstasy	3	2	2	2	2	1	1
GHB	0	1	0	0	0	0	0
Other	1	1	1	1	1	1	1

a) From 2007, the response option was "Hashish/marijuana (cannabis)"; b) From 2007, the response option was "Heroin"; c) From 2007: "Tranquilliser means of benzodiazepine without medical advice (e.g. Rohypnol, Propavan, Imovane and Stilnoct)".

Table 1.13 Experience of different types of drugs. Year 2 of upper secondary school in Sweden. Percentage distribution among boys and girls respectively, 2004–2010



Year	Men				Total	Women				Total	All
	Age 16-29	30-44	45-64	65-84		Age 16-29	30-44	45-64	65-84		
2004a)	2	21	11	1	15	19	12	5	0	8	12
2005	22	20	10	1	13	19	11	4	0	8	11
2006	28	20	9	1	13	17	11	4	0	7	10
2007	22	21	13	0	14	16	10	5	0	7	11
2008	20	20	11	1	12	14	11	4	0	7	10
2009	26	21	12	0	16	16	8	6	0	8	12
2010	23	20	13	1	15	16	12	6	0	9	12

18-84 years

Table 1.14 Proportion (percentage) of cannabis use among different age groups in a nationwide survey of the general population in Sweden, 2004-2010

Year	Men				Total	Women				Total	All
	Age 16-29	30-44	45-64	65-84		Age 16-29	30-44	45-64	65-84		
2004 ^{a)}	9	2	1	0	3	5	1	0	0	1	2
2005	8	2	0	0	2	3	1	0	0	1	2
2006	9	2	0	0	2	4	1	0	0	1	2
2007	8	3	1	0	2	4	1	0	0	1	2
2008	7	2	1	0	2	4	1	0	0	1	2
2009	12	2	1	0	4	5	1	0	0	1	2
2010	9	2	1	0	3	6	1	0	0	2	2

18-84 years

Table 1.15 Prevalence of cannabis use over the last 12 months among different age groups in a nationwide survey of the general population in Sweden, 2004-2010

Substance	1995	1999	2003	2007	Substance	1999	2003	2007
Tranquillisers or hypnotic (sophomoric) drugs	19	18	17	16	Tranquillisers or hypnotic (sophomoric) drugs	6	9	7
Cannabis	10	15	19	16	Cannabis	12	15	11
Inhalants (i.e. glue, lighter fuel, etc.)	10	9	9	8	Inhalants (i.e. glue, lighter gas, etc.)	4	4	4
Amphetamines	3	7	6	4	Amphetamines	7	4	2
LSD	2	4	3	2	LSD	3	1	1
Cocaine	1	2	2	2	Cocaine	2	1	1
Heroin	1	6	2	1	Heroin	2	1	1
Ecstasy	1	3	3	3	Ecstasy		2	1
Anabolic steroids	3	3	3	2	Anabolic steroids	3	2	1

Table 1.16. Students in Poland aged 15-16 years who have used illegal substances at least once in their life (%)

Table 1.17. Students in Poland aged 15-16 years who have used illegal substances at least once in the last 12 months prior to the study (%)

Substance	2002	2006
Cannabis	2.8	2.8
Amphetamines	0.7	0.7
LSD	0.4	0.1
Crack	0.1	0
Cocaine	0.1	0.2
Heroin		0.1
Ecstasy	0.2	0.3
Anabolic steroids	0.1	0.1

Table 1.18. Use of illegal substances by people in Poland aged 16-64 in the 12 months prior to the study - results of the nationwide questionnaire study conducted in 2002 and 2006 (%)

Age group	2002	2006
16-24	10	9
25-34	3	3
35-44	0	2
45-64	0	0

Table 1.19. Use of any illegal substance during 12 months in different age groups in Poland - results of the nationwide questionnaire study conducted in 2002 and 2006 (%)

and amphetamines were the third (4%). In recent years, some stabilisation or a decrease in the number of experiments with drugs has been observed. In 1999–2003, on the other hand, a rising trend was observed. It must be added that in 1995–1999 the growth of drug use was really significant.

Cannabis products are currently the most popular recreationally used illegal substances in the last 12 months. In 2007, over 11% of third grade middle school students used them (see Table 1.17). Inhalants are in second place (4%) and amphetamines rank third (2%) (Sierosławski, 2007).

The use of amphetamines became less frequent much earlier than the use of cannabis products. This suggests much significant improvement in the case of this very dangerous substance. In the 1990s drugs were no longer a fad for young people. The study conducted in 1997 in Warsaw revealed that drugs became a fad for adults as well, at least among the inhabitants of the Polish capital. A repeat study conducted in Warsaw in 2002 and the nationwide study conducted in the same year revealed a small increase in the use of drugs, mainly cannabis products.

As revealed by the nationwide study conducted in 2002, drugs were present in the world of adults all over the country, although their actual use was rather low (see Table 1.18). Of all the illegal substances, cannabis products were most popular, followed by amphetamines. The use of other illegal substances was never higher than 0.5%.

A comparison of the results obtained in 2006 and those obtained in 2002 with respect to the population aged 16–64 reveals some stabilisation of recreational drug use (Sierosławski, 2006). The use of individual illegal substances is most popular in the 16–24 age category (see Table 1.19). In 2006, com-

pared to 2002, the percentage of 16–24-year-old drug users was slightly lower, while that of 35–44-year-old drug users increased.

Medical data

Information about the trends in drug use understood as addiction or use leading to serious problems can also be obtained from statistical medical data. Some information about the number of patients treated for abuse of psychoactive substances other than alcohol and tobacco is provided by psychiatrists. There is also data on the trends in drug use available in medicine addiction records of outpatient psychiatric clinics, detoxification wards for drug users as well as rehabilitation centres run by non-governmental organisations (provided that the latter also operate health care institutions).

In 2006 13,198 patients who reported problems with drugs were admitted to hospitals. This indicates a drop of 122, i.e. 0.9%, compared to 2005, when 13,320 patients were admitted. The percentage of patients treated in 2006 per 100,000 inhabitants was at the same level as in 2005, i.e. 34.9%. The stabilisation of the number of patients in 2006 took place after the period 2002–2005, when the decrease was lower. It must be remembered that this period was preceded by a significant growth trend in 1996–2002. In 1991–1995, a rising trend was also observed, although its intensity was very low.

The number of patients admitted to hospitals for the first time in their life is a much more useful indicator for analysing epidemiological trends. This indicator illustrates the pace at which the number of new patients requiring treatment was growing and thus better represents the growth trend than the overall number of patients reporting for treatment. In Figure 1.1, the percentage of first-time patients per 100,000 inhabit-

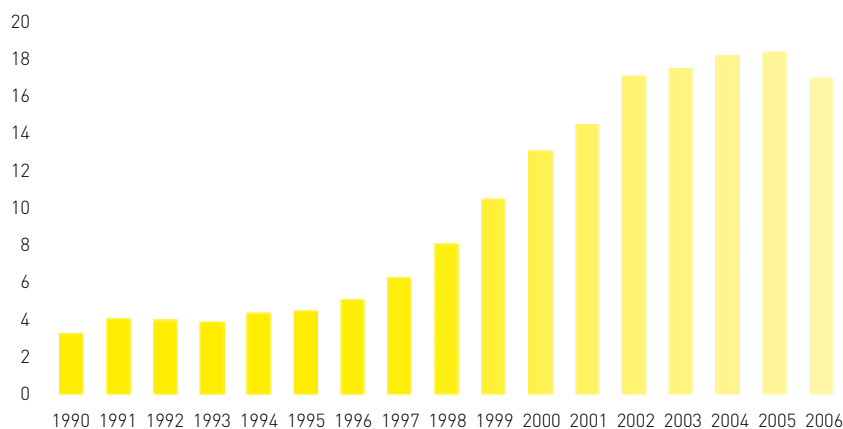


Figure 1.1 The relative number of patients (%) in Poland admitted to hospitals for the first time in their life in 1990–2006 because of psychic disorders and behaviour disorders caused by the use of psychoactive substances (per 100,000 inhabitants)



ants can be analysed. In the first half of the 1990s the number of patients reporting to hospitals for the first time grew very slowly. In 1996–2002 very large growth was observed, followed by much slower growth in the following years. In 2006 a decrease was observed. It should be noted that between 2001 and 2005 the percentage of patients reporting to hospitals for the first time increased by 27%. These results corroborate the earlier estimates. Although the estimated number of drug users was growing more than the number of patients reporting for treatment, it must be remembered that the former indicator illustrates changes in the phenomenon with some delay.

The data in figure 1.1 can be supplemented by analysing the age structure of the persons reporting for treatment. In 1997–2001 the percentage of persons aged 16–24 was growing consistently and that of persons aged 25–34 was decreasing. In 1997 the percentage of patients aged 16–24 was at the level of 40%, but in 2001 it was as high as 57%. The percentage of the youngest patients (15 years of age and younger) and the oldest patients (45 years and older) was relatively constant, i.e. 3–4% and 7–8% respectively. In 2002 this trend changed. The percentage of 16–24-year-old patients dropped to 55%, i.e. to the level of 2000. At the same time, the percentage of the oldest patients (45+) and the 25–34-year-old patients increased. In the following years, continuation of this trend was observed, i.e. a decrease in the percentage of 16–24-year-old patients and an increase in the percentage of 25–34 and 35–44-year-old patients. In 2006 the percentage of 16–24-year-old patients dropped to 41%, while the percentage of the oldest patients (over 45 years of age) increased to 16%. It is worth noting that in 2006 the percentage of 16–24-year-old patients was the same as in 1997, while the percentage of the oldest patients, i.e. over 45 years of age, increased more than twofold in the same period. Changes in the age structure seem to reflect two processes. The first is demographic: the ageing of the population. The other is epidemiological – the pace at which the scale of drug use has grown. The increase in the younger age groups could be regarded as a signal of the growing intensity of the phenomenon. The reversal of this tendency can suggest the beginning of some stabilisation.

Common contribution

Summary of Chapter 1

Existing surveys in this area among the countries contributing to the report show that the use of steroids and other performance and image enhancing drugs (PIEDs) is a current problem in society. The users of the substances are mainly young and middle-aged men. A Dutch study shows that the starting age for the use of doping substances is 18 and that the average age of the users is 28. Surveys across contributing countries do not provide a uniform picture of whether there is a connection

between the use of steroids and socio-economic factors such as education and employment.

Steroid users are over-represented among fitness centre members compared with the population in general, which correlates with the fact that the effect of muscle-building substances is best achieved by regular weight training. In other words, the use of steroids is a common problem among young men at fitness centres and therefore cannot be said to be a problem that only affects the bodybuilding sport, for example.

There is a general perception that body ideals and a distorted perception of one's own body results in a body and training culture that focuses on an exceptionally muscular body. In this context, substances like steroids can be perceived as a short-cut to visible results – but an extremely dangerous short-cut.

There are differences between the countries, as the fitness sectors do not show the same level of interest in implementing anti-doping measures in order to reduce the use of steroids. The fitness centres are nevertheless an obvious arena for anti-doping measures, and it appears logical that the fitness sector should assume part of the responsibility, as the users frequent fitness centres, which play a key role in body shaping.

Anti-doping measures are important for health reasons. It is well documented that steroids increase the risk of a large number of diseases, are harmful to health and can result in changes to the psychological state. Some studies also show a correlation between the use of food supplements, steroids and narcotics.





2. ANTI-DOPING LEGISLATION

In this chapter the legislation concerning doping and the anti-doping action is described. In terms of an anti-doping effort aimed at fitness centres it includes doping control, the possibility of sanctions, and the possibility for authorities and organisations to exchange data. The chapter also examines legislation and penalty range for distribution, possession, use, etc. of doping substances, and the available investigative tools for the police and other authorities in the field.

Denmark

2.1. National legislation concerning doping

The Danish Act on Promotion of Doping-Free Sport came into force on 1 January 2005. Under the Act, Anti Doping Denmark was established as a self-governing institution with the task of promoting anti-doping measures in sports.

The legislation (the Act and the corresponding Executive Order) on doping control refers to the current rules for doping control and sanctions set out in the WADA Code (the World Anti-Doping Code), including testing procedures (see 4.3), analysis of doping samples (see 4.5) and sanctions for positive a test, etc.

Fitness centres under organised sport

The Act makes it compulsory for sports federations and associations to introduce and uphold regulations regarding doping control and doping sanctions as a condition for receiving government subsidies in the form of lottery funds or other subsidies governed by legislation.

According to current legislation, sports associations under the main Danish sports organisations – the National Olympic Committee and Sports Confederation of Denmark (DIF), the Danish Gymnastics and Sports Associations (DGI) and the Danish Federation for Company Sports (DFIF) – are obliged to introduce and uphold rules for doping control and sanctions in accordance with the WADA Code.

The WADA Code permits national sports federations that carry out doping control within non-competition and recreational-level sports to establish special rules for doping control, for example in relation to members of the fitness centres operated by the federations. On that basis, the sports federations (DIF, DGI, DFIF as well as the Danish Shooting Association (DDS)¹ have drawn up common anti-doping regulations for recreational sports regarding the handling of doping cases among fitness members, not involving elite athletes.²

The anti-doping regulations for recreational sports differ from the WADA Code as regards the rules on suspension and sanction, among other matters. The differences are outlined in the following:

Suspension

If the result of the analysis of the sample shows the presence of doping substances, or the doping secretariat becomes aware of another contravention of the doping regulations, the secretariat can suspend the person in question (see 4.3) without consulting the person in question. The suspension can be for a maximum of three months. All doping cases are handled by the secretariat. DGI is responsible for the secretariat function. The secretariat's tasks include the administrative handling of doping cases.

Sanction

The sanction for both a positive test and a refusal to take part in doping control is, in principle, two years' exclusion from all training and competition activities, if applicable, within the organisations covered by the rules. However, the anti-doping regulations for recreational sports allow for both an extension and a reduction of the penalty for a positive test, in the latter case on account of the social circumstances of the individual, for example. The anti-doping regulations for recreational sports also permit the exemption of certain activities from the penalty of exclusion.

Commercial fitness centres

With a view to preventing the use of doping in sports outside the organised sports federations, the Act also stipulates that Anti Doping Denmark must endeavour to enter into anti-doping agreements with fitness centres and other private or public institutions or companies that offer sports and related activities, as well as with associations and organisations not belonging to the above-mentioned sports federations. This primarily refers to commercial fitness centres. Anti Doping Denmark charges a fee for its services under such collaboration agreements.

Under the legislation in this area, these collaboration agreements aim to ensure that the parties to the agreement undertake doping control and impose sanctions in accordance with the guidelines that apply to Danish sports federations, i.e. in accordance with the WADA Code.

On that basis, Anti Doping Denmark and commercial fitness centres have entered into an agreement whereby a positive test or the refusal to participate in doping control is sanctioned with two years' exclusion. It is nevertheless up to the individual centre to make the final decision and impose the sanction in each individual case. The standard contract between Anti Doping Denmark and the commercial fitness centres is attached to the report as Appendix 1.

¹ DDS is associated with the Danish Gymnastics and Sports Associations (DGI), which means, among other things, that DGI also safeguards the interests of DDS in relation to a number of authorities (www.skytten.dk)

² All Danish elite athletes are subject to the "National Anti-Doping Rules", which fully comply with the WADA Code.



Compulsory signage scheme for commercial fitness centres

With effect from 1 July 2008, the Danish Parliament adopted an amendment to the Act on Promotion of Doping-Free Sport which introduced a compulsory disclosure scheme for commercial fitness centres. The Act made it compulsory for commercial fitness centres to display clear signs indicating whether they have entered into a collaboration agreement with Anti Doping Denmark – the so-called “signage scheme”. According to the Act, commercial fitness centres must clearly indicate at their entrance and on their website, if applicable, by means of a happy or frowning smiley whether the centre has entered into a collaboration agreement with Anti Doping Denmark.

It is the responsibility of the police to check whether commercial fitness centres use correct signage and to impose sanctions on any centres that fail to comply with the rules.

The Act on Promotion of Doping-Free Sport is administered by the Ministry of Culture.

A copy of the Act on Promotion of Doping-Free Sport is attached as Appendix 2.

The Netherlands

2.1. National legislation concerning doping

No specific legislation exists in the Netherlands for carrying out doping controls amongst fitness centre members (see Chapter 4 for further information) either by government or by the Doping Authority. One way of carrying out doping controls in fitness centres is for the fitness centre to include this in the terms and conditions to which its visitors must agree.

Organised sport does have doping rules which are based on the World Anti-Doping Code and which apply to almost all members in organised sport. This is covered by the National Doping Regulations. In principle, doping controls can be carried out by almost all members of organised sport. However, in practice this is almost always done only at the highest levels. If a doping control is positive, this only leads to sanctions within organised sport. Fitness members who train in fitness centres and are not included in organised sport can therefore not be checked by the Doping Authority.

Despite the lack of a doping law, there are however several laws which share common ground with doping.

First there is the Medicines Act. Many doping-designated substances, such as AAS or growth hormones, are regular medicines. The Medicines Act contains provisions to promote the safe use of medicines. The production, trade, prescription and supply of medicines are subject to strict rules. For example, possession of AAS for personal use is not, in principle, a punishable offence. However, if it can be demonstrated that they are intended for sale, this is a punishable offence.

As a result of a study into the illegal doping trade (Koert & Van Kleij, 1998), the law was amended in 2001. Since 2001, illegal dealing in medicines has been covered by the Economic Crimes Act. Prior to 2001, illegal trade in medicines was regarded as a breach of the rules. Following the change in the law, it is now seen as a crime bearing the maximum sanctions in terms of custodial sentences and fines. Previously the maximum penalty was a six-month prison sentence and a maximum fine of €4,540. This is now a maximum six-year prison sentence and a €45,400



fine. Due to the stricter prison sentence, investigative powers have also been widened.

Another law which applies to a number of types of doping-designated substances is the Opium Act. This covers various types of drugs such as cannabis, cocaine, ecstasy, etc. In the Netherlands a distinction is made between List I (hard drugs, such as amphetamines and cocaine) and List II (soft drugs such as cannabis). According to the Opium Act, substances which appear on Lists I and II:

- may not be transported into or out of the territory of the Netherlands,
- may not be cultivated, packaged, processed, sold, delivered, supplied or transported,
- may not be possessed and/or
- manufactured

Infringements of this law may lead to punishments ranging from a six-month prison sentence to a maximum twelve-year prison sentence.

Thirdly there is the Penal Code. This contains various provisions which can be applied to doping use. A clear example of this is article 174, which states:

1. Anyone selling, offering for sale, delivering or distributing goods which he knows to be harmful to life or health, whilst not disclosing that harmful nature, shall be punished by a custodial sentence of a maximum of fifteen years or a category five fine.
2. In the event that death occurs, the guilty party shall be punished by life imprisonment or temporary imprisonment with a maximum of thirty years or a category five fine.

The Medicines Act is the most important law for tackling the trade and use of anabolic steroids. This is principally a task which is carried out by the Healthcare Inspectorate (IGZ).

Sweden

2.1. National legislation concerning doping

In Sweden, doping controls can be carried out by the Swedish Sports Confederation or the Swedish Police Authority. The Swedish Sports Confederation (RF) carries out controls involving active members in accordance with the regulations and doping rules of the Swedish Sports Confederation, WADC, and the Council of Europe Convention against Doping (Swedish Sports Confederation, 2011). The police can carry out doping controls at training facilities pursuant to the preliminary investigation with associated legal rules as stipulated in the Code of Judicial Procedure (rättegångsbalken, RB). However, under Swedish law the police are not allowed to carry out doping

controls on children aged under 15 without the permission of their parents. Children reach the age of criminal responsibility at the age of 15 in Sweden. Anyone younger than 15 who has committed a crime will be dealt with by the authorities. The courts in Sweden regard criminals up to the age of 21 as young people. Hence, people aged under 21 will receive lesser penalties than people aged over 21. Another way of carrying out doping controls at privately owned and municipal training facilities is to use a clinic or occupational health service which takes urine samples and analyses them as medical samples. This procedure is applicable mainly to employees of training facilities, not people who work out there (SOU 2011:10).

The Swedish Sports Confederation's regulations form the legal foundation for the implementation of doping controls at the training facilities affiliated to the Confederation. These regulations prescribe that doping controls may be carried out on all members within the sports movement. For training facilities not affiliated to the Swedish Sports Confederation (the majority of the training facilities in Sweden), the legal foundation is formed by the Swedish Act on Prohibition of Certain Doping Agents (SFS 1991:1969) (Swedish National Institute of Public Health, 2009).

However, there are overlaps between the sports rules and the Doping Act. One example which illustrates the problems with overlap is when a person who works out spends time at a training facility and has to undergo a doping control. If a person who is not affiliated to any sports association within the Swedish Sports Confederation returns a positive result, the case is assessed in accordance with the Doping Act. If the person is a registered member of a sports association within the Swedish Sports Confederation, the rules of the sport are applicable in the first instance and the sanctions will be in accordance with those rules, although the provisions of the Doping Act may also be applicable (SOU 2011:10).

Poland

2.1. National legislation concerning doping

Under the Polish system of anti-doping law, and specifically under the Act of 25 June 2010 (Dz.U. [Journal of Laws] No 127, item 857 as amended) it is possible to carry out doping control on persons who participate in sports competitions or prepare for sports competitions, which could lead to the conclusion that in some situations such control could also be carried out in fitness centres and gyms. However, the provisions of the law are not clear about this. In each case of doping control carried out in fitness centres, the controlling agency would have to prove that a person identified for doping control who is not an athlete practising sport professionally meets the criteria of the statutory definition, namely that the person in question is preparing for sports competitions (the statutory definition is discussed

further below). Consequently, it is not practical to apply this provision to doping control in fitness centres where amateurs not engaged in competition are involved, as it is not possible to objectively define their status.

The legal basis for doping control is stipulated in Article 44(5) (2) of the Act on Sport of 25 June 2010 (Dz.U. No 127, item 857 as amended), which provides that the Polish Commission Against Doping in Sport is particularly responsible for doping control both within and outside sports competitions. The definition of doping given in Article 43(1) of the Act on Sport lists the categories of athletes who can be identified for doping control. It follows from this article that a person participating in sports competitions or preparing for sports competitions can be found guilty of violating anti-doping rules. The definition also describes the categories of people who can be subject to doping control when it is likely that there could be violation of the anti-doping rules defined in the Act on Sport. These categories include the athlete's support personnel as well as a coach, physician, massage therapist or other person assisting the athlete. In Poland there are no regulations under which doping control could be directly carried out in fitness centres and gyms.

Under the Pharmaceutical Law of 6 September 2011 (Dz.U. No 126, item 1381 as amended) it is possible to control fitness centres and gyms with respect to the distribution of illegal pharmaceuticals, in particular AAS. The Law regulates the distribution of medicinal products on the territory of the Republic of Poland. It also provides for sanctions for illegal distribution of medicinal products, including AAS (Article 124 Pharmaceutical Law). Under this provision, it is possible to combat illegal distribution of such medicinal products. The authorities eligible to act under the provisions of the Pharmaceutical Law include the police, prosecutors, and state sanitary inspection and customs authorities. However, it must be remembered that any control in fitness centres and gyms with the aim of detecting illegal AAS can only be carried out when the police or the prosecutor have information which corroborates their suspicions that a crime has been committed.

It is currently difficult to pass on our experience in the application of the criminal provisions of the Act on Sport since it has only been in force for a short time. No criminal proceedings under Article 50(1) and (2) of the Act, i.e. administration of prohibited substances to an athlete or use of prohibited methods, have been instituted so far. The situation is entirely different in the case of the Act on Counteracting Drug Addiction, which serves as the basis for starting criminal proceedings. But we do not have any detailed data on the basis of which we could give an exact number of detainees. Criminal provisions of the Pharmaceutical Law apply in cases of illegal distribution of AAS.

Cyprus

2.1. National legislation concerning doping

Cyprus ratified the Anti-Doping Convention of the Council of Europe in 1993, the Additional Protocol to the Anti-Doping Convention of the Council of Europe in 2004 and the UNESCO International Convention against Doping in Sport in 2009.

The Ratifying Law for the International (UNESCO) Convention against Doping in Sport (hereinafter referred to as the "Law") came into effect on 15 May 2009. This Law determines that doping in sport and other related actions are criminal offences and specifies the appropriate sanctions. By Ministerial Decree issued by virtue of the Law, the Cyprus Anti-Doping Authority (CyADA) was established on 29 May 2009 as the competent authority responsible for the implementation and management of anti-doping policies in Cyprus. Other Ministerial Decrees issued by virtue of the Law define doping in sport, regulate the functioning of the CyADA including doping controls and the analysis of samples, regulate the functioning of the relevant disciplinary panels and specify the consequences in the case of doping.

Denmark

2.2. Is it legal for different authorities and organisations to exchange data on persons who have tested positive for doping?

Data exchange

Anti Doping Denmark enters into three different types of collaboration agreements on doping control with fitness centres:

1. With fitness centres in organised sport (cf. the obligations outlined in the Act on Promotion of Doping-Free Sport and the WADA Code)
2. Via the industry organisation, the Danish Fitness & Health Organisation (DFHO) (see 3.2)
3. Directly with commercial fitness centres that are not members of the DFHO

(See 4.1 for more information on the respective agreements)

The Act on Processing of Personal Data, which is administered by the Danish Data Protection Agency, makes it illegal for public authorities and private individuals in the open to exchange personal data, defined as information about an identified or identifiable physical person, in registers. Accordingly, Anti Doping Denmark and its partners are not permitted to exchange information about fitness members on whom sanctions have been imposed in connection with doping control in fitness centres. In practice, this means that until now a person who has tested positive at a centre under the DFHO, for example, can be excluded from all DFHO centres for two years.



However, since neither the DFHO nor Anti Doping Denmark can exchange personal data with the other partners about the sanction imposed on the fitness centre member, the person in question is free to join another fitness centre as long as it is not a member of the DFHO.

A working group under the Ministry of Culture consisting of representatives from the sports associations, DFHO, Anti Doping Denmark, the Ministry of Culture, the Ministry of Law and the Ministry of Interior and Health is currently discussing potential scenarios for the future sharing of data between the parties involved in anti-doping work.

The Netherlands

2.2. Is it legal for different authorities and organisations to exchange data on persons who have tested positive for doping?

At the moment it is unclear which authorities may share what information and subject to what conditions. However, as doping tests are not yet carried out in fitness centres, this is not currently an issue.

Sweden

2.2. Is it legal for different authorities and organisations to exchange data on persons who have tested positive for doping?

It is not possible, due to preliminary investigation confidentiality, to exchange information until legal proceedings have been started. There is a provision concerning confidentiality within the regulations of the Swedish Sports Confederation. This currently prevents the Swedish Sports Confederation from notifying the police of any suspected doping offences in sport. The cases referred to include information provided to the police concerning analysis results indicating the use of doping agents. In the individual cases in which the police have shown an interest, they have submitted a request to the prosecutor concerning a search and a formal request from the preliminary investigation manager to the Swedish Sports Confederation to be kept informed of the analysis result. After a decision has been made about a search, the Swedish Sports Confederation has submitted the requested information in accordance with the request (SOU 2011:10).



Poland

2.2. Is it legal for different authorities and organisations to exchange data on persons who have tested positive for doping?

Cases of anti-doping rule violations in Poland are not disclosed. Information about the violations is provided to the athlete, the Polish Sport Union and the Minister of Sport. Theoretically, exchange of data on persons tested positive for doping can be more extensive. In practice, however, this data has not been exchanged with the police or prosecutors. In Poland, as in other EU Member States, a regulation on personal data protection is in force. In Poland, personal data is protected by an Act of Parliament dated 27 August 1997 (Dz.U. No 133, item 883 as amended). As the Act on Sport does not authorise the Commission Against Doping in Sport to disclose information about the violation of anti-doping rules, it seems that it is not possible to disclose this information to the public. As regards exchange of data between different authorities, it seems that this is possible, but a more thorough analysis of applicable legal provisions is needed.

Denmark

2.3. Penalty for distribution, possession, use, etc. of doping substances

Maximum penalty for doping-related crime

The Act concerning the Prohibition of Certain Doping Substances, which is administered by the Ministry of Health, applies in Denmark.

The Act applies to the following groups of doping substances:

1. Anabolic steroids
2. Testosterone and testosterone derivatives as well as similar substances with androgenic effect
3. Growth hormones
4. Erythropoietin and substances with a similar effect of increasing the amount of red blood cells in the blood to above normal values for the age and gender in question
5. Substances that increase the production and release of
 - a. Growth hormones
 - b. Testosterone and testosterone derivatives as well as similar substances with androgenic effect, or
 - c. Endogenous erythropoietin

The doping substances in question must not be manufactured, imported, exported, traded, handed out, distributed or possessed unless according to a doctor's prescription in connection with the prevention of disease or treatment or for a scientific purpose. A breach is punishable by a fine or imprisonment for up to two years.

As a result of tightening of the legislation in 2009, trade in, transfer of or distribution of doping substances shall be regarded by the court as an aggravating factor when sentencing.

Sentencing

The Act concerning the Prohibition of Certain Doping Substances thus determines that any form of dealing with doping substances can be punished by up to two years' imprisonment. As in the case of narcotics, the courts distinguish between possession for personal use (which is normally punishable with a fine) and trade in doping substances (which normally results in imprisonment).

In a 2007 instruction to public prosecutors in Denmark (Memorandum no. 3 from 2007, amended in 2010), the Danish Director of Public Prosecutions indicated the "normal" level of punishment applied by the courts:

- Possession of doping substances for personal use is punishable with a fine. The fine amounts to a minimum of DKK 1,000/EUR 133 and increases according to the amount involved. Possession of 1,000 units is subject to a fine of DKK 13,000/EUR 1,733 which is the maximum. Possession of more than 1,000 units is not "for personal use", and the possession of more than 1,000 units is therefore punishable by imprisonment. In certain cases, the fine can be reduced, for example when the case involves a young person under 18. If aggravating circumstances apply, for example the possession of doping substances in prisons, a short period of imprisonment is imposed – as a minimum seven days.
- Sale or possession with a view to sale of up to 15,000 units is generally punishable by 20–60 days' imprisonment. When larger amounts are involved, the sentence is imprisonment for a certain number of months, depending on the amount and the circumstances of the case in general. It will be regarded as an aggravating circumstance, for example, if the person in question has previously been convicted of a similar crime.

There are relatively few examples in Danish legal practice of isolated cases involving trade in doping substances. Doping generally occurs in criminal cases relating to the sale of narcotics in which the doping substances isn't a part of the sentencing. The following examples from the period prior to the tightening of the legislation in 2009 show a number of general trends in sentencing:

- The Eastern High Court 1998 (unreported decision 25/5 1998): Approximately 17,500 units – sale: Four months' imprisonment, subject to community service, among other things.



- The Western High Court 2002: (Ugeskrift for Retsvæsen³ 2002 page 1311): Import and partial sale of doping substances worth approximately DKK 500,000: Four months' imprisonment
- The Western High Court 2002 (Ugeskrift for Retsvæsen 2002 page 555): Possession with a view to sale of 786 units – previously convicted for sale: Sixty days' imprisonment

Suspended sentences were common in the past, but following the amendment of the Act in 2009, trade in doping substances must, as a general rule, be punished with imprisonment (without suspension).

No decisions have yet been made pursuant to the new Act (Source: Poul Gade, Chief Prosecutor, PhD).

Penalties for drug crimes, for comparison

Like the Act concerning the Prohibition of Certain Doping Substances, the Danish Misuse of Drugs Act is administered by the Ministry of Health.

According to the Misuse of Drugs Act, a person who imports, exports, purchases, hands over, receives, manufactures, processes or possesses such substances in contravention of the Act with the intention to pass them on to a third party is punished by a fine or imprisonment of up to two years.

In addition, the Penal Code (section 191) states that a person who passes on euphoricants to a large number of individuals or against a major sum of money or under other aggravating circumstances in contravention of the Misuse of Drugs Act can be punished by imprisonment of up to ten years. If the transfer involves a considerable amount of a particularly dangerous or harmful substance or if the transfer of such a substance is otherwise of a particularly dangerous nature, the punishment can be increased to 16 years' imprisonment, cf. the Penal Code.

The Netherlands

2.3. Penalty for distribution, possession, use, etc. of doping substances

Illegal trade in, for example anabolic steroids, which is an infringement of the Medicines Act, may lead to a maximum six-year prison sentence and a maximum €45,400 fine.

Penalty for drugs crimes for comparison

For drugs offences and therefore infringements of the Opium Act, punishments vary from a maximum prison sentence of

six months to a maximum prison sentence of twelve years in conjunction with fines.

Sweden

2.3. Penalty for distribution, possession, use, etc. of doping substances

The use of and illegal trade in certain doping agents was identified as a problem in Sweden in the late 1980s. As regards the need for national legislation, the Government proposal concerning Prohibition of Certain Doping Agents (bill 1990/91:199) emphasises the following:

The issue has taken on wider significance due to the fact that doping has become more and more common and is now not only found in elite sports. It may be stated that nowadays doping not only occurs at sports competitions but is also utilised during training periods, as well as having reached new groups, such as exercisers and bodybuilders. Therefore, from a public health standpoint, there is reason to pay attention in any case to such types of doping where it may be feared that uncontrolled use would cause damage to the human organism. On 1 July 1992, Sweden was the first country in Europe to implement an Act (SFS 1991:1969) to regulate certain doping agents in Sweden. Through this Act, the Riksdag (Swedish Parliament) established the fact that doping is a social problem. The Act has been developed on a number of occasions. As a consequence of the Government appointing the Committee for Doping in 1996 (SOU 1996:126 part A), the proposal concerning Actions Against Doping (bill 1998/99:3) was compiled, which resulted in the law being tightened up. Use was criminalised in 1999, serious doping crime was introduced, and the scale of penalties was tightened up. The Act and tightening up of the scale of penalties have been reviewed again since 1999, and on 1 April 2011 the penalty for serious doping crime was increased from four to six years (Swedish National Institute of Public Health, 2009).

Substances covered by the Act:

Act (SFS 1991:1969) on Prohibition of Certain Doping Agents (the "Doping Act")

Section 1 states that the Act is applicable to

1. synthetic anabolic steroids,
2. testosterone and its derivatives,
3. growth hormones, and
4. chemical substances which increase the production or release of testosterone and its derivatives, or of growth hormones. (2011:112).

The definition of doping agents in the Act is generic. The generic definition is used to classify a whole group of products

³ A weekly journal which includes all High Court decisions and significant judgments and decisions from the Maritime Commercial Court and the High Courts, as well as a literary section which includes legal articles, comments on judgments and reports.

with a shared basic chemical structure instead of regulating each substance individually. This approach is different from the method used to regulate narcotics and products hazardous to health in Sweden. Lists linked to the ruling have been compiled for both narcotics and products hazardous to health. In political terms, these lists are justified by the fact that they lead to greater law and order. This means that there is no chance of being mistaken about which preparations are covered by the Act. The generic definition does not provide complete predictability, as the substances covered by the Act are not included in any legally binding list. As a complement to the Act, since February 2006 there has been an unofficial guideline list of substances which are deemed to be covered by the Act. This list can be accessed at www.fhi.se and is managed by the Swedish National Institute of Public Health, and decisions on all revisions are made in consultation with a group of experts (Swedish National Institute of Public Health, 2009).

All handling is a criminal offence according to the present wording of the Doping Act and, according to section 2, the substances in question must not, other than for medical or scientific purposes:

1. be brought into the country
2. be transferred
3. be produced
4. be acquired for the purpose of transfer
5. be offered for sale
6. be held in possession
7. be used

Anyone intentionally breaching sections 2–7 and committing doping crime will be sentenced to prison for a maximum of six years. If the crime can be considered minor, the person will be made to pay a fine or be sentenced to prison for a maximum of six months. In the event of serious crime, the person will be sentenced to prison for a minimum of six months and a maximum of six years. The quantity of the substance and other circumstances will be taken into consideration when deciding whether or not the crime is minor or serious. Penalties for bringing substances into the country illegally are specified in the provisions in the Act on Penalties for Smuggling (SFS 2000:1225). Anyone bringing a product into the country which is covered by a specific prohibition or conditions for import and who intentionally breaches this prohibition or these conditions by failing to report the product to customs will be sentenced to fines or prison for a maximum of two years for smuggling. If a crime is regarded as serious, anyone found guilty of serious smuggling will receive a prison sentence of a minimum of six months and a maximum of six years, which is the most common penalty imposed upon people who smuggle doping agents.

Penalty for drug crimes for comparison

In Sweden it is illegal to use, buy or possess narcotics, or to sell, exchange, lend or give away narcotics as a gift. It is also illegal to cultivate or produce narcotics in any other way. Narcotics may not be packaged, transported or stored. Nor may people arrange contact between buyers or sellers or help to transfer payment between buyers and sellers (SFS 1968:64).

The penalty for drug crime is set according to how serious the crime is. In the case of minor drug crimes, the court may impose fines or a prison sentence for a maximum of six months. More serious crimes are always punished with prison sentences, normally up to a maximum of three years. If the crime is considered serious, the penalty is imprisonment for a minimum of two years and a maximum of ten years.

Drug Offences Act (1968:64), section 1:

Anyone who illegally

1. transfers narcotics,
2. produces narcotics which are intended for abuse,
3. acquires narcotics for the purpose of transfer,
4. acquires, processes, packages, transports, stores or has any other such dealings with narcotics which are not intended for the person's own use,
5. offers narcotics for sale, stores or raises payment for narcotics, arranges contact between sellers and buyers or undertakes any other such measure if the procedure is intended to promote trade in narcotics, or
6. possesses, uses or has any other dealings with narcotics will be sentenced to prison for drug crime for a maximum of three years, if the crime is committed intentionally.

Provisions concerning penalties for the illegal import and export of narcotics and illegal dealings with narcotics in certain cases are included in the Act on Penalties for Smuggling.

Poland

2.3. Penalty for distribution, possession, use, etc. of doping substances

Pursuant to the applicable law, there are two types of penalty for distribution and possession of doping substances. The first category relates to a situation in which the perpetrator is the person who participates or who prepares for participation in sport competitions. If possession or distribution is in connection with sport competition, a penalty of four year suspension can be imposed on the offender. The penalty is treated as a disciplinary measure. The act on sport, which regulates when anti-doping rules are violated, provides for penalties for the administration of prohibited substances to athletes or use of prohibited methods. In such cases a fine, restriction of liberty or two year imprisonment can be imposed on the person found



guilty of administering prohibited substances to athletes or using prohibited methods. The other category includes a wide range of subjects who violate the ban on distribution, possession, production or transport of narcotic substances or illegal pharmaceuticals.

Two provisions of article 62 of the Act on Counteracting Drug Addiction of 29 July 2005 (Dz.U. No 179, item 1485 as amended) apply. Under these provisions, offenders face a fine or a three-year prison sentence. In the case of possession of large quantities of intoxicating or psychotropic substances, the penalty is from one year to 10 years of imprisonment. When intoxicating or psychotropic substances are possessed in small quantities and for private use, proceedings against the offender can be discontinued. Furthermore, the Act on Counteracting Drug Addiction provides for penalties for the production, processing and theft of intoxicating or psychotropic substances, and for the possession and distribution of tools used to produce intoxicating or psychotropic substances.

In the case of production of drugs, the penalty is from 6 months to 8 years of imprisonment. The Act on Counteracting Drug Addiction also provides for penalties for people guilty of importation, exportation, transportation and intracommunity purchase or intracommunity supply of intoxicating and psychotropic substances and opium poppies. The penalty for these offences ranges from a fine to 5 years of imprisonment.

This category also includes offences committed against the Pharmaceutical Law. Article 124 of the Pharmaceutical Law provides for a fine, restriction of liberty or a two-year prison sentence for any person found guilty of marketing a medicinal product or of storing a medicinal product for the purpose of its marketing without a marketing authorisation. On the basis of this legal act, it is possible to class anabolic steroids as a medical product.

Cyprus

2.3. Penalty for distribution, possession, use, etc. of doping substances

Under the Ratifying Law for the International (UNESCO) Convention against Doping in Sport of 2009 and 2011, the following penalties apply:

A person convicted of possessing, or trafficking or supplying or administering any prohibited substances or prohibited methods as defined in the Prohibited List of the World Anti-Doping Agency which is annexed to the Law is subject to imprisonment for a period not exceeding five years, or to a fine not exceeding €50,000 or both. It is implied that, should any of the above-mentioned offences be committed against an athlete who is

a minor, i.e. not older than eighteen (18) years, the sanctions imposed can be doubled.

A person convicted of using prohibited substances or prohibited methods is subject to imprisonment for a period not exceeding two years, or to a fine not exceeding €10,000 or both.

Denmark

2.4. Opportunity for IT monitoring and closure of websites used as sales channels

The police can study and monitor the content of publicly available websites if warranted, e.g. if they suspect that the websites are being used to commit a punishable offence.

If the police are to read information not available to the public on an IT system, e.g. messages in an internal e-mail system on the website using software or other equipment (data scanning), it is a requirement that the investigation relates to a criminal offence punishable by six years' imprisonment or more under section 791(b)(1) of the Danish Administration of Justice Act. As the maximum penalty for breaching the Act concerning the Prohibition of Certain Doping Substances is limited to up to two years' imprisonment (cf. section 3(1) of that Act), such measures cannot be taken in matters relating to doping legislation.

If the information not available to the public exists on a computer or server, the police can access it according to the rules concerning searches set out in the Administration of Justice Act, depending on the circumstances. The same applies to breaches of the Act concerning the Prohibition of Certain Doping Substances.

The provisions of the Administration of Justice Act regarding impounding also apply to computer data on websites, and the police can therefore, depending on the circumstances, seize the content of web pages with a view to confiscation, e.g. if there are reasons to believe that the website is being used to contravene the Act concerning the Prohibition of Certain Doping Substances, cf. sections 802 and 803 of the Administration of Justice Act and section 75(2) of the Penal Code.

Websites that deal with illegal doping substances and target Danes – websites in Danish, for example – can be investigated by the Danish customs and tax authorities, e.g. to determine the ownership of the websites. If warranted, the Danish customs and tax authorities can institute proceedings against Danish owners, if applicable, or other parties involved. For further information regarding criminal prosecution, see the Tax Control Act, the Value Added Tax Act and the Penal Code.

The Netherlands

2.4. Opportunity for IT monitoring and closure of websites used as sales channels

An increasing amount of trade in doping and/or AAS occurs via the Internet (Wassink et al., 2010; Van de Ven, 2011). The authority which is able to act against this in the first instance is the Healthcare Inspectorate (IGZ). It is able to tackle illegal trade in medicines. Another government authority which can play a role is the Fiscal Information and Detection Service – Economic Control Service, (FIOD-ECD) for short. The FIOD-ECD is a detection service which is part of the Tax Authority and has the following aims:

- to combat fiscal, financial and economic fraud
- to guarantee a sound professional and business sector
- to combat organised criminality

Sweden

2.4. Opportunity for IT monitoring and closure of websites used as sales channels

The police have the option of monitoring websites, but as the people behind such websites often use encrypted IP addresses it is difficult to monitor them. The police do not engage in any general surveillance of websites which sell doping preparations, but on the other hand they can request IP addresses from Internet service providers in respect of doping cases, for example. Internet service providers are under no obligation to submit IP addresses to the police; but there is good cooperation between the police and Internet service providers. However, the police do generally know which sites sell doping agents in Sweden and use targeted surveillance for doping cases. There is no legislation in Sweden which permits closure of websites that sell doping agents (C. Fant, The National Swedish Criminal Investigations Department. Personal communication, 6 September 2011).

Denmark

2.5. Opportunity for doping control (for AAS) of persons arrested in connection with violence

It has been scientifically proven that the use of steroids can result in increased aggression, a short fuse and reduced impulse control and empathy (Thiblin et al., 2002; Pope et al., 2000; Beaver et al., 2008; Midgley et al., 2001 and others). It is therefore relevant to test people for anabolic steroids if they are arrested in connection with violence, in the same way as tests for stimulating substances and alcohol used in similar situations, as these stimulants are thought to have a potential effect on the nature of the crime or the degree of violence.

The presence of anabolic steroids can only be determined by testing a urine sample.

Section 792(1)(ii) of the Administration of Justice Act states that physical intervention can be used against the accused and others in connection with an investigation. This can involve a detailed examination of the body, including its cavities, extraction of saliva or blood samples or other similar samples, X-ray examinations and similar.

Section 792(a)(2) of the Administration of Justice Act states that a physical examination of an accused person can only take place if there are reasons to believe that the person in question has committed an offence that can lead to 18 months' imprisonment or more according to the Act (or a breach of section 249, first sentence of the Danish Penal Code) and if the intervention is deemed to be essential to the investigation. In addition, blood samples can be taken if there are reasons to believe that the person in question has committed an offence in which the consumption of alcohol or euphoricants has played a role, cf. section 792(b)(2) of the Administration of Justice Act.

Whether the police are allowed to take urine samples from an accused therefore depends on what offence the person is suspected of having committed and whether the result of the analysis is essential for the investigation of the crime that has been committed. This means that it is believed that the use of different substances could potentially have been relevant to the crime; either the nature of the crime, the degree of violence, or similar.

The Netherlands

2.5. Opportunity for doping control (for AAS) of persons arrested in connection with violence

In principle this should be possible, but in practice it probably never, or hardly ever, occurs. There is no data on the subject. It is likely that no-one has ever thought of doing this.

Sweden

2.5. Opportunity for doping control (for AAS) of persons arrested in connection with violence

The police are entitled to take blood and/or urine samples in the event of violent crimes or other crimes if there is reasonable cause to suspect doping crime. One example of this is when extreme and gratuitous violence has been used; but unfortunately samples are not taken as a matter of routine in such instances, although the number of samples taken has increased over the past few years (SNPE, 2008).

Common contribution

Summary of Chapter 2

There are major differences in anti-doping legislation between the countries that have contributed to the report. These differences relate to the areas of doping control, the substances clas-



sified as illegal, and the maximum penalty for violations such as the possession of steroids.

Anti-doping legislation also acts as a tool in the battle against steroids and doping in general. In some areas, legislation contributes to the anti-doping work. One example is the Danish Smiley scheme, which gives fitness members the option of actively choosing fitness centres that cooperate with Anti Doping Denmark. The Netherlands and Sweden have higher maximum penalties than Denmark, and the police are in a better position to put manufacturers and dealers out of action with imprisonment and substantial fines.

In other areas, legislation can limit the opportunities for anti-doping work. An example is the wording of the Polish anti-doping legislation, which only allows doping control on individuals who take part in or prepare for sporting competitions. This hampers the doping control of normal fitness centre members, as they do not necessarily train in order to take part in sporting competitions. In Denmark, the rules on IT monitoring in combination with the relatively light maximum penalty prevent the police from accessing information that is not publicly available (e.g. private e-mails), which hampers the investigation of matters relating to the distribution of steroids, for example.

In general, the data collected from the contributing countries shows that the maximum penalty for violations relating to doping substances is lighter than for narcotics in general. This appears to apply despite the European Commission's 2007 White Book on sport, which recommends a focus on the use of legislative measures to combat doping. In this regard, the Commission recommends that trade in illegal doping substances be treated on a par with trade in illegal narcotics throughout the EU (European Commission, 2007: 4–5).

The data also shows that the contributing countries have limited opportunities for data exchange. Fitness chains and fitness centres do not currently have the possibility of exchanging data about quarantining imposed in connection with positive doping tests at fitness centres. As a result, the individuals concerned can simply change fitness chain or fitness centre, which undermines the doping control and the effect of the quarantining.

The data also shows that there are several websites that openly sell prohibited doping substances in the language of the country in question. In practice, the police have difficulty closing down the websites and prosecuting the people behind them, as the website browsers are registered in third countries, the IP addresses are encrypted, or local legislation does not permit the necessary measures.





3. FITNESS CENTRES IN THE COUNTRIES

This chapter gives an overview of the numbers of fitness centres and how they are organised – under organised sport, as commercial centres or in other ways. The chapter pays attention to, if the fitness centres carry out preventive anti-doping work, which can be seen as an indication on whether the industry takes on a social responsibility. Finally, it examines in which extent national certification programmes exist, concerning doping prevention, nutritional supplements, anti-doping policy etc. exist.

Denmark

3.1. How many fitness centres are registered in the country?

Denmark has a total of approximately 716 fitness centres. According to the latest survey by the Danish Institute for Sports Studies (IDAN), there were 427 commercial fitness centres at the end of 2010 (Kirkegaard, 2011), and, as at 1 October 2011, 290 fitness centres under the national sports federations (Source: The Danish Gymnastics and Sports Associations (DGI)).

According to IDAN, there are a total of approximately 700,000 fitness centre members in Denmark, of which 540,000 are members of commercial fitness centres, 135,000 are members of fitness centres under sports associations, and 25,000 are members of physiotherapy centres (Kirkegaard, 2011).

The Netherlands

3.1 How many fitness centres are registered in the country?

Fitness has become popular in the Netherlands. The number of fitness centres has quadrupled in the last 20 years (Lucassen & Schendel, 2008). According to the most recent wide-scale study into fitness centres, there were 2,041 registered fitness centres in the Netherlands in 2007 (Lucassen & Schendel, 2008). With a population of around 16 million inhabitants, that equates to one fitness centre per 8,000 inhabitants. In total, almost 2 million people are members of a fitness centre, which is 12% of the population. Fitness is one of the most popular forms of sporting activity. Currently, more people take part in fitness activities than the most popular team sports of football, tennis and swimming (Lucassen & Schendel, 2008).

There is a wide prevalence of fitness centres across the Netherlands. The average fitness centre has around 1,000 members. The average number of staff per fitness centre is 13 (5.7 full-time equivalent), of whom a large number are fitness instructors (Lucassen & Schendel, 2008). A relatively large number of part-time workers are employed in the fitness sector – around 80%. Fitness members are primarily to be found in the 19 – 34 age group, although growing numbers of young people and senior citizens are also represented. There is a small majority

of women (56% of members are female) compared to men (Stubbe et al., 2009). One-half of the fitness centre users live in an urban environment and only 10% in rural areas. There are relatively few centres in cities, however, although these do have a large membership (Lucassen & Schendel, 2008).

Sweden

3.1. How many fitness centres are registered in the country?

There are no precise details on the number of fitness centres and training facilities in Sweden. One indicator of the extent of the industry can be found on the www.121.nu website, which provides information on companies in Sweden. The following details were listed for the fitness centre industry on 18 July 2011:

It is stated that there are 824 active/registered fitness centre companies throughout Sweden. Of these, there are 227 in Stockholm, 73 in Gothenburg and 70 in Malmö.

To get an idea of the sport and exercise habits of the people of Sweden, the Swedish Sports Confederation carries out annual surveys. Between October and December 2010, Statistics Sweden (Statistiska Centralbyrån, SCB) carried out the latest survey of the competition and exercise habits of Swedish people on behalf of the Swedish Sports Confederation. According to the survey, a total of 23% of the Swedish population (1,714,000 people) take part in weight training at least once a month (24% of men, 901,000 people, and 22% of women, 813,000 people) (Swedish Sports Confederation, 2011).

Poland

3.1. How many fitness centres are registered in the country?

There is no register of fitness centres. Fitness centres are usually registered as operators of economic activity in the area of sport and recreation. This is a general concept, which does not lend itself to precise identification of the number of entities providing fitness services. According to Google, which is not a reliable source of information, there are about 6,000 fitness centres. Most certainly this number is incorrect as not all fitness centres promote themselves on the Internet and some might be represented more than ones.

Cyprus

3.1. How many fitness centres are registered in the country?

In Cyprus, according to the Report of the General Auditor of the Republic (2011) as at 12.04.2011, the Cyprus Sports Organisation, which is the highest sports authority in the country, had registered 404 fitness centres as well as 96 additional fitness centres operating in hotels.

Denmark

3.2. How are they organised – under organised sports, as commercial centres or both?

Denmark has both fitness centres organised under the large national sports federations and traditional commercial fitness centres. In addition, there are training facilities in association with municipal sports centres such as aquatic centres and facilities at physiotherapy clinics and in similar places. It is a common feature of most of these centres that anyone can walk in and sign up or purchase access to the facilities, as at commercial centres. In this context they will therefore be considered part of the same group.

Fitness centres under organised sport

Denmark has three large national sports federations: The National Olympic Committee and Sports Confederation of Denmark (DIF), the Danish Gymnastics and Sports Associations (DGI) and the Danish Federation for Company Sports (DFIF), all of which offer fitness centre memberships along with other forms of sports.

Commercial fitness centres

Denmark has three dominant fitness chains: Fitness World A/S with 97 centres, Fitness DK A/S with 38 centres, and Dansk Fitness a.m.b.a. with 13 centres (as at 29 February 2012). To this should be added a number of smaller chains and several independent centres.

The Danish Fitness & Health Organisation (DFHO) was established in 2006. DFHO is a non-profit industry organisation which represents, promotes and protects the fitness industry in Denmark. Centres that are members of DFHO are covered by a solidarity scheme in which a number of doping controls are distributed among all centre members based on a risk assessment of the individual centres.

As at 1 October 2011, the industry organisation had a total of 170 centre members, including the large fitness chains.

The Netherlands

3.2. How are they organised – under organised sports, as commercial centres or both?

Of the total sporting activity in the Netherlands, 46% takes place in a team context, 28% is non-organised and 17% is in a fitness centre or sports school (Lucassen & Schendel, 2008). Almost all fitness centres in the Netherlands are commercially run. Some of these fitness centres are also involved in organised sport, via a sporting association or sports federation. Thus, 3% of them are linked to the KNKF (*Koninklijke Nederlandse Krachtsport en Fitnessfederatie* – Royal Dutch Strength and Fitness Federation), 2% to the NBBF (*Nederlandse Bodybuilding en Fitness Federatie* – Dutch Bodybuilding and Fitness Federa-

tion) and 22% to other organisations including sports associations such as the JBN (*Judo Bond Nederland* – Dutch Judo Federation) (Stubbe et al., 2009).

The largest organisations to which fitness centres are affiliated are Fit!vak (a trade organisation for approved sports and activity centres in the Netherlands), the EFAA (a service organisation for sports and health centres) and the LERF (*Stichting Landelijke Erkenning Regeling Fitness* – National Fitness Accreditation Scheme Association). Fit!vak is the largest, with 890 members (September 2011). Almost 33% of the centres are not affiliated to any organisation (Stubbe et al., 2009).

There is a great deal of diversity among fitness centres in terms of membership numbers, the service offered and the organisational structure. Some centres have a very simple offering, but multi-sports centres also exist. Some offer combat sports or physiotherapy and various other wellness activities (sun beds, sauna, beauty salons, etc.).

One trend which has emerged in recent years is for the centres to be organised in chains. This has increased dramatically in the past few years. There are 30 such fitness chains in the Netherlands. The largest has around 40 branches. Almost 85% of all the centres in the Netherlands are not part of a chain.

Sweden

3.2. How are they organised – under organised sports, as commercial centres or both?

The most common forms of organisation among these companies are stated to be limited liability companies (368), sole traders (160), partnerships/limited liability partnerships (55) and non-profit organisations (45).

In addition, there are fitness centres and training facilities run by the municipalities as part of their administration, as well as the sports associations affiliated with the Swedish Sports Confederation which operate fitness centres. There are more than 100 Friskis och Svettis (Keep Fit) clubs in Sweden. There are also clubs operating in the field of inter-company sports, strength lifting and weightlifting, and also athletics, gymnastics, squash, etc. which run fitness centre operations, but their number has never been recorded (personal communication from Håkan Nyberg, Swedish Sports Confederation, 7 September 2011).

Poland

3.2. How are they organised – under organised sports, as commercial centres or both?

Most of the fitness centres are organised as commercial centres. A much smaller number of fitness centres are financed by municipalities or towns.



Cyprus

3.2. How are they organised – under organised sports, as commercial centres or both?

According to the 1995 Private Schools of Gymnastics Regulations¹ issued by the Cyprus Sports Organisation, each fitness centre must acquire an operating licence from the Cyprus Sports Organisation which will then register the fitness centre in its Sports Registry. This Regulation does not prohibit the provision of paid services by the fitness centres to their customers.

Denmark

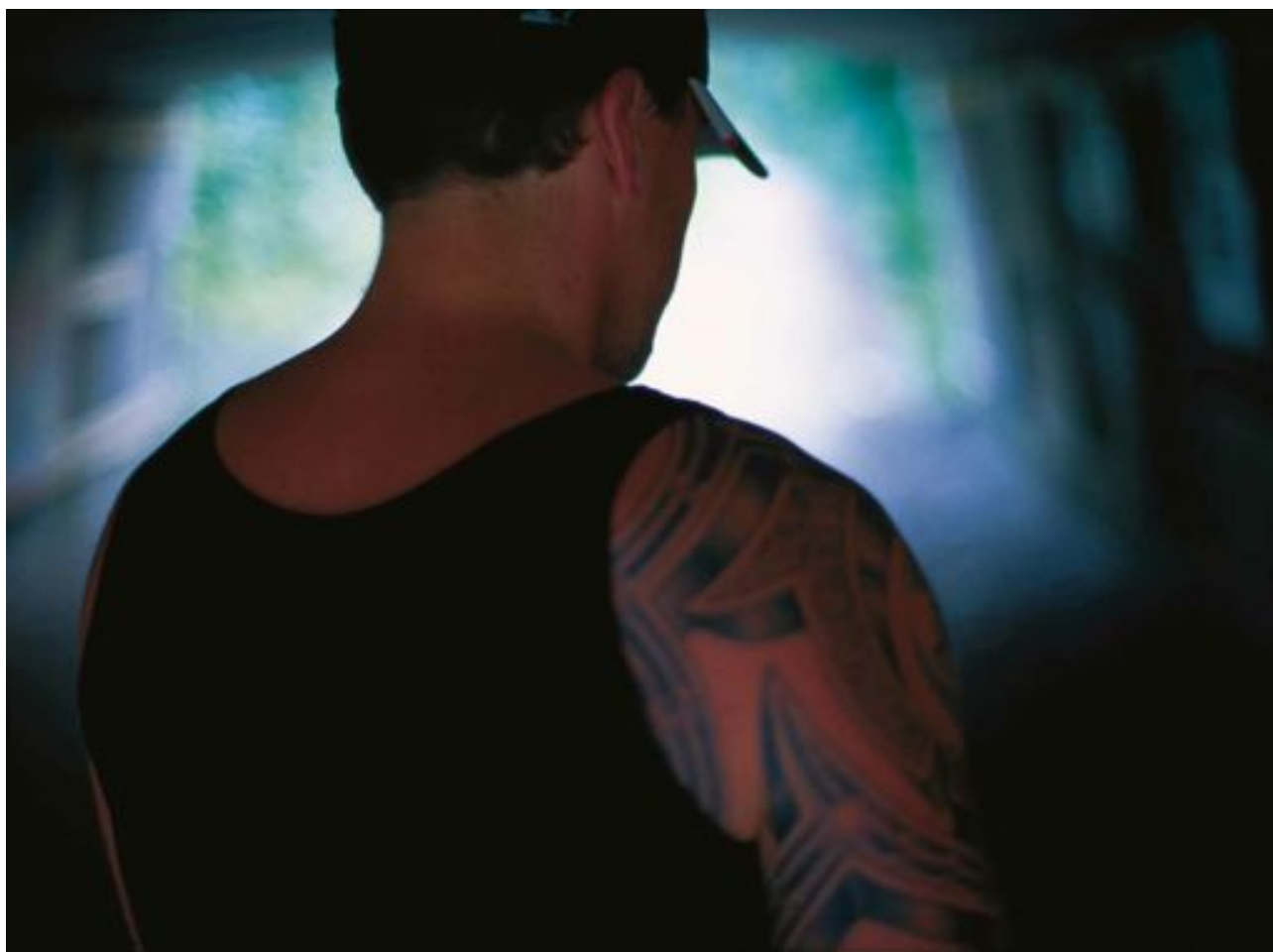
3.3. Do fitness centres carry out preventive anti-doping work?

All fitness centres that have a doping control agreement with Anti Doping Denmark receive information material that targets centre members, material for instructors and other staff, and offers of consultancy, lectures, training, etc. (see 6.1 for more on information material).

¹ 1995 Private Schools of Gymnastics Regulations, <http://cyprusgsla.com/> (visited 22 September 2011).

A 2010 survey by the Danish Institute for Sports Studies (IDAN), in which owners and centre managers at commercial fitness centres were asked about their attitude to anti-doping work, shows that 93% of the respondents think the fitness sector has a responsibility for combating fitness doping (IDAN, 2010: 81). Nevertheless, only one-third (27%) of the surveyed centres that were party to a doping control agreement had carried out any anti-doping work at their local centre on their own initiative at the time of the survey. This appears to indicate that the centres place the responsibility for combating fitness doping with Anti Doping Denmark (IDAN, 2010: 86).

Part of Anti Doping Denmark's strategy to combat fitness doping has specifically been to promote co-ownership and responsibility in this area among the individual centres by ensuring local anchoring of the work. It is the impression of Anti Doping Denmark that this has been well received by the fitness centres in general – both fitness centres under organised sport and commercial centres. As at 1 September 2011, 234 people had been appointed as voluntary local anti-doping managers at centres that cooperate with Anti Doping Denmark. The centre's



anti-doping manager is Anti Doping Denmark's contact person and has the following areas of responsibility at the local centre:

- to keep up-to-date with knowledge regarding the most common doping substances and the rules and procedures that apply to anti-doping work at fitness centres
- to ensure that other staff and volunteers at the centre are familiar with the anti-doping work and the rules that apply
- to ensure that the centre always has information material on display
- to ensure that the centre focuses on anti-doping measures
- to ensure that the risk that any nutritional supplements sold at the centre contain prohibited substances is minimal, cf. the risk assessment² prepared by the National Olympic Committee and Sports Confederation of Denmark (DIF) and Team Denmark³
- to ensure that the centre has an anti-doping policy and action plan
- to be responsible for or participate in talks with members suspected of using doping substances

The anti-doping manager receives regular newsletters from Anti Doping Denmark containing advice, new material, if applicable, and general up-to-date information on the topic.

IDAN's survey (2010) shows that 63% of the surveyed centres without a doping control agreement had defined a doping policy and published it to centre members, for example on a website. According to the information provided, these centres therefore also take an active stance on fitness doping (IDAN, 2010: 82).

The Netherlands

3.3. Do fitness centres carry out preventive anti-doping work?

There are no precise figures regarding how many fitness centres in the Netherlands have an anti-doping policy.

Centres which are affiliated to the professional association Fit'vak must be approved by the LERF prior to being permitted to become a member. LERF stands for Stichting Landelijke Erkenning Regeling Fitness (National Fitness Accreditation Scheme Association) and accredits centres based on a number of quality standards. One of the conditions is the signing of an anti-doping covenant in which the fitness centre declares that it has an anti-doping policy in order to combat and prevent doping use. The number of centres in the Netherlands which have done so is 890 (out of a total of approximately 2,000).

² The so-called Grey area Memorandum ([http://www.teamdanmark.dk/CMS/cmsresources.nsf/filenames/Gråzonenotat%202008%20retrtet%20dec%202009.pdf/\\$file/Gråzonenotat%202008%20retrtet%20dec%202009.pdf](http://www.teamdanmark.dk/CMS/cmsresources.nsf/filenames/Gråzonenotat%202008%20retrtet%20dec%202009.pdf/$file/Gråzonenotat%202008%20retrtet%20dec%202009.pdf))

³ The Danish elite sport organisation

In addition, centres can participate in the Doping Authority's Eigen Kracht (True Strength) campaign (further information about this campaign can be found in Chapter 6). 141 fitness centres were participating in this campaign at the end of December 2011.

Sweden

3.3. Do fitness centres carry out preventive anti-doping work?

Yes, see Chapter 6 – Preventive work.

Poland

3.3. Do fitness centres carry out preventive anti-doping work?

Generally, owners of fitness centres are not interested in the promotion of preventive anti-doping work because of the negative associations that such work can invoke in persons who practise in fitness centres. Owners of fitness centres believe that promotion of clean sport can lead to a pejorative perception of their activity, the same perception as that of the police or other organisations involved in combating socially harmful phenomena. Since the social attitude to the law enforcement agencies is negative, particularly among the so-called “neds”, “football hooligans” or persons active in the so-called “grey zone” who usually use fitness centres, owners of fitness centres try to meet the expectations of their customers – who usually do not feel like participating in information campaign-related activity during their training. Obviously, the problem cannot be generalised – among users of fitness centres there are well-educated persons, earning good salaries, who are usually aware of the consequences of using doping or taking anabolic-androgenic steroids.

Cyprus

3.3. Do fitness centres carry out preventive anti-doping work?

There is no data with regard to the activities of fitness centres related to anti-doping.

Denmark

3.4. National certification schemes according to e.g. doping prevention, nutritional supplements policy, etc.

Denmark does not have a general national certification scheme for fitness centres based on e.g. preventive anti-doping work, a policy on nutritional supplements, etc.

The National Olympic Committee and Sports Confederation of Denmark (DIF) and the Danish Gymnastics and Sports Associations (DGI) are jointly responsible for the Club Fitness concept (Foreningsfitness). This involves an internal certifica-

tion scheme that includes anti-doping work as a standard component. It is thus a requirement for certification that the centre:

- has an anti-doping policy including an action plan in the event of suspicion or knowledge of doping abuse among its members
- displays information material about anti-doping
- has free weights up to 26 kg only
- only uses instructors who, as a minimum, have completed Club Fitness' internal instructor training of 40 hours

(Source: Ruben Lundtoft, Project Manager, Club Fitness).

The Netherlands

3.4. National certification schemes according to e.g. doping prevention, nutritional supplements policy, etc.

There is no government-imposed national certification system for doping prevention. There is, however, a National Fitness Accreditation Scheme Association (*Stichting Landelijke Erkenning Regeling Fitness – LERF*) which certifies centres and also checks anti-doping policy, although this is fairly limited.

Another development is the registration and approval of fitness instructors in the Netherlands. This is coordinated by Fit'lvak in collaboration with the EHFA and is run via the European Register of Exercise Professionals (EREPS). In the Netherlands, the register has been in existence for approximately one year (www.ereps.nl). If Dutch fitness professionals wish to be eligible for registration with the EREPS, they must hold an industry-approved diploma. It is also possible for a fitness centre to obtain EREPS accreditation, provided that the fitness centre employs at least 3 EREPS instructors. The intention is to include EREPS in LERF certification at a later stage.

EREPS has a Code of Ethical Practice. This includes a reference to doping, namely: "that it shall never stimulate or approve of the use of prohibited drugs or other banned substances for performance enhancement". The code does not define exactly what these banned substances are, nor does it state the consequences if the code is not adhered to.

In respect of food supplements, there is no specific national policy and no policy directly related to the fitness sector. Questions regarding nutritional supplements were also prompted by research into doping substances carried out in 2008 (Stubbe et al., 2009). It was evident from this that 45% of the fitness centres which took part in the research sold nutritional supplements.

It was evident from research on several occasions that nutritional supplements can be contaminated with doping-designated substances, without the substance(s) being stated on the label.

As a result, elite athletes run the risk of testing positive in a doping control. In order to reduce this risk as much as possible, a security system for supplements was developed in 2003 (De Hon & Coumans, 2007). The system is called the Nederlands Zekerheidssysteem Voedingssupplementen Topsport (NZVT; The Netherlands Security System Nutritional Supplements Elite Sports). Sports athletes at a lower level and fitness members can make use of the system and by doing so minimise the risk of using a supplement contaminated with doping substances.

Sweden

3.4. National certification schemes according to e.g. doping prevention, nutritional supplements policy, etc.

There is currently not any national independent anti-doping organisation in Sweden, nor is there a national certification system for training facilities. On 3 December 2009, the Government decided to appoint a special investigator who should submit proposals for the structuring of future national anti-doping operations and examining the options for forming an independent national anti-doping organisation, for which the State and the central sports organisation would share responsibility. This committee, which adopted the name Organisation Committee against Doping (Ku 2009:03), submitted its report "*Antidopning Sverige – En ny väg för arbetet mot dopning*" (Anti-doping Sweden – A new path for work against doping – SOU 2011:10) in January 2011. The Committee proposes that an independent national anti-doping organisation (NADO) should be formed and that the NADO should be a private limited liability company, with the State and the Swedish Sports Confederation as owners at the time of formation. It is suggested that the NADO should be named Antidopning Sverige AB (Anti-Doping Sweden in English).

Proposed tasks outside sports

In its review of various groups working to counteract doping in society, the committee has established that there is a need for coordination and cooperation. The Swedish National Institute of Public Health holds significant responsibility for this work, but there is a need for a partner with more operational responsibility. Such areas may include compilation of a knowledge base which includes anti-doping operations and experience from various projects against doping which are run in society in order to facilitate the promotion of good examples and development of such project activities. The representatives of fitness centres and training facilities met by the Committee have expressed a strong desire for the NADO to be able to work with fitness centres and training facilities preventively against doping, including the implementation of doping controls. The committee proposes that the NADO should be allocated the following tasks outside sports:

- To initiate research into anti-doping issues in society and give advice based on such research
- To build and update a national knowledge base with regard to anti-doping
- To implement preventive anti-doping measures aimed at fitness centres and training facilities
- Targeted training and information initiatives with regard to anti-doping
- Other information and opinion-forming activities with regard to anti-doping
- Put together a partnership with the Swedish National Institute of Public Health on issues of significance to doping prevention work

Poland

3.4. National certification schemes according to e.g. doping prevention, nutritional supplements policy, etc.

The Institute of Sport and the National Medicines Institute plan to implement a nutritional supplement certification programme monitoring that supplements are not contaminated with substances prohibited in sport. The programme is based on two basic pillars, one being a laboratory conducting analyses of products covered by the programme and the other being a certification system. To a large extent, the programme has been based on the Dutch programme of nutritional supplement certification. Work on the implementation of the Polish programme is fairly advanced; the programme should start in mid-2012.

Cyprus

3.4. National certification schemes according to e.g. doping prevention, nutritional supplements policy, etc.

No fitness centre certification schemes have been applied in Cyprus with regard to doping prevention or the application of policies with regard to nutritional supplements.

Common contribution

Summary of Chapter 3

Fitness is the most popular physical activity in all the countries represented. However, there is no central record of the number of fitness centres in the contributing countries, and there are also no specific restrictions or criteria that has to be met for a centre to be categorised as a fitness centre. Denmark, the Netherlands and Sweden nevertheless have access to approximate figures.

The users of steroids are often men who frequent fitness centres, and good collaboration between the national anti-doping authority and the fitness industry is therefore essential. There are nevertheless huge differences between the contributing

countries regarding the degree of collaboration between the anti-doping authority and the fitness industry and in terms of the fitness industry's perception of its responsibility for the fight against fitness doping and for taking its own anti-doping initiatives.

In Denmark, the vast majority of fitness centres cooperate with Anti Doping Denmark, which means that there is regular doping control at their premises and they receive information material, etc. However, even in Denmark, where the majority of owners and managers of fitness centres think the fitness sector has a responsibility to combat fitness doping, limited anti-doping work is generally carried out at the initiative of the fitness centres. In other countries, the owners of fitness centres are generally not interested in taking part in any form of anti-doping work, as they think it will create negative associations concerning the fitness activity.

In general, it is difficult to establish a constructive dialogue with the fitness centres and to make them aware that anti-doping work promotes a doping-free environment and that a doping-free environment is what the vast majority of fitness centre members want.



4. DOPING CONTROL IN FITNESS CENTRES

The chapter looks at the experiences with doping control in fitness centres, including how it is done, how many centres have control on a regular basis and what the test statistics look like? The chapter presents, the fitness centres own views and reasons for and against choosing doping control. The existing practical procedures for doping control are described in the last part of the chapter.

Denmark

4.1. Is doping control done in fitness centres?

Anti Doping Denmark works with three types of collaboration agreements in connection with doping control in fitness centres.

All fitness centres under the national sports federations (the National Olympic Committee and Sports Confederation of Denmark (DIF), the Danish Gymnastics and Sports Associations (DGI) and the Danish Federation for Company Sports (DFIF)) are obliged by the Act on Promotion of Doping-Free Sport and the WADA Code to carry out anti-doping work, including doping control, subject to any modifications pursuant to the anti-doping regulations for recreational sports (see 2.1). Anti Doping Denmark can therefore carry out tests at all fitness centres under organised sport. A number of tests are distributed each year to the individual organisations according to a risk assessment carried out by Anti Doping Denmark, the organisation in question, and the individual centres.

Anti Doping Denmark has concluded a doping control agreement with the industry organisation of fitness centres, the Danish Fitness & Health Organisation (DFHO) (see 3.2). A number of doping tests are distributed each year to the member centres according to a risk assessment carried out in collaboration between Anti Doping Denmark, the DFHO and the individual centres.

Private commercial fitness centres conclude a doping control agreement directly with Anti Doping Denmark. A standard agreement involves two visits to the centre, and two samples are taken at each visit.

4.1.1 How many fitness centres?

Anti Doping Denmark can carry out doping control at all fitness centres associated with DIF, DGI and DFIF; a total of 290 centres as at 1 October 2011.

To this should be added 228 commercial fitness centres with a voluntary doping control agreement with Anti Doping Denmark (as at 1 October 2011). Of these, 170 centres are members of DFHO, and 58 centres have a direct agreement with Anti Doping Denmark.

In June 2010, 50% of all commercial fitness centres (230 centres) had a doping control agreement with Anti Doping Denmark, which is equivalent to approximately 80% of all members of commercial fitness centres being covered by the doping control scheme (IDAN, 2010: 9).

4.1.2 Test statistics

Anti Doping Denmark's doping control at Danish fitness centres shows that approximately one out of five of the members tested have used prohibited substances, primarily AAS, and this figure has remained constant over the past five years. In 2010, 669 tests were carried out at commercial fitness centres, of which 139 were positive. This corresponds to 21%. Another 201 tests were carried out at centres under organised sport, resulting in 29 positive cases, corresponding to 14% (see Table 4.1 and Table 4.2).

It must be pointed out that the members tested at the fitness centres were selected based on certain criteria including appearance and behaviour, which means that the test personnel chose to test those fitness centre members who were most likely to have used drugs. The proportion of positive cases is therefore not representative of the total number of members at the centres.

The Netherlands

4.1. Is doping control done in fitness centres?

In general, it can be said that no doping controls are carried out in Dutch fitness centres. As far as is known, there is only one fitness centre in the Netherlands where anti-doping controls can be carried out as an element of its own anti-doping policy.

The policy of this fitness centre is that new members belonging to a high-risk group must agree to a separate regulation in which they declare that – if they are suspected of doping use – they can be screened (monitoring of their physical condition) and, if doubt remains, they must undergo a doping test. If they refuse to do so, or if the controls result is positive, their membership is immediately terminated. Monitoring of physical condition involves the measurement of body weight, percentage of body fat, and fat and muscle mass. These measurements are repeated after 4 weeks. If the increase in muscle mass appears improbable, the member is suspended. In case of doubt, a doping control can be imposed. Non-cooperation with the screening or doping control will result in automatic suspension. In recent years, several members of this fitness centre have been suspected. In some cases people resigned immediately, and generally people did not wish to cooperate. There was one sports person who underwent a doping control, which ultimately proved to be negative.



Year	Number of test	Positive cases	%
2011*	510	109	21%
2010	669	139	21%
2009	751	151	20%
2008	463	111	24%
2007	243	49	20%
2006	216	44	20%

* 8 cases pending

Table 4.1: Doping control in commercial fitness centres in Denmark.

Year	Number of test	Positive cases	%
2011	178	30	17%
2010	201	28	14%
2009	210	30	14%
2008	213	27	13%
2007	198	24	12%
2006	181	21	12%

Table 4.2: Doping control in fitness centres under the national sports federations (DIF, DGI, DFIF) in Denmark.



Whether testing is or will be carried out in other fitness centres in the Netherlands remains unknown.

Sweden

4.1. Is doping control done in fitness centres?

Doping controls take place at training facilities in Sweden, but most of the controls carried out take place at training facilities affiliated to the Confederation.

4.1.1. How many fitness centres?

In Sweden there is no one organisation with overall responsibility for controls and statistics. Consequently, there are no collated, reliable statistics available on how many facilities carry out tests.

4.1.2. Test statistics

In Sweden, only the Swedish Sports Confederation is allowed to carry out doping tests at fitness centres. However, they can only carry out tests at training facilities affiliated to the Confederation, not at private or municipal training facilities. Unfortunately, the statistics available from the Swedish Sports Confederation do not make it possible to identify the doping tests which have been carried out at fitness centres (Tommy Forsgren of the Antidoping Group at the Swedish Sports Confederation, personal communication dated 7 November 2011).

Cyprus

4.1. Is doping control done in fitness centres?

As at the time of compilation of this report, no doping controls have been performed in fitness centres.

Denmark

4.2. Is doping control obligatory or voluntary?

Fitness centres under organised sport are obliged to carry out anti-doping work, including doping control, cf. the Act on Promotion of Doping-Free Sport and the WADA Code (see 2.1).

Commercial fitness centres can choose whether to participate in doping control but are legally bound to clearly indicate by signage whether the centre has concluded an agreement with Anti Doping Denmark for doping control, cf. the signage scheme (see 2.1).

In 2010, the Danish Institute for Sports Studies (IDAN) surveyed the signage scheme for commercial fitness centres. In the survey, they asked owners and managers of fitness centres with and without doping control about their arguments and reasons for choosing to carry out or not carry out doping control at the centre. The answers are summarised below.

4.2.1 Reasons for fitness centres choosing doping control

The representatives of centres with a doping control agreement see doping control as an important tool to solve the problem of misuse of performance and image enhancing drugs (PIEDs) among fitness users. A number of the respondents indicated that the doping control has caused members at the centre to feel safer and has resulted in a better training environment at the centre. In addition, many are of the view that the doping control agreement has improved the centre's reputation and that it gives the centre a possibility to back up its views on doping with action (IDAN, 2010: 68).

The representatives also indicate that doping control sends a positive signal. It is a signal to consumers, who can then actively choose a centre with doping control; this makes doping control a competition parameter. It is also a signal to members and potential members that doping users are not accepted at the centre, which can make the unwanted target group go elsewhere. In addition, some representatives of centres with doping control think the control agreement promotes recognition of the relatively young fitness industry, as centres with doping control demonstrate social responsibility (IDAN, 2010: 93–94).

4.2.2 Reasons for fitness centres not choosing doping control

Representatives of centres that have chosen not to conclude a doping control agreement with Anti Doping Denmark state, among other things, that the number of controls under a standard agreement (see 4.1) will have too little effect. Some say that they prefer to take the matter into their own hands and expel doping users (IDAN, 2010: 70). In that case, this will be based entirely on suspicion and not on a positive doping test.

Some also indicate that, in principle, they are against transferring a control system developed to ensure equal and fair competition in elite sport to the fitness industry, where they think it should rather be a question of checking and penalising “unhealthy behaviour”. Some think what one does to one's own body is a private matter rather than something that public authorities should get involved in. Others think that doping control creates a bad atmosphere at the centre and bothers some of the members. In addition, some respondents describe the control as discriminatory, as it focuses on anabolic steroids and men and does not include control of women using illegal slimming substances, e.g. ephedrine. Most representatives of centres without doping control indicate that the price for doping control is too high, and the small centres, in particular, find it difficult to pay the price and at the same time struggle to see the value of the control. Instead, representatives of centres with-

out a doping control agreement think the centres should focus on daily preventive work (IDAN, 2010: 91-92) (see 3.3).

Discussion of compulsory vs. voluntary doping control

A working group with representatives from the fitness industry, Anti Doping Denmark, the Ministry of Culture, the Ministry of Justice and the Ministry of Interior and Health was established in 2011 under the auspices of the Ministry of Culture to discuss the possibility of amending either the current Smiley scheme (see 2.1) or the law in order to make doping control compulsory at all fitness centres.

According to the IDAN survey (2010), the fitness industry thinks the current voluntary scheme and a potential requirement for compulsory doping control present both advantages and disadvantages.

Compulsory doping control would eliminate the possibility that those who wish to use doping substances can always find a centre where they can use it without being bothered by the doping control.

However, both the fitness industry, as represented by the industry organisation, Danish Fitness & Health Organisation (DFHO), and Anti Doping Denmark also regards voluntary involvement in the current signage scheme as positive and a key factor for the practical implementation of doping control at the centres. Doping control at centres hostile to the scheme can present a safety risk to test personnel, and it can be difficult to collect the payment for the doping control. In addition, Anti Doping Denmark is concerned whether hostile centres might fail to implement the sanctions following positive doping tests or might refuse to participate in the doping control. Should this happen, the doping control scheme would be undermined and would lose its credibility. A major national control system would therefore be a prerequisite for a compulsory scheme, according to Anti Doping Denmark. In addition, the voluntary signage scheme has a positive marketing effect for the individual centre/chain. The price for doping control nevertheless prevents some, especially small, centres from concluding an agreement with Anti Doping Denmark, and the signage scheme is also criticised for not taking the different risk profiles of the centres into consideration, such as membership composition and facilities, the size of the centre, or the centre's own informal anti-doping work.

The fitness industry does, however, express a desire to see an improvement of the signage scheme compared with today. The industry would like to see the signage scheme more actively promoted to the centres and the population, along with increased monitoring of compliance with the Act – e.g. they would like to see centres without doping control which fail to

use correct signage identified and penalised. Moreover, both the fitness industry and other active players in the sector, including Anti Doping Denmark, call for a common password protected register of fitness centres members who have been banned, to make it difficult for such people to continue their training at other centres (see 2.3). They see this lack of a register as a flaw in the current system and think it weakens the anti-doping work and the credibility of the signage scheme (IDAN, 2010: 103–107).

The Netherlands

4.2. Is doping control obligatory or voluntary?

In the Netherlands there is no obligation to carry out doping control in fitness centres. There is no legal or regulatory framework for this. Fitness centres are private enterprises and do not belong to organised sport.

In recent years, the introduction of doping control in fitness centres has been argued for on several occasions by a Member of the House of Representatives. In 2009, that Member submitted a motion in this regard. The motion argued in favour of considering the introduction of an accreditation mark for fitness centres and the possibility of carrying out doping control in fitness centres. The Secretary of State at the Ministry of Public Health, Welfare and Sport at the time was not in favour of doping control in fitness centres. She wrote: “Compulsory participation in doping control is a serious infringement of individual privacy which is only permitted in the event of a justified interest. In principle I can envisage such an interest in the protection of top level sport, although not within non-organised sport. The substance policy that the Dutch Government has applied in respect of tackling the use of harmful substances is more suitable in this area. Prevention is central to that policy, and repression in order to discourage use is not applicable. With a view to consistency in the substance policy, I do not wish to progress to the implementation of control and with it the ability to impose sanctions. I am also basing my position on the principles of proportionality and subsidiarity.” (Parliamentary Paper “Doping use in non-organised sport” by Secretary of State Bussemaker to the House of Representatives, 9 June 2009).

Sweden

4.2. Is doping control obligatory or voluntary?

Anti-doping work at fitness centres in Sweden is divided into two parts: training facilities affiliated to the Swedish Sports Confederation, and training facilities which are private or municipal. A certain number of random tests take place every year at the training facilities affiliated to the Swedish Sports Confederation, in line with the regulations of the Confederation. However, the way the tests are to be distributed depends



on the association to which the training facility belongs. (Swedish Sports Confederation, 2009).

At private and municipal fitness centre, there are no regulations or laws requiring a certain number of tests to be carried out every year (SOU 2011:10). They may cooperate with the police, who can carry out tests if there is reasonable cause to suspect a crime (Swedish National Institute of Public Health, 2009).

4.2.1. Reasons for fitness centres choosing doping control

There are several reasons why training facilities should be able to carry out doping tests on their members and staff. By testing, the facility actively distances itself from criminal acts at the training facility. People who use doping agents may be loud and aggressive, which can create an unpleasant atmosphere at the facility. This in turn may leave “ordinary” people feeling that they no longer want to exercise there. If facilities can choose to carry out tests, they can get rid of the people who have an adverse effect on their operations. Most facilities also advocate good health, a healthy lifestyle and wellbeing, which is not in line with the use of doping agents.

4.2.2. Reasons for fitness centres not choosing doping control

The tests are expensive to buy, which means that training facilities are opting not to buy them. As things stand at present, there are no clear regulations on whether a training facility can exclude a person if that person tests positive for a substance. Due to this lack of clarity, it is easier for facilities not to test their members. Tests may also lead to conflicts, resulting in unpleasantness for staff and owners.

Denmark

4.3. Procedure for doping control in fitness centres

Doping control in fitness centres follows Anti Doping Denmark's procedure for doping control in accordance with the organisation's current ISO certification, which is based on the international WADA test standard.

However, there are a few exceptions in the procedure and a few special guidelines for control at fitness centres. These are described below.

Notifying members

It can be necessary for fitness centres to call members in for a test immediately when the test personnel arrive at the centre, as experience has shown that the relevant individuals try to leave the centre the minute they discover the test personnel. This means that there is not always time to establish a control room before notifying the members who are present when the

test personnel arrive. To be able to impose a sanction on an individual member, it is necessary that the member has been notified of the doping control.

Refusal

If the member in question has made it clear verbally or through behaviour that he/she does not wish to participate in the doping control, the member must be informed that this amounts to a breach of the anti-doping rules that apply at the premises and that the member will therefore be excluded from the centre as well as other centres with doping control. The test personnel must then allow the member to leave and not interact further in order to protect their own safety. The test personnel must then contact the staff at the centre and request or confirm the identity of the member concerned. If this is not possible, the test personnel must note on the doping control form or in the supplementary doping control report that the staff could not or would not identify the person concerned. The names of the people involved are also recorded on the doping control form, and the entire course of events is described in the report to Anti Doping Denmark's secretariat.

Based on the above, Anti Doping Denmark's secretariat contacts the parties involved and informs them of the events and the identity of the notified member. If the identity is unknown, the relevant parties will be asked to investigate the matter and subsequently inform Anti Doping Denmark of the person's identity.

If the summoned member alleges having a valid reason for refusing to participate in the doping control, the reason is recorded on the doping control form and the member is informed that he/she is obliged to provide supporting documentation to the fitness centre. It is then entirely up to the fitness centre/the central administration of the fitness chain to determine whether the reason is valid and subsequently penalise the individual, if relevant.

Interview and compulsory reporting in connection with doping control

The procedure for doping control at fitness centres specifies that the doping control officers and the chaperones should not encourage or commence a conversation in connection with the doping control about the individual's possible use of doping substances, the person's knowledge of the distribution of doping substances, general health, or similar.

If the person notified starts talking about criminal matters, he/she should be informed that the doping control officer/chaperone has a duty to report to Anti Doping Denmark, who will pass on relevant information to the appropriate authorities, e.g. the police. If the individual doping control officer/chaperone





does not wish to be party to the knowledge in question, the doping control officer/chaperone is entitled at any time to end the conversation and refer the notified member to Anti Doping Denmark's secretariat or the local police.

If the notified member starts talking about his/her health, whether physical or psychological, the doping control officer/chaperone must make it clear that his/her role in the current situation is that of a doping control officer/chaperone and encourage the member to seek help for health issues through a medical practitioner, the anonymous telephone service, The anti-doping Hotline (Dopinglinien) or the health sector in general. This procedure applies regardless of the type of job the doping control officer/chaperone may otherwise have in addition to his/her employment with Anti Doping Denmark.

Incidents of violence or threats – public servants, section 119 of the Danish Penal Code

In the event of violence or threats against the doping control officer/chaperone, it is extremely important to collect the right documentation to enable legal action to be instituted against the party in question. The procedure for doping control at fitness centres therefore includes a special procedure for these situations; cf. the relevant section in the Danish Penal Code.

Procedure in the event of a positive test in fitness centres under organised sport associated with the National Olympic Committee and Sports Confederation of Denmark (DIF), the Danish Gymnastics and Sports Associations (DGI), or the Danish Federation for Company Sports (DFIF)

When Anti Doping Denmark receives a positive test result from the laboratory for a member of a fitness centre under organised sport, the matter is dealt with through the anti-doping collaboration system of the organised sports federations, consisting of the Anti-Doping Secretariat, the Anti-Doping Board and the Anti-Doping Appeal Committee.

The Anti-Doping Secretariat

All doping cases at fitness centres under organised sport go through the Anti-Doping Secretariat under DIF. The Secretariat makes decisions about suspension of members (see 2.1 – “Suspension”) while their case is being processed and refers matters to the Anti-Doping Board and the Anti-Doping Appeal Committee.

The Anti-Doping Board

The Board has eight members. At least three members of the Board must have a legal background, and at least two members of the Board must have a medical background. The members are appointed for a two-year period with the possibility of reappointment. Members who, during the period in question, are

employed by or perform certain tasks on behalf of the organisation cannot be appointed to the Board. The Board appoints its own chairman. The chairman must have a legal background.

The Board makes decisions in cases concerning fitness doping and about any sanctions associated with the cases.

In the decisions of the Board, the members are only bound by the relevant sports organisation's common anti-doping regulations for recreational sports and current legislation.

Matters are dealt with either verbally or in writing. The chairman can decide that the question of suspension or issues relating to formalities must be dealt with in writing, and a matter is likewise dealt with in writing unless the accused has requested that it be dealt with verbally. The verbal proceedings are open to the public. If warranted by special circumstances, including considerations relating to investigation of the matter or to prevent unnecessary infringement of the rights of a party, the proceedings can take place behind closed doors.

During the hearing of the case, the accused may be accompanied by a legal assistant of his/her own choice. The Board can appoint a lawyer for the accused. The Board determines the lawyer's fee.

A minimum of two and a maximum of three Board members, at least one of whom must have a legal background, take part in the hearing. If the chairman of the Board does not participate in the hearing, the Board must appoint an acting chairman. The acting chairman must have a legal background. In the event of parity of votes, the vote of the chairman prevails.

Except in exceptional circumstances, the Board's decision must be available within four months of referral of the case to the Board.

The Board can make a decision about the legal costs in connection with its decision in the matter. The legal costs may include expenses incurred in investigating the matter.

The decisions of the Board are available to the public except if the Board finds that there are special circumstances requiring confidentiality. Anti Doping Denmark is notified directly.

In all other respects, the Board's decides on its own rules of procedure.

Decisions by the Board can be appealed to the Anti-Doping Appeal Committee.

The Anti-Doping Appeal Committee

Decisions by the Anti-Doping Board can be brought before the Anti-Doping Appeal Committee by the accused and/or the Anti-Doping Secretariat or Anti Doping Denmark within four weeks from receipt of the decision.

The Anti-Doping Appeal Committee has four members and appoints its own chairman. The chairman must have a legal background.

The decisions of the Anti-Doping Appeal Committee are final.

The Anti-Doping Appeal Committee can make a decision about the legal costs in connection with its decision in the matter. The legal costs may include expenses incurred in investigating the matter.

The decisions of the Anti-Doping Appeal Committee are available to the public except if the Anti-Doping Appeal Committee finds that there are special circumstances requiring confidentiality. Anti Doping Denmark is notified directly.

The Anti-Doping Appeal Committee decides on its own rules of procedure.

Procedure in the event of a positive test at a commercial fitness centre

When Anti Doping Denmark receives a positive test result from the laboratory for a member of a commercial fitness centre, the matter is dealt with by the individual centre and/or the industry organisation Danish Fitness & Health Organisation (DFHO), if the centre has a doping control agreement with the organisation.

The individual member can bring written complaints before DFHO about decisions by the individual fitness centre regarding breaches of current anti-doping rules. This applies whether or not the individual centre in which the doping test took place is a member of DFHO.

4.3.1 Who does the testing?

Anti Doping Denmark carries out testing at centres under organised sport and at commercial centres that have requested collaboration regarding doping control, information, etc.

4.3.2 What is being tested for?

Urine samples taken at fitness centres are, in principle, tested for the following substances, ref. paragraph 1 of the WADA prohibited list:

Substances and methods prohibited at all times (in-competition and out-of-competition)

S0. Non-approved substances

S1. Anabolic agents

S2. Peptide hormones, growth factors and related substances

S3. Beta-2 agonists

S4. Hormone and metabolic modulators

S5. Diuretics and other masking agents

M1. Enhancement of oxygen transfer

M2. Chemical and physical manipulation

M3. Gene doping

In practice, the doping samples which Anti Doping Denmark collects in fitness centres are analyzed only for AAS and methods - ref. S1, S4 and S5, which is particularly prevalent among male fitness members.

However, this does not mean it is permitted to use other substances included in section 1 on WADA's prohibited list of substances and methods prohibited at all times, but it means that ADD focuses doping control on AAS, which are believed to be the doping substances that pose a problem in the fitness centers (IDAN, 2010: 39).

4.3.3 Experience with risks to test personnel

Elite athletes are generally familiar with the anti-doping rules and comply with them, including the doping control, as part of their professional career. Relevant fitness centre members, on the other hand, often strongly oppose to the doping control and can therefore behave in a threatening and aggressive manner towards test personnel.

Anti Doping Denmark has a single team of test personnel who carry out all doping tests both within sports in general and at fitness centres. The job of doping control officer is a sideline for all test personnel, and most team members have taken an interest in the anti-doping work in connection with the sports environments they frequent in their spare time. The Danish test personnel team thus comprises several nurses, students, school teachers, etc. while fewer are police officers, for example. This means that doping control officers do not necessarily have a background or an occupation that has given them the skills or experience to deal with pronounced aggressive or threatening behaviour.

Over the years, Anti Doping Denmark has only seen a small number of cases in which a doping control officer has felt threatened or has been verbally abused. There has been one case where a doping control officer was pushed.

Danish doping control officers are considered to be "public servants" when carrying out doping controls, which corresponds to the status of a policeman at work. There is therefore

a substantial punishment for threats against or assaults on test personnel (up to eight years' imprisonment – see 4.3 – “Incidents of violence or threats – public servants, section 119 of the Danish Penal Code”).

The Netherlands

4.3. Procedure for doping control in fitness centres

If the doping control is administered, the person reports within 48 hours to a general practitioner (GP) with whom the fitness centre has an arrangement. At the GP's surgery, a urine sample is taken which is subsequently analysed in a laboratory for anabolic steroids.

Sweden

4.3. Procedure for doping control in fitness centres

Training facilities affiliated to the Confederation

In Sweden, some fitness centres are affiliated to the Swedish Sports Confederation (Riksidrottsförbundet – RF), which makes them members of a special sports association within the Swedish Sports Confederation, thereby allowing the Confederation to carry out doping tests at these fitness centres. The controls carried out within the Swedish Sports Confederation take place in connection with both competition and training. Doping tests can also be carried out on other occasions, e.g. during home visits. In Sweden, these controls are carried out by the Swedish Sports Confederation's authorised doping control officials. Active members of the Swedish sports movement, or people who represent a Swedish sports organisation in national teams or similar, are always obliged to submit samples at the request of a doping control official who is accredited and authorised in accordance with the WADA Code. If anyone refuses to be tested for any reason, this is regarded as failing the doping test and is an offence (Swedish Sports Confederation, 2010).

The way in which sampling is to take place is regulated in various steering documents. This is to ensure the rule of law for the active exerciser and also to ensure that the analysis response is correct. The samples are sent for analysis to a laboratory accredited by WADA. In Sweden, the Doping Laboratory at Karolinska University Laboratory in Stockholm carries out the analyses according to WADA's doping list. With the permission of the owners, doping controllers in sport can also carry out controls at privately owned training facilities if the person being tested is a member of an association affiliated to the Swedish Sports Confederation (Swedish Sports Confederation, 2010).

The Swedish Sports Confederation decides which sportsmen and women are to be tested. During a doping control, the doping official must provide identification, and the member to be tested is then obliged to follow this person's instructions. The official must inform the member of his/her rights and obligations, and then ask the member to sign the “notice to attend”

form and give the member a copy. To remove any opportunity for manipulation, the urine sample must be given under the supervision of an official of the same gender. The official must see the urine leaving the body, without hindrance. The sample, a copy of the “chain of custody” form and the laboratory issue of the report are then packaged and transported via a traceable system to an accredited WADA laboratory. Irrespective of the analysis results, the member will receive a written response from the Swedish Sports Confederation, sent to the address given in the report. The analysis results are ready after about three to five weeks (Swedish Sports Confederation, 2010).

Private and municipal training facilities

The police can carry out doping controls at private and municipal training facilities pursuant to the preliminary investigation with associated legal rules as stipulated in the Code of Judicial Procedure (Rättegångsbalken – RB). Any doping control on the basis of the legal rules in the Code of Judicial Procedure is based on reasonable cause to suspect that a crime has been committed in accordance with the Doping Act and the fact that the police have begun a preliminary investigation. This suspicion may relate to transfer, possession or own use. During the control, the police use the option of means of compulsion as regulated in the Code of Judicial Procedure, such as searches of premises, body checks or body searches. The means of compulsion used are dependent on the suspected crime and what is considered relevant to the investigation in question (Swedish National Institute of Public Health, not yet published).

During a preliminary investigation, the police may access the training facility in question following a decision to search the premises made by the preliminary investigation manager (police officer or prosecutor). During the doping control, the people at the training facility are checked for signs and symptoms of abuse or suspected handling of anabolic androgenic steroids (AAS). By weighing up various signs, symptoms and other relevant information, the police make an assessment to see whether there is reasonable cause to suspect doping crime. If there is reasonable suspicion, a preliminary investigation will commence, at which point the rules of the Code of Judicial Procedure concerning body checks, body searches or searches of premises may be applied (Swedish National Institute of Public Health, not yet published).

If there is reasonable cause to suspect someone of abusing AAS, the suspect must submit a urine sample. This may take place at the training facility or at a police station. When the urine sample is taken, the police will interview the suspect and tell the person what crime they are suspected of. When the interview is finished, the preliminary investigation manager decides whether the suspect is to be released. The urine sample is then sent to the National Laboratory of Forensic Science (Statens

kriminaltekniska laboratorium – SKL) or to the National Board of Forensic Medicine for analysis. The analysis results are ready after about four weeks, when they are passed on to the suspect together with other investigation material. If the analysis results are positive, the case is submitted to the Swedish Prosecution Authority for assessment of the penalty. If the analysis response is negative, the suspicion is written off and the case is discontinued. The police are also authorised to carry out the above doping controls at federation-run training facilities (Swedish National Institute of Public Health, not yet published).

4.3.1. Who does the testing (Police, NADO, others)?

At the training facilities affiliated to the Confederation, the Swedish Sports Confederation's doping controllers carry out the tests in the first instance. These may be carried out by officials from the Swedish Sports Confederation or its equivalent in other countries. They can also be carried out by the International Sports Federation (ISF) or on behalf of WADA. The Swedish Sports Confederation's doping controls are certified in accordance with the requirements laid down in the WADA standard for doping control and the quality standard ISO 9001:2000. At private and municipal training facilities, at present the police carry out tests in the first instance if there is reason to suspect a crime on the basis of the Act (SFS 1991:1969) on Prohibition of Certain Doping Agents (the Doping Act) (SOU 2011:10).

4.3.2. What is being tested for?

The tests carried out by the Swedish Sports Confederation include all illegal substances on the WADA doping list, and the tests carried out by the police include the substances covered by the Act on Prohibition of Certain Doping Agents (the Doping Act) (SOU 2011:10).

4.3.3. Experience with risks for test personnel

There are reports about threats to test personnel in a variety of forms. They may receive threats in the form of letters and e-mails, but also personal threats directly associated with doping controls, and threats may also be made against doping controllers outside working hours (when going out to a restaurant, for example) (Lars-Göran Schütt, Malmö Stad, personal communication dated 6 September 2011).

Denmark

4.4. Possible analysis options – WADA laboratories or other laboratories?

The rules that govern the performance of doping control and sanctions, including the analysis of doping samples, in fitness centres under organised sport and in commercial fitness centres are set out in the Act on Promotion of Doping-Free Sport and the corresponding Executive Order as well as the WADA Code (see 2.1).

According to the WADA rules, Anti Doping Denmark as an anti-doping organisation must submit all doping samples for analysis at a WADA-accredited laboratory. There is no WADA-accredited laboratory in Denmark, and Anti Doping Denmark therefore sends all samples to the Norwegian Doping Control Laboratory at Aker University Hospital in Oslo.

The Netherlands

4.4. Possible analysis options – WADA laboratories or other laboratories?

The analysis of the urine sample is carried out in a laboratory. Testing is only carried out for anabolic steroids.

Sweden

4.4. Possible analysis options – WADA laboratories or other laboratories?

Samples taken by the Swedish Sports Confederation's doping commission are sent for analysis to a laboratory accredited by WADA. In Sweden, the Doping Laboratory at Karolinska University Laboratory in Stockholm carries out the analyses according to WADA's doping list (SOU 2011:10). The police send their tests for analysis to the National Laboratory of Forensic Science (SKL) in Linköping. SKL is an unbiased expert body which carries out investigations for the judicial system, the police, prosecutors and courts in the first instance (SKL, 2010). Some tests which the police carry out can also be sent for forensic analysis at the National Board of Forensic Medicine (National Board of Forensic Medicine, 2010)

Poland

4.4. Possible analysis options – WADA laboratories or other laboratories?

In Poland it is possible to conduct analyses of urine and blood samples in WADA-accredited laboratories. There is one accredited laboratory in Poland, located in Warsaw. It offers a full range of doping analyses required by WADA.

Denmark

4.5. Who finances doping control at fitness centres (NADO, Ministries, others)?

Anti Doping Denmark's general activities are financed by the Ministry of Culture and the Danish sports organisations: Team Denmark, the National Olympic Committee and Sports Confederation of Denmark (DIF), the Danish Gymnastics and Sports Associations (DGI) and the Danish Federation for Company Sports (DFIF), among others.

Doping control at the fitness centres under organised sport associated with DIF, DGI and DFIF is paid for by the annual subsidy paid to Anti Doping Denmark by these organisations. The tests are distributed among the fitness centres in the different organisations according to a risk assessment in which the



individual centres, the organisation and Anti Doping Denmark take part. In addition, some associations have entered into an agreement about additional controls.

Doping control at commercial fitness centres that are members of DFHO are financed by the membership fees paid by the centres to DFHO, out of which Anti Doping Denmark receives a certain amount per member centre. The number of tests carried out depends on the number of centres that are member of DFHO. The tests are distributed among the fitness centres according to a risk assessment in which the individual centres, DFHO and Anti Doping Denmark take part.

Commercial fitness centres that have a control agreement directly with Anti Doping Denmark pay an individual fee per sample taken at the centre.

The price of a doping test covers the remuneration of the test personnel, the cost of sending the sample by courier to the laboratory in Oslo, the analysis of the sample as well as the administration of the results.

The Netherlands

4.5. Who finances doping control at fitness centres (NADO, Ministries, others)?

All costs incurred in the doping control are initially paid by the fitness centre. If the result of the control is positive, however, the member concerned must pay the costs.

Sweden

4.5. Who finances doping control at fitness centres (NADO, Ministries, others)?

The regular doping controls carried out by the Swedish Sports Confederation are financed by the Confederation itself, and every association has a certain number of tests which are included in their association fees every year. The associations can also order extra tests from the Confederation; the associations themselves have to pay for these. In the case of doping controls carried out by the police in the event of reasonable cause for suspicion, the tests are paid for directly via the Treasury. The private and municipal training facilities can also buy tests themselves, but then they have to pay their own implementation and analysis costs (SOU 2011:10).

Common contribution

Summary of Chapter 4

Doping control at fitness centres is not uniform among the contributing countries, which may be due to major differences in anti-doping legislation. In Denmark, legislation makes it compulsory for fitness centres under national sports federations to carry out anti-doping work, including doping control. Legislation also encourages Anti Doping Denmark to enter

into collaboration agreements with the fitness sector concerning areas such as doping control. As a result, Anti Doping Denmark has concluded doping control agreements with the fitness centre industry organisation as well as with individual privately owned commercial fitness centres. Legislation in other contributing countries does not appear to encourage similar initiatives in the anti-doping field. In Sweden, doping control takes place at training facilities under the Swedish Sports Confederation, including “Sport for all” participants, and the police perform doping controls on a regular basis, as the use of steroids is illegal under Swedish law. In the Netherlands, only one fitness centre is known to carry out doping control, and this is undertaken as part of its own anti-doping policy.

Danish test results show that approximately one out of five of the selected and tested fitness centre members test positive for steroids or other doping substances. Although the selection process is not random, this is a clear indication that there is a problem with steroids and similar substances at fitness centres.

In general, a positive doping test results in two years’ suspension. This is therefore an effective tool to remove any users of steroids etc. who fail to respond to general anti-doping messages. In this way, doping controls can supplement other anti-doping work to promote a doping-free fitness environment. Experience from Denmark indicates that the tested individuals in certain cases demonstrate aggressive verbal and physical behaviour, and it is therefore recommended that the doping control personnel possess the relevant professional and personal skills to handle tense situations.

One of the challenges to the promotion of doping control at fitness centres is that the price for this service appears to be high for many of the centres, especially the small centres.





5. DOPING CONTROL – OTHER PLACES

The chapter goes outside the fitness centres to other areas employing doping controls such as prisons. It is relevant to look at steroid abuse and its health consequences wherever it takes place. The chapter addresses the experiences including test statistics and financing models.

Denmark

5.1. Has doping control been done in prisons?

The Danish Prison and Probation Service has contributed to the following section.

Doping control in prisons

The Danish Prison and Probation Service has entered into an agreement with Anti Doping Denmark on doping control in the weight training facilities at prisons under the “Green Card” scheme.

The background to the Green Card scheme was growing safety concerns and unrest at the weight training facilities in the prisons caused by particular groups of inmates (strong, negative inmates). These inmates displayed threatening and aggressive behaviour which affected both staff and other inmates wishing to use the facilities. Prison staff had a strong suspicion that abuse of anabolic steroids played a major role in the aggressive behaviour of the inmates. In addition, they knew from experience and research that weight training is important for steroid abusers. The Danish Prison and Probation Service therefore wanted to use the Green Card scheme to regulate access to the training facilities and limit the use of anabolic steroids in prisons.

Under the Green Card scheme, an inmate who wants to use the weight training facilities at a prison will be asked to sign a contract with the prison. The contract states that the inmate consents to providing a urine sample for doping control at the request of the staff as a condition for using the weight training facilities and that the possession of doping substances can result in exclusion from the training facilities for two years. Refusal to take part in a doping test also results in exclusion for two years.

The inmates must state in the contract whether they have used doping substances in the last two years prior to imprisonment. Inmates who answer YES must provide a urine sample. A positive test results in six months’ exclusion, followed by another urine test. If the second test is negative, the inmate is issued with a Green Card – i.e. an access card to the prison’s weight training facilities. If the second test is also positive, another six months’ exclusion is imposed. This procedure continues until the inmate has a negative test result.

If the inmate answers NO in the contract regarding having taken doping substances within the last two years and subse-

quently has a positive doping test, the inmate will be excluded from the prison’s training facilities for two years.

If the inmate is moved from one prison to another, the exclusion period is also transferred to the new prison. If an inmate wishes to appeal a sanction imposed on the basis of a doping test under the Green Card scheme, this appeal will be dealt with by the Danish Prison and Probation Service.

Doping control in fitness centres always follows Anti Doping Denmark’s procedure for doping control in accordance with the organisation’s current ISO certification, which is based on the international WADA test standard. The doping control in prisons under the Green Card scheme is based on a special agreement between the Danish Prison and Probation Service and Anti Doping Denmark, and the doping control in the prisons therefore differs from the doping control carried out in general sport and at fitness centres in three important respects:

- It is the responsibility of the individual prison to ask Anti Doping Denmark to carry out doping control when required – the doping control therefore is not unannounced as far as the prison staff is concerned but has not been announced to the inmates
- It is up to prison staff to decide who needs to be tested
- Doping samples from prisons are only analysed for anabolic steroids in accordance with a special agreement with the laboratory

An evaluation of the Green Card scheme shows that it has generally been well received by the inmates. The impression is that most of the inmates value their Green Card and the idea behind it. It is also the general impression that many inmates have never had any form of identification that gives them special rights and that the possession of a Green Card therefore makes them feel that they had a special status. In addition, the inmates appear to associate the Green Card with “non-doping”, which was one of the main reasons for the introduction of the card. There is a general perception at the prison where the evaluation took place that the scheme has resulted in a culture among the inmates in which it is OK to be “clean” – to train without using doping substances (the Sdr. Omme State Prison, 2003: 7).

5.1.1. How many prisons?

The Prison Service has 13 prisons, of which 5 are closed and 8 are open.

5.1.2. Test statistics

See Table 5.1

Year	Prisons with doping control	Tests in prisons total	Positive cases	Positive %
2011	3	32	17	53%
2010	7	107	18	17%
2009	6	107	36	34%
2008	8	67	20	30%
2007	4	49	9	18%
2006	3	47	12	26%
2005	2	34	6	18%
2004	2	41	12	29%
2003	1	10	6	60%
2002	1	8	3	38%

Table 5.1: Test statistics, Denmark

The Netherlands

5.1. Has doping control been done in prisons?

In the Netherlands, no doping controls like those carried out in organised sport are undertaken in penal institutions. In organised sport, tests are carried out on the basis of the WADA doping list. Substances and methods are stated on this list because they comply with a minimum of 2 of the following 3 criteria: (1) performance-enhancing, (2) harmful to health, and (3) in conflict with the “spirit of sport”. Drugs are listed on the WADA doping list, but these are only prohibited for sports people taking part in competitions.

Tests in penal institutions are restricted to soft and hard drugs such as cannabis, ecstasy, cocaine, speed, heroin, etc. Drugs are prohibited in penal institutions at all times. The reasons for drugs testing within penal institutions are wholly different from those within organised sport. Testing for anabolic steroids is not carried out in penal institutions in the Netherlands.

Drugs testing are undertaken in all 29 penal institutions in the Netherlands. Inmates are tested for drugs by means of urine examinations. Drugs testing are done on a random basis. Drugs testing are also done:

- upon arrival at an institution (the “zero reading”)
- prior to and upon return from leave from the institution
- upon suspicion of use
- after an unsupervised visit
- when addicted inmates are transferred to a monitoring facility (addiction clinic)

A uniform policy applies nationally to sanctions. Sanctions are dependent on any recurring infringement, the type of institution (normal to low level security) where the inmate is held and the type of drug. Sanctions may consist of:

- transfer to an institution with a tighter security regime (from less to more secure)

- no leave
- a number of days in solitary confinement

Sweden

5.1. Has doping control been done in prisons?

There are a number of indications of the presence of AAS within the Swedish Prison and Probation Service at both prisons and institutions. Urine samples are taken while people are in institutions, mainly with regard to security. However, as things stand at present it is difficult to get a clear view of how widespread this presence is and how it has changed over time. (Swedish National Institute of Public Health, 2009).

5.1.1. How many prisons?

In Sweden there are 52 prisons divided into five different security classes from A to E, A being maximum security prisons and E being the lowest level. Three of the 52 prisons fall under security class A (Swedish Prison and Probation Service, 2011).

5.1.2. Test statistics

According to the Swedish Prison and Probation Service, 91,130 urine samples were taken from inmates in 2008. Of these, 5,080 were positive for drugs in general. Of the total number of urine samples, 1.7% tested positive for AAS in 2008. 0.9% were positive between 2003 and 2004, and the figure stood at 1.6% in 2005. In 2008, doping agents were found at 13 institutions. Working methods and forms used during searches have changed over the years, which mean that the statistics are not entirely comparable. Between 2002 and 2008, the number of seizures varied between 26 and 100 (Swedish National Institute of Public Health, 2009).

In the Stockholm region of the Swedish Prison and Probation Service, annual unannounced screenings have taken place since 2003, involving a representative selection of 200–300 inmates (20–25%) at institutions. As inmates sometimes refuse to provide urine, or provide diluted samples, it is difficult to demonstrate the precise occurrence of the drugs for which screening takes place, including AAS. However, the survey indicates a reduction in the number of people who regularly use drugs, from 36% in 2003 to 17% in 2008. The trend for AAS is similar, and the number of AAS-positive cases in 2003–2008 is somewhere between 2% and 11% (Swedish National Institute of Public Health, 2009).

Denmark

5.2. Who finances doping control in prisons etc. (prison service, ministries, others)?

The Prison Service and Anti Doping Denmark have entered into a general agreement on procedures, price, etc. for doping control in prisons. It is up to the individual prison, however, to enter into a contract with Anti Doping Denmark regarding



control at the prison in question, and it is therefore also up to the individual prison to finance the doping control.

Sweden

5.2. Who finances doping control in prisons etc. (prison service, ministries, others)?

The Swedish Prison and Probation Service falls under the jurisdiction of the Riksdag (the Swedish Parliament) and the Government of Sweden. How the authority is to work is established in an instruction from the Government. The Riksdag allocates funding in the state budget, and every year the authority receives appropriation directions from the Government with regard to what is to be given priority during the year. This means that costs for tests and analyses carried out within the Swedish Prison and Probation Service are included in its budget (Swedish Prison and Probation Service, 2011)

Denmark

5.3. Do the police test for anabolic steroids in connection with arrests for e.g. violence?

The Danish National Police advises that the police normally do not request blood or urine samples to test for doping substances in connection with arrests. It cannot be excluded, however, that the police may request such samples for purposes of evidence in serious cases involving violence or murder.

The Department of Forensic Medicine in Copenhagen, which carries out analyses on behalf of police districts on Zealand, Lolland-Falster and Bornholm, reports having carried out analyses for AAS on 17 urine samples since 2006; 7 samples from arrested individuals, and 10 samples submitted by prisons. Of the 17 urine samples, 9 were positive for AAS.

The samples were taken in cases where the person tested had been arrested in connection with violence and where there was a suspicion of AAS abuse.

All urine samples were sent to the Norwegian Doping Control Laboratory at Aker University Hospital in Oslo to be analysed for anabolic steroids.

In practice, only individuals 15 years and over can be requested to provide a blood, urine or saliva sample. The reason is that a young person under 15 cannot be convicted and therefore, if arrested, will be treated as a “suspect” rather than an “accused”. It is therefore not possible to body-search the person in question unless the guardian provides written consent. Section 792(d)(2) of the Administration of Justice Act states that the provisions do not cover body searches of individuals who have not been charged.

Sweden

5.3. Do the police test for anabolic steroids in connection with arrests for e.g. violence?

The police can order urine samples from suspects on the basis of “safe signs”. When violent crimes are committed, samples are taken in order to ascertain whether the suspect was under the influence of AAS. AAS analysis is normally ordered as a supplement to the basic narcotics package, but is also carried out as stand-alone analysis. The number of police cases involving special orders for AAS has increased gradually from around 80 in 1999 to 1,400 in 2008. Over the past decade, a total of more than 4,800 urine samples from the police have been analysed. Most of these analyses were ordered by the police in connection with suspected drug crime: own use (approx. 70%), followed by violent crime (20%) and cases involving driving under the influence of drugs (10%). The proportion of positive analyses in the various groups has remained relatively constant over the years. Around 30% of samples relating to own use and in connection with cases involving driving under the influence of drugs have been positive, along with 16–18% of samples relating to violent crime (Swedish National Institute of Public Health, 2009).

The police carry out tests for AAS in the event of violent crimes, assault, robbery, etc., even if the offender is not obviously under the influence of drugs or AAS, but it is a requirement that this action should be of significance to the investigation. Analysis of AAS was requested in 253 cases of violence in 2007, ten times more than in 2003. AAS are analysed only if the police specifically request it. Opiates and cocaine are always included in an analysis (SNPF, 2008). Unfortunately it is not possible to determine how many of these tests are positive, as no information is provided regarding which specific violent crimes are involved. The important thing here is that these statistics indicate that the Swedish Police have started to pay attention to the problem and are actually requesting tests for AAS in cases involving violent crime to a greater extent than was the case a decade ago (Yvonne Lood, Swedish National Laboratory of Forensic Science, personal communication, 1 November 2011).

Poland

5.3. Do the police test for anabolic steroids in connection with arrests for e.g. violence?

When the police suspect use of psychoactive substances by perpetrators of offences, they test them for the presence of alcohol and stimulants, drugs and cannabinoids (cocaine, amphetamine, marijuana, LSD, heroin) but no tests for anabolic androgenic steroids are carried out.

Denmark

5.4. Possible analysis options – WADA laboratories or other laboratories?

Pursuant to the Danish Act on the Promotion of Doping-Free Sport, Anti Doping Denmark is obliged to have all samples analysed at a WADA-accredited laboratory. This also applies to samples taken during doping control at prisons.

Urine samples collected in prisons under the Green Card scheme (cf. Anti Doping Denmark's agreement with the Prison Service), are therefore analysed at the Norwegian Doping Control Laboratory at Aker University Hospital in Oslo.

Sweden

5.4. Possible analysis options – WADA laboratories or other laboratories?

All tests carried out by the Swedish Prison and Probation Service are sent for analysis to Sweden's only forensic chemistry laboratory, which belongs to the National Board of Forensic Medicine. Its job is to carry out analyses of blood and urine to detect any traces of alcohol, narcotics, drugs and toxins in the human body (National Board of Forensic Medicine, 2010).

Common contribution

Summary of Chapter 5

It is generally recognised that the use of steroids in connection with regular training results in a more muscular body and that increased aggressiveness is one of the side-effects. This combination can present a security risk in prisons, for example, but can also be a determining factor in episodes of violence in general.

In Denmark and Sweden, standard drug tests have in recent years been supplemented by doping controls of groups of prison inmates. Security concerns are the main reason for these tests. In keeping with this, the sanction for a positive result in Denmark is exclusion from the prison's training facilities for two years. In Denmark, the doping controls target specific "suspicious" inmates. The number of positive results has varied over the years from 17% to 62%. In Sweden, urine samples were taken from 91,130 inmates in 2008. Of these, 1.7% tested positive for AAS. Doping control of inmates has not been introduced in the prisons in other contributing countries.

In Sweden, the police test for the use of steroids in connection with incidents involving violence, molestation, robbery, etc. if this is relevant to the investigation. Analyses of steroids were requested in 253 cases of violence in 2007. In Denmark, it is not standard procedure for the police to request blood or urine samples for testing for doping substances in connection with an arrest. The Department of Forensic Medicine in Copenhagen performs analyses on behalf of several police districts. In recent

years, they have recommended the use of urine analysis and have tested 17 urine samples for steroids since 2006. Of the 17 urine samples, 9 were positive for steroids.



6. PREVENTIVE WORK

This chapter contains insight on a wide range of preventive work and information campaigns including the financing, target groups, media-channels and evaluation. The text is supplemented with images from the campaigns. The aim is to provide a visual insight and inspire. In the last part of the chapter, other national prevention projects and the methods are described and discussed.

Denmark

6.1. Preventive work and Information campaigns

6.1.1 Who is behind the campaign?

In November 2008, Anti Doping Denmark launched the “*Steroids are stronger than you*” information campaign. This became the kick-start to a vigorous and targeted campaign against fitness doping in Denmark.

6.1.2 Who is financing the campaign?

The campaign was financed by the former Ministry of Health and Prevention (the current Ministry of Health), the sports federations: The National Olympic Committee and Sports Confederation of Denmark (DIF), the Danish Gymnastics and Sports Associations (DGI) and the Danish Federation for Company Sports (DFIF) as well as the fitness centre industry organisation Danish Fitness & Health Organisation (DFHO). The private foundation Trygfonden¹ also supported the campaign financially.

6.1.3 Target groups

The campaign has focused on providing general information about steroids and their side-effects to the primary target group of young men aged 15–25 and their support groups, fitness personnel, relatives and SSP (school, social authorities and police) consultants, general practitioners and the police. A key objective has been to make the fitness industry aware of the issue, as fitness centres are an important social environment where steroid users are likely to be found. Anti Doping Denmark has therefore endeavoured to establish dialogue and collaboration with fitness centres and to encourage them to take ownership of local anti-doping work.

In addition, the campaign has focused on placing the fitness doping issue on the agenda among young people, in the general public, among relevant decision makers and in the media. The means to achieve this has been collaboration with other relevant organisations and authorities as well as an ongoing, targeted PR campaign.

6.1.4 Media channels

Different materials have been developed as part of the campaign, capable of being launched on different platforms.

The website www.steroids.dk is a fundamental component of the general information campaign. The website includes:

- information about the most common fitness doping substances
- a list of the potential side-effects of steroids
- case stories – as both text and video clips
- guidelines for doctors, parents and partners suspecting steroid abuse
- a map of Denmark with search facilities to locate centres with doping control
- a guide to greater muscle mass – training and dietary guidelines
- advice on anti-doping work at fitness centres
- recent research in the field – national and international



In connection with the launch of the campaign, Anti Doping Denmark prepared a leaflet with general information entitled “*Steroider er stærkere end dig*” (Steroids are stronger than you). This leaflet is available at all fitness centres with doping control, together with a campaign poster. The leaflet has also been distributed to prisons, training facilities at military barracks around Denmark, centres for treatment of drug abuse, schools, etc.

An information leaflet with the title “*Kan du genkende en steroidmisbruger?*” (Can you spot a steroid abuser?) was also prepared in connection with the launch of the campaign and mailed to general practitioners.

A fitness handbook with advice and guidelines on anti-doping was developed for fitness personnel (“*Handbook for fitness centres – guidance and advice on anti-doping*”). The fitness

¹ <http://www.trygfonden.dk/Om-TrygFonden/In-English>



handbook contains information about the most common doping substances in the fitness environment, signs of steroid abuse, information about nutritional supplements, interview guidelines for managers and other senior personnel when the use of doping is suspected among members or instructors, advice about how the fitness centre should handle a doping case – both internally and externally – and a number of hints for preventive activities and initiatives at the local fitness centre.



The fitness handbook, like the leaflets and posters, has been distributed to all fitness centres with doping control. The fitness handbook has also been sent to training facilities at military barracks around Denmark, prisons, centres for treatment of drug abuse, etc.

Anti Doping Denmark has produced a film about the former steroid abuser Ditlev Traasdahl Madsen in which he talks about his life as a steroid abuser. He tells how he was introduced to steroids; how his abuse developed and the consequences it has had. The film is available at www.steroids.dk, on Anti Doping Denmark's YouTube channel and on the web channel of a Danish newspaper.²

Anti Doping Denmark initiated and co-financed the population survey *“Motionsdoping i Danmark – en kvantitativ undersøgelse om brug af og holdning til muskelopbyggende stoffer”* (Fitness doping in Denmark – a quantitative survey of the use of and attitude to muscle-building substances). Anti Doping Denmark assisted with background knowledge for the survey, which was carried out by the Centre for Sports, Health and Civil Society at the University of Southern Denmark (Singhammer et al., 2010).

Anti Doping Denmark has a fan page on Facebook, a social media website frequently used by the campaign's primary target group.³ An application has been developed for this website in the form of a test called *“Bryst eller bryster”* (Chests or breasts), which focuses on the development of gynaecomastia (an enlargement of the male breast), which is a typical side-effect of anabolic steroid abuse. The fan page also has a game applica-

tion, *“Tisse-spillet”* (the Peeing game)⁴, which is a humorous and entertaining take on doping control and aims to generate new fans for the page and hence more recipients in Anti Doping Denmark's information loop.

Anti Doping Denmark has contributed an article to *“STOF – tidsskrift for stofmisbrugsområdet”* (SUBSTANCES – magazine on substance abuse) dealing with the need for a focus on steroid abuse in the established system for treatment of drug abusers (Johannisson, 2010).⁵

The Anti-doping hotline

Anti Doping Denmark offers telephone-based anonymous medical advisory services regarding doping agents, side effects, etc. on the Anti-doping hotline.

The job of the Anti-doping hotline is to prevent the use of anabolic steroids and other doping agents. Hence the Anti-doping hotline can:

- answer medical questions about effects, side-effects and other risks involved with doping agents
- identify doping preparations on the basis of their names
- provide information on laws and regulations concerning the use of doping agents
- arrange contact between callers and the relevant organisations, authorities and similar
- assist with contingency measures and strategies in emergencies
- support scientific knowledge concerning the use of doping agents by remaining in contact with the environment, so that call responses are always of high quality
- compile statistics on calls and so gather experience to support health-related interventions

The Anti-doping hotline is open for two hours, two days a week.

Question and answer function on the website (Ask Anti-Doping Denmark)

The Anti-Doping Denmark website offers a question and answer function where users can ask Anti-Doping Denmark's panel of experts questions on subjects in the following categories:

- schoolwork
- doping in general
- doping control
- steroids and growth hormones
- creatine/nutritional supplements
- the doping list and exemptions
- EPO and similar

² The film was produced in collaboration with Anti-Doping Norway. It is available at: http://www.steroids.dk/Steroider_tæet_paa/Personlige_beretninger/Ditlev_ville_vaere_stor.aspx

³ <http://www.facebook.com/antidopingdanmark>

⁴ http://www.facebook.com/#!/antidopingdanmark?sk=app_142808389114647

⁵ <http://www.stofbladet.dk/6storage/586/42/stof15.43-47.pdf>

In 2009, J. Bojsen-Møller and A. Vest Christiansen carried out a survey which analysed enquiries to Anti Doping Denmark's information services (the Anti-doping hotline and the online query system) over an 18-month period. 1,398 enquiries were examined with respect to the age and gender of the enquirer, affiliation to sports or exercise, and the substances in question. The main finding was that Anti Doping Denmark's information services are used by male recreational athletes in their mid-20s who train at fitness centres. 15% of enquirers were users of anabolic steroids or other substances banned by WADA, and an additional 15% were considering using such substances. In total, 1,089 respondents (78%) referred to a specific drug or substance, the most common being AAS (34%) (Bojsen-Møller et al., 2009).

Collaboration with other relevant organisations, authorities, etc.

Anti Doping Denmark has held lectures on the issue of steroid abuse for the Danish customs authorities' smuggling control unit, providers of treatment for substance abuse in the Prison Service, the police and SSP personnel.

National Network against Anabolic Steroids

In 2009, Anti Doping Denmark established a National Network against Anabolic Steroids, which includes a large number of the organisations and authorities dealing with steroid abuse. The network is used to exchange information about experience and challenges, and to coordinate anti-doping work in Denmark. The network has resulted in close collaboration between Anti Doping Denmark and several of the other members.

The network includes representatives of:

- Anti Doping Denmark
- The Danish Ministry of Culture
- The Danish Ministry of Health
- The Danish Ministry of Justice
- Defence Command Denmark
- The Prison and Probation Service
- The Danish Fitness & Health Organisation
- The Danish Gymnastics and Sports Associations (DGI)
- The National Olympic Committee and Sports Confederation of Denmark (DIF)
- Club Fitness (*Foreningsfitness*)
- The Danish Tax and Customs Administration (SKAT)
- The Danish National Police (National Centre of Investigation)
- The National Community-Based Crime Prevention Cooperation (*SSP-Samrådet*)
- The Anti-doping hotline (anonymous telephone counselling)
- A provider of treatment for substance abuse
- A clinical psychologist
- An endocrinologist

At the request of Anti Doping Denmark, Defence Command Denmark, which is also represented in the network, has appointed a person to be in charge of anti-doping at each training centre at Danish military barracks.

Anti Doping Denmark has established close collaboration with the former steroid abuser Ditlev Traasdahl Madsen who today is physically disabled and has brain damage as a result of his steroid abuse. He travels all over Denmark and talks at schools and other venues about his life on steroids and its consequences. This type of lecture based on a personal story appeals to young people who would otherwise be difficult to reach with preventive information. In addition, Anti Doping Denmark refers the media to Ditlev Traasdahl Madsen when they want a personal angle on a story or article on steroid abuse.

Ditlev Traasdahl Madsen was awarded the Ministry of Culture's Sports Prize 2010 for his important social work with anti-doping in the fitness sector following nomination by Anti Doping Denmark.

The website www.netstof.dk is a portal where young people can anonymously debate subjects like stimulants. At the request of Anti Doping Denmark, the portal has included information on anabolic steroids and a facility allowing young people to contact a psychologist, doctor, anti-drug coach and other young people associated with the site if they have questions relating to steroids.

At the request of Anti Doping Denmark, the recognised training website www.motion-online.dk has included a guide to bigger muscles with advice and guidelines on both diet and training. The guide is available at www.motion-online.dk, and Anti Doping Denmark has a direct link to the guide from www.steroids.dk.

In addition, the increased focus on the fitness doping issue has motivated other organisations and authorities to introduce new measures:

- At the request of Anti Doping Denmark, several fitness centres have appointed a local anti-doping manager (see 3.3)
- A small number of police districts in Denmark have increased their focus on doping substances in connection with investigations into drug-related crime (see 7.5.1)
- With effect from 1 January 2011, doping has become one of SKAT's special national focus areas (see 7.1.2)
- In 2010, a new bill "*B-52 Forslag til folketingsbeslutning om behandlingstilbud til steroidmisbrugere*" (B-52 – Proposal for a parliamentary decision on specialised treatment options for steroid abusers) was tabled in Parliament (see 8.1)



6.1.5 Evaluation and evaluation criteria

The market research company Epinion has evaluated the “*Steroids are stronger than you*” information campaign which ran from November 2008 until the end of 2010. The campaign evaluation was based on:

- three quantitative online questionnaire surveys of the primary target group – 15–25-year-old Danish men (pre-evaluation, interim evaluation (effect evaluation) and final evaluation)
- two quantitative online questionnaire surveys of users of the www.motion-online.dk training forum (pre-evaluation and effect evaluation)
- questionnaire survey of general practitioners
- two focus group interviews with fitness instructors from commercial fitness centres and fitness centres under the national sports federations (DIF, DGI and DFIF)
- a PR evaluation in connection with the campaign launch
- a specific evaluation of campaign activities on the Internet including the www.steroids.dk campaign page, Anti Doping Denmark’s fan page on Facebook and questions to the expert panel on Anti Doping Denmark’s web pages

Epinion’s evaluation report: the main conclusions

At the end of the campaign, one out of four young men aged 15–25 remembered having seen the campaign, which is therefore deemed to have achieved a high degree of awareness among the primary target group. In particular, young men training at fitness centres showed growing awareness throughout the campaign period.

The campaign has had an effect on the target group’s knowledge of muscle-building substances. While the level of knowledge has in some respects decreased among the population in general, those who are familiar with the campaign have gained more knowledge. A third of the respondents with knowledge of the campaign indicated that they had acquired new knowledge of the subject, which is a significant increase. As a result of the campaign, respondents with knowledge of the campaign had also acquired greater insight into the side-effects associated with use of the substances and the type of muscle-building substances available. Generally, people training at fitness centres are more knowledgeable than the rest of the target group.

Moreover, the campaign had an effect on the attitude to muscle-building substances. In terms of attitude, on the whole the primary target group did not change much during the campaign period, as they were already fairly well aware of the risks of steroid abuse. Among those who were aware of the campaign from the beginning, 10% indicated that it had changed their attitude. Survey questions relating to attitude also show that respondents with knowledge of the campaign became more

aware that the substances are dependence-forming, detrimental to health and dangerous.

Meanwhile, the campaign targeting general practitioners was deemed to have been less successful. Only a few of the doctors surveyed indicated that their practice participated in the campaign. The doctors who read the leaflet nevertheless indicated that they think it contained relevant information.

Fitness instructors considered the language, style and tone of the campaign to be appropriate and also stated that they think the campaign was a positive step towards making doping abuse “uncool”.

At the time of the launch, the campaign received much media attention, and the PR work is therefore regarded as having been successful.

The fitness instructors consider that the www.steroids.dk campaign page is professional, credible and a good and lasting product. The website had an average of 1,193 unique visitors per month between the launch in November 2008 and 1 May 2011. The fan page on Facebook has also contributed to increased awareness of the anti-doping work. The page currently has 3,966 fans who therefore receive regular updates about the anti-doping work in Denmark (22 February 2012).

Overall, both the primary target group and the fitness instructors regarded the message and design of the campaign as relevant and credible.

The Netherlands

6.1. Preventive work and information campaigns

In the Netherlands, approximately 2 million people take part in fitness activities. It is evident from research (Stubbe et al., 2009) that around 8% of fitness members have used doping-designated substances in the past year, from AAS to stimulants. The use of doping is linked to various (serious) health risks (Hartgens and Kuipers, 2000). In order to prevent and combat doping use in fitness, the Doping Authority has developed an integral campaign – “*the Eigen Kracht (True Strength) campaign*” – which in addition to the provision of information and training also includes interventions which are focused on attitude and behaviour. The campaign is being financed by the Government. The campaign budget in 2011 was EUR 60,000.

6.1.1. Who is behind the campaign?

The True Strength campaign is being undertaken by the Doping Authority. The Doping Authority in the Netherlands is an NADO which for a long time has focused on both elite athletes and sports people in fitness centres.



6.1.2. Who is financing the campaign?

The True Strength campaign is being financed by the Ministry of Public Health, Welfare and Sport (VWS). The ministry has also made it explicitly known that it considers good collaboration between the fitness sector (Fitvak) and the Doping Authority desirable.

6.1.3. Target groups

The primary target group within the True Strength campaign are fitness centre member. Secondary target groups are fitness instructors (including those in training) and the owners of fitness centres. The fitness instructor is an important intermediary, as he/she is in direct contact with fitness centre members. In addition, doctors and partners/families will be provided with information.

Within the group of fitness centre members, a distinction is made between non-users, doubters – those who in principle have an interest in doping and may be considering use – and users. The first two – non-users and doubters – are primarily served by the campaign material (posters, tub, leaflet) in the fitness centre and via the website (www.eigenkracht.nl) and the book “Op Eigen Kracht” (True Strength Only). For questions regarding doping and supplements there is the Doping Hot Line (for telephone calls – discontinued in January 2012 – and emails). For users, *harm reduction* is the principal objective. (See “Harm reduction” below.) Because there is a specific risk of unintentional doping use amongst non-users and doubters, particularly through the uncritical use of (certain) supplements, the policy in respect of supplements has been tightened up. (See “Stimulants and unintentional doping use via supplements” below.)

For fitness instructors there is a (further) training course on doping, supplements and dealing with users. Information can also be found on the website: for example, there are annual programmes for the most common fitness goals (muscle building, slimming and combinations of the two) which the instructor can also get involved in. In order to enhance his/her basic knowledge, in addition to the website there is a book “Op Eigen Kracht” (True Strength Only), which contains reliable information about training, nutrition, slimming, supplements and doping. In a commercial environment, the availability of reliable information is exceptionally important. A book about doping substances is being published in the spring of 2012 (“Doping: the bare facts”) which will contain a great deal of information about the effects and side-effects of many substances used.



The owner of a fitness centre must naturally be prepared to pay attention to anti-doping policy in his/her centre. This means making use of the information material (posters, tub, leaflet and possibly the information film) which have been developed

Target group	Products/Interventions
Owners	Anti-doping kit Posters to be utilised (2 different posters) True Strength tub + display with leaflet True Strength in the Centre DVD Fitness fairs
Fitness instructors	(Additional) training on doping True Strength book True Strength website True Strength T-shirt Doping Info Line True Strength annual programmes for slimming and muscle building “Doping: the bare facts” book Articles in sport & fitness magazines Fitness fairs Presentations at fitness conferences
Fitness centre members	True Strength website True Strength book “Doping: the bare facts” book Doping Info Line Leaflet Annual programmes for slimming and muscle building Articles in sport & fitness magazines True Strength T-shirts



for the campaign. But they must also permit the instructor to refer clients to it and possibly provide additional information or actually make use of that information during instruction.

Harm reduction

The focus in recent years has primarily been on doubters. It was anticipated that prevention would be more effective than discouraging fitness members from use, according to research (Detmar et al., 2003). Because the prevention of (further) health damage is a more significant motive, attention was also paid to harm reduction, i.e. a series of measures which are intended to limit the harmful effects of doping-designated substances. Recommendations regarding what and how much people should use or the prescription or administering of drugs form absolutely no part of this. The message is promoted by way of articles in bodybuilding magazines, information on the website and by publishing the forthcoming book *“Doping: the bare facts”*. In addition there is (indirect) involvement in the Anabolics Clinic – a special ambulatory which users with health complaints can attend to see a medical specialist, who may screen them. This purely involves health screening. No advice is given about use or guidance on how to use doping-designated substances. The intention is to obtain greater insight into the nature and extent of the health complaints and possibly also into the motivation for use (see also Chapter 8).

In future, more attention will be paid to harm reduction. An important tool in this is a book to be published in the spring of 2012, *“Doping: the bare facts”* – produced by the Doping Authority in collaboration with an external expert. The book not only attempts to be an accessible and objective presentation of the facts surrounding the use of doping-designated substances, but also to communicate the message that the Doping Authority is an expert and reliable source of information in this field. All too often, users tend to rely on information sources which dealers of doping-designated substances are responsible for. The rhetoric which these sources employ suggests that governments and medical professionals are stirring up fear regarding the risks associated with the use of doping-designated substances.

Stimulants and unintentional doping use via supplements

The concern in the Health Council’s report regarding the high use of stimulants amongst fitness members (4.8%) stated in the report *“Dopinggebruik in de ongeorganiseerde sport”* (Doping use in non-organised sport) (GR, 2010) is naturally also a point requiring attention. In addition to the direct use of stimulants, it is also evident from research that supplements can also contain contamination (i.e. substances not stated on the packaging) such as stimulants, anabolic steroids or prohormones. The FDA (U.S. Food and Drug Administration) primarily warns against supplements in the “triangle” of slimming drugs, muscle en-

hancers and sexual performance enhancers. In the Netherlands, too, the RIVM (2009), amongst others, has warned against increasingly more dangerous illegal slimming drugs which are found here. These are often counterfeits of real medicines, or “natural” nutritional supplements to which active ingredients from medicines are added. Sibutramine is a well-known example of this. The use of these types of drugs can also cause serious health conditions. The research was commissioned by the Healthcare Inspectorate.

In line with this concern is the fact that the stimulant methylhexanamine – which appears on the WADA doping list – is freely available in the Netherlands from chemist and sports nutrition shops. The Doping Authority has warned against its use. One of the planned new interventions is to provide more information about the risks of illegal slimming drugs and supplements which conceal stimulants or contain muscle enhancing substances. This means that the True Strength campaign will pay more attention to these forms of (unintentional) doping use.

Doping Info Line

The Doping Info Line (DIL) has been in existence since 2000. This is a helpline (telephone and email) of the Doping Authority available to anyone with doping-related questions. The telephone line is open every working day between 13.00 and 16.00. There are regular calls from people with questions about anabolic steroids. These could be people who are in two minds about their use. In that case, they want information about the effect and risks of use or they want to know if there is somewhere they can test the contents of the products. Another group is that of users of anabolic steroids and/or partners of users who want to know more about the side-effects and health complaints, such as the consequence of the use of anabolic steroids for a man’s fertility.

Needless to say, no advice regarding use is provided by the Doping Info Line. General information is provided however, as how the drugs work, their effects and particularly their side-effects. The motives behind (potential) doping use are also covered and alternatives which achieve the desired goal (increased muscle mass and/or less body fat) are suggested, such as a more effective training regime, nutritional habits, food supplements and better recovery. The telephone helpline was discontinued in January 2012, due to a reduction in calls over the years and due to budget cuts. Emails can still be sent, and these are answered within one working day.

6.1.4. Media channels

In addition to the website www.eigenkracht.nl the campaign uses a broad mix of media channels including television and radio, but also interviews for newspapers and periodicals.



Usually this is as a result of press reports which are sent and/or in response to studies and reports by the Doping Authority. The report of the Netherlands Organisation for Applied Scientific Research (TNO) by Stubbe et al. (2009) into the use of doping-designated substances by fitness centre members, for example, attracted a great deal of attention nationally. In addition, articles were written for periodicals in which advertisements were also placed. Among the social media, a great deal of use is currently made of YouTube, where all campaign videos are placed. There are also plans for a pilot with narrowcasting (broadcasting of TV items via a closed TV circuit). This will be run and researched in a number of fitness centres and is being done jointly with Sportzorg24.tv, an initiative of Sportzorg.nl.

6.1.5. Evaluation and evaluation criteria

Important policy information is generated by the four-yearly studies into the general Dutch population, such as the National Prevalence Study on Substance Use (NPO) and the National Permanent Lifestyle Study (POLS) (see also Chapter 1). These polls include the use of PIEDs. The data is used both as an evaluation of earlier policy and as input for future policy.

In addition, there is important specific research, such as research into behaviour determinants of non-users and users of doping in fitness centres and attitudes to anti-doping policy among owners of fitness centres (see, for example, Detmar et al., 2003) The research may also involve prevalence amongst fitness centre members (Stubbe et al., 2009) or exploratory research into the supply of illegal doping via the Internet and the associated health risks (Wassink et al., 2010).

Elements of the campaign are also evaluated. In 2008, an evaluation was made of the information material for the True Strength campaign and a pilot study was undertaken of the True Strength muscle building programme (Shirazeh, 2008). The information material consisted of two posters, a True Strength tub and a display of leaflets. The evaluation of the information material was carried out in five centres, and the testing of the muscle building programme was done in three fitness centres, over a period of eight weeks. The background to the muscle building programme was recognition of the fact that:

- a sports people themselves have little insight into the proper alignment of training, nutrition, recovery and motivation, and thus it is possible that, if results are disappointing, the use of doping is considered or actually begun; and
- b supervision in fitness centres is inadequate, partly due to the moderate level of expertise of the average fitness instructor in relation to the possibilities offered by training and nutrition for achieving fitness goals such as increased muscle mass.

It emerged from the evaluation of the information material that the material had been seen and the content was clear. The muscle building programme ensured correct progress for people who were supervised by fitness instructors (who had been trained by the programme).

Other evaluations undertaken were guest lessons in fitness training, statistics from the website, and statistics from videos on YouTube. A customer satisfaction survey was also conducted concerning the Doping Hot Line (both telephone and email service) (Palsma, 2008) and a study was made concerning a series of articles in a bodybuilding magazine (Vogels, 1999).

As at the end of December 2011, there are 141 fitness centres in the Netherlands which are making use of the True Strength campaign information material.

Sweden

6.1. Preventive work and information campaigns

Prevention work on the part of society can prevent or restrict doping problems. The best way to achieve this is to reduce or completely eliminate the causes of the problems, primarily before they arise. In Sweden, research into the field of doping prevention is very limited. A lot of questions remain unanswered as regards the causes of the problems and what measures are effective for limiting them. As is the case for alcohol, narcotics and tobacco, a number of determination factors can be identified which control the scope of both the use of doping agents and the problems which this use creates. These determination factors can be divided into five groups: price, physical availabil-



ity, norms and attitudes, social factors and individual factors. These are the factors which need to be influenced in order to reduce doping-related damage. Preventive measures should therefore also be based on a multifactorial approach (Swedish National Institute of Public Health, 2009).

In January 2008, responsibility for implementation of the national action plans for alcohol and narcotics (doping being included in the latter) was moved away from the Alcohol Committee and the office of the national drug policy coordinator (*Mobilisering mot narkotika*) to relevant authorities, including the Swedish National Institute of Public Health. To assist with implementation of the action plans between 2006 and 2010 (prop. 2005/06:30), the Swedish National Institute of Public Health has awarded more than SEK 7 million (0.8 million Euro) to doping prevention initiatives over the period (Swedish National Institute of Public Health, 2011).

The aim in Sweden is to bring about a society free from narcotics and doping. The objectives for public health policy include doping in target area 11, which covers tobacco, alcohol, narcotics, doping and gambling. The work of the Government on alcohol, narcotics, doping and tobacco issues involves a number of ministries, which is why the Ministry of Health and Social Affairs has been assigned a coordinating role in the Govern-

ment Offices with regard to these issues. The Government has appointed a special council for alcohol, narcotics, doping and tobacco issues (the ANDT council). The ANDT council aims to act as an advisor to the Government on ANDT issues and to notify the Government of results of research and investigations of significance to the formulation of policy in these fields, for instance. The council is made up of managers from relevant authorities, a representative of the Swedish Association of Local Authorities and Regions, researchers and representatives of idea-borne organisations, including the Swedish Sports Confederation (SOU 2011:10).

In December 2010, the Government accepted a proposal entitled “*En samlad strategi för alkohol-, narkotika-, dopnings- och tobakspolitiken*” (A collective strategy for alcohol, narcotics, doping and tobacco policy) (prop. 2010/11:47), which presents a strategy for the period 2011–2015. This strategy will help to increase cooperation in order to bring about clearer, more effective authority control within the sectors of crucial significance to implementation of the Government’s policy on prevention in relation to alcohol, narcotics, doping and tobacco. One important initiative is to develop a forum for the exchange of experience and information, as well as to develop cooperation between policy areas and coordinate ANDT policy. This strategy will be supplemented with annual action programmes

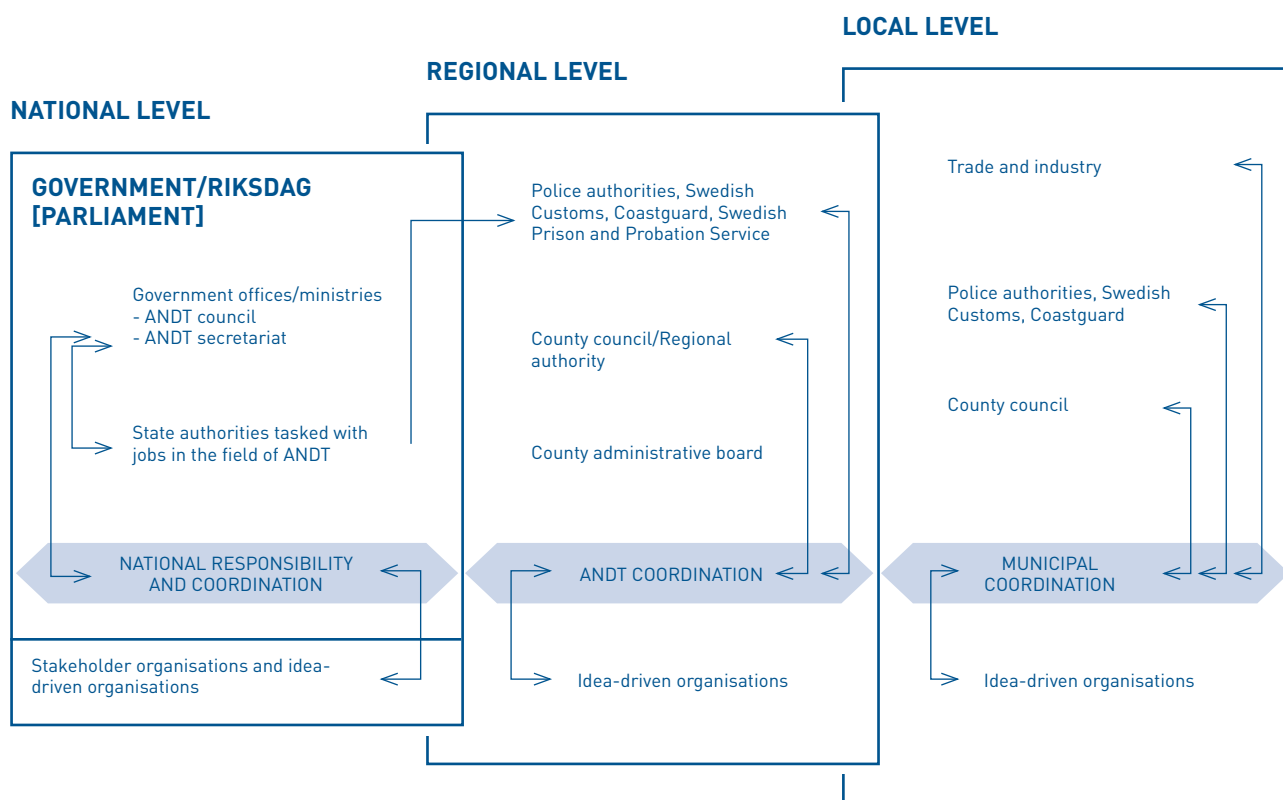


Figure 1. General organisation for attainment of national ANDT targets

in which Government policy will be compiled on the basis of a general sector and topic perspective. Regular follow-up and evaluation of the work will also take place so that the targets set can be reached.

Organisation for implementation of ANDT policy

Municipalities and county councils bear overall responsibility for preventive and health-promoting work at preschools and schools, the alcohol and tobacco supervisory authority, social services, abuse and addiction care, treatment and rehabilitation. The State bears no overall responsibility for this work. Responsibility for implementation of the overall Government strategy for Alcohol, Narcotics, Doping and Tobacco policy (prop. 2010/11:47) (the ANDT strategy) also rests with the authorities with explicit responsibility for implementation of the policy. Initiatives for achieving the targets of the strategy will be demanded from most sectors in society – from the public sector, the private sector, idea-driven organisations and individuals.

The ANDT policy is a cross-sector initiative. This is why a cross-sector coordination structure is required so that the targets and direction of the ANDT strategy can be passed on to external players in all relevant sectors and at all levels. Cooperation for clearer, more efficient authority control in the sectors of central significance to implementation of the Government's ANDT strategy must continue to be given priority. The present coordination structures at national, regional and local level will remain in place, but these will be complemented by a national structure for overall follow-up and evaluation of the ANDT strategy.

The job of the municipal coordinators

A local coordinating function for alcohol, narcotics, doping and tobacco prevention work has been developed at the county administrative boards since 2002 as part of the implementation of the national action plans at regional and local level. The Government is funding coordinators in all municipalities. The job of the coordinators is to provide knowledge and guidance for local prevention work by working in cooperation with the municipalities. In 2008, the coordination function for this work was also transferred to the Swedish National Institute of Public Health. Contact with the coordinators is helping to bring about greater communication, knowledge exchange and mobilisation in respect of the doping issue.

Responsibilities of the Swedish National Institute of Public Health

The job of the Swedish National Institute of Public Health mostly involves supporting work against doping in society and coordinating knowledge on anti-doping-related measures. The

Government has assigned funding to the Swedish National Institute of Public Health for measures relating to doping.

The three main tasks of the Swedish National Institute of Public Health are:

- to act as a national knowledge centre for effective methods and strategies; to follow up the national public health policy
- to carry out inspections with regard to alcohol, narcotics and tobacco

In addition, the Swedish National Institute of Public Health also coordinates and participates in a number of cooperation groups which deal with issues relating to doping. The Swedish National Institute of Public Health is now the convener for meetings of the Central Cooperation Group for Doping Issues. One purpose of the cooperation group is to discuss issues and focus relating to doping for practical reasons and reasons of policy so that the authorities and central players participating can develop better awareness of the field and work together to raise vital issues. One method involves illustrating and attempting to resolve existing or anticipated problems, including problems which do not fall naturally within the fields of responsibility of the relevant authorities or to which no attention has been paid for other reasons. The cooperation group meets once a year and consists of representatives of a large number of institutions and authorities involved with anti-doping issues.

Besides this, the Swedish National Institute of Public Health has also established contact with relevant authorities, organisations and researchers working with the doping issue, and has established good contact within sports, primarily with the Swedish Sports Confederation. This cooperation has been reinforced and is helping to bring about more efficient work and faster knowledge exchange.

The Swedish National Institute of Public Health opted to include and specify doping in “*Folkhälsopolitisk rapport 2010, Framtidens folkhälsa – allas ansvar*” (Public health policy report 2010, Public health for the future – everyone's responsibility) as one element in the increase of knowledge of and focus on the doping issue. Doping was not included in a corresponding report for 2005. The 2010 report illustrated the development of doping, as well as the initiatives implemented over the last five-year period in order to achieve the overall public health objective – a society free from doping. In addition, the Swedish National Institute of Public Health submits proposals for new measures at both national and regional/local level.

Anti-Doping Hot-line

Awareness of the increased use of doping agents, mainly AAS, in the 1980s and early 1990s led to the Swedish National



Institute of Public Health being commissioned by the Government to coordinate anti-doping work in Swedish society. This was why the Anti-Doping Hot-line, which opened in October 1993, was set up.

The Anti-Doping Hot-line is part of the clinical pharmacology department at Karolinska University Hospital. Its operations are financed by state funding – a total of SEK 3 million (0.35 million Euro) for 2010. The Anti-Doping Hot-line is run by three full-time members of staff, all of whom are trained nurses, a part-time doctor working 20% of full-time hours, and supported by 10% of the working hours of a manager.

According to its website, the Anti-Doping Hot-line (www.dopingjouren.se) works round the clock to:

- discover, describe and prevent doping in Sweden
- reduce dope abuse, increase knowledge and make people aware of the consequences by providing information, education, development and research
- increase knowledge levels in society, primarily among the professional categories affected

The Anti-Doping Hot-line has a nationwide telephone advice line which can be called by anyone via a 020 number. The service can also answer questions via its website. The website also includes a database of facts describing the side-effects of various substances, etc. The actual telephone advice line is being used less widely and is becoming more and more “medical” in nature, while the online services are being used more and more.

The scientific level is achieved due to the fact that the service is now an integral part of the Pharmaceutical and Doping Information business area of the Clinical Pharmacology department at Karolinska University Hospital. The Anti-Doping Hot-line also provides a range of training courses financed by fees. For example, there is a course for staff at fitness centres and training facilities, but the service also provides courses for relatives, and managers for training groups of relatives. The service also provides training for various professional categories at the request of municipalities: local and regional coordinators for drug prevention, school personnel, sports teachers and school nurses, health and medical care staff, social services and the police. The purpose of this training is to give staff the expertise to prevent, pay attention to and deal with the use of doping agents.

Regional and local projects

Blekinge

The cooperation group in Blekinge was formed in 1992 and consists of representatives of Blekinge Sports Federation, the police, Swedish Customs, social authorities, the county council and private owners of fitness centres and training facilities, and

municipal sports arenas. This network carries out prevention work through information initiatives to groups that come into contact with users of AAS in a variety of ways. The network also trains hospital staff, police officers and social workers. The police take part in visits to fitness centres and training facilities, and there is intensive cooperation between authorities and owners of fitness centres and training facilities. Experience gained from many years of work in Blekinge has provided experience which is important for the work of many regional projects against doping (SOU 2011:10).

Stockholm Prevents Alcohol and Drug Problems (STAD)

In April 2007, the STAD section at the Centre for Psychiatry Research Karolinska Institutet/Stockholm County Council Health Care Provision started a project focusing on prevention work against doping in cooperation with fitness centres and training facilities in the county of Stockholm. This project is named “100% pure hard training” and is financed by funding from the Swedish National Institute of Public Health.

STAD’s doping prevention work is based on the “community intervention” model originally developed in relation to alcohol (Holder, 1998). The theoretical basis is an environmental strategy in which society is viewed as comprising several subsystems: accessibility, social norms, the judicial system, authorities and social and medical factors. To achieve lasting effects, it is necessary to change as many parts of this environment as possible. Thus, in this model, no attempts are made to change individuals, but to change the system surrounding individuals. The primary components of the model are to engage and mobilise various players in a municipality/county in order to prevent a problem and to work with both demand-limited initiatives and initiatives which restrict accessibility. This model has been successful in alcohol prevention work in which training and policy work have been combined (Graham, 2000; Wallin et al., 2002, 2003). We presume that the same theoretical assumptions are applicable for doping prevention work as well.

The aim of STAD’s doping prevention work is to develop a cooperation model to reduce the use of and access to AAS and other hormone preparations at fitness centres and training facilities in the county of Stockholm. Work on the project also aims to develop coordinated, long-term prevention work at fitness centres and training facilities and to provide greater knowledge of the effects of AAS and other hormone preparations and of methods which have a demonstrated effect in prevention work. In addition, this work aims to ensure quality assurance of fitness centres and training facilities, develop active cooperation between players to reduce access to AAS and other hormone preparations, and to help build up national knowledge.



To become a quality assured fitness centre and training facility, the facility has to meet the following criteria:

- 1 Owners, training managers and instructors must have completed the course offered within the “100% pure hard training” project
- 2 The facility must have formulated a policy on hormone preparations which is applicable to all staff and people who train at the facility
- 3 The facility must organise the training environment in such a way as not to encourage the use and sale of hormone preparations
- 4 The facility must have a cooperation initiative with the police

The participating fitness centres and training facilities are offered support in the form of training, inspection work, quality assurance and opinion-forming initiatives (working with marketing and media). This work has aroused a lot of interest, and similar initiatives are therefore being planned in a number of Swedish municipalities. STAD has held conferences on doping and has taken part in fitness fairs and similar events in order to pass on its message about “100% pure hard training”. The aim of this is to emphasise the solution, not the problem, and to reinforce in young men a negative attitude towards doping by promoting a clean training ideal which is “as hard as nails” and absolutely real.

A scientific evaluation has been carried out in order to measure the effects of STAD’s work. When work began in 2007, a number of facilities (20) were selected as intervention fitness centres. These were then compared with the same number of control fitness centres. Evaluation of the work (questionnaire studies) between 2007 and 2010 indicates that at the training facilities included in STAD’s work (intervention fitness centres), the number of members stating that the fitness centres at which they train has a policy against doping has increased from 20% in 2007 to 35% in 2010. At the control centres, these figures were 16% for 2007 and 16% for 2010. The difference between the intervention centres and the control centres is statistically significant.

The number of members stating that they have been offered the opportunity to buy and/or try AAS between 2007 and 2010 has fallen from 25.6% to 18.4% at the intervention fitness centres. At the control fitness centres, however, this figure has risen from 21.1% to 26.4%. The difference is statistically significant.

The number of men stating that they have used AAS at some point has fallen over the period from 4.0% to 3.6% at the intervention fitness centres and has increased from 3.0% to

5.1% at the control fitness centres. The number of men stating that they have used AAS over the last 12 months has fallen over the period from 1.4% to 0.9% at the intervention centres and has increased from 1.5% to 2.7% at the control centres, and men stating that they have used AAS over the last 30 days has fallen from 0.4% to 0.2% at the intervention centres and has increased from 0.6% to 1.3% at the control centres.

Working to counter hormone doping in Malmö – A drug-free future

The project “Working to counter hormone doping in Malmö – A drug-free future” began in late 2007. One of the initiators of the project was the Skåne Sports Federation, which was responding to the use of doping agents both within and outside organised sport. A working group was put together following a preparatory conference and seminars involving federation-run fitness centres and training facilities, a municipal fitness centre and training facility, the police and Swedish Customs, Skåneidrotten and the municipality of Malmö. This project is being financed by funding from the municipality and from the Skåne county administrative board. The original project ran until 30 June 2011, and from this point on the work will be included in the regular operations of the respective organisations.

25 fitness centres and training facilities have taken part in the project. Courses have been held for the police and Swedish Customs (search staff, local police and police trainees), school healthcare staff and social services staff. A two-stage course covering a total of 1.5 days for owners, site managers, receptionists and instructors is held for interested fitness centres and training facilities. Fitness centres and training facilities may be awarded diplomas, if they have a policy document on hormone doping and their reception staff, fitness instructors and a board member, owner or someone in a senior position have completed the course.

Narcotics officers have taken part in doping controls at federation-run fitness centres and training facilities. The police can train at a fitness centre and training facility themselves and observe people training who are showing signs of AAS use. Pursuant to section 24, §7 of the Code of Judicial Procedure, the police may arrest a suspect if there is reason to do so, e.g. if someone suspected of a doping crime attempts to leave the scene of a doping control (SOU 2011:10).

Other regional projects

Regional anti-doping projects include *Samverkan. Antidoping. Nätverk. Norrbotten* (S.A.N.N., the Norrbotten Anti-doping Network Cooperation), which is a three-year project financed by the National Board of Health and Welfare, the Swedish National Institute of Public Health and the Norrbotten Sports Federation/*SISU Idrottsutbildarna*. The aim of this project is to

provide information and pass on knowledge about what happens physically and psychologically to anyone who takes dope (SOU 2011:10).

The funding provided by the Swedish National Institute of Public Health to coordinators against drugs means that anti-doping projects are becoming more and more common and are in progress in a number of counties and in various municipalities. In the county of Kronoberg, fitness centres and training facilities are offered the opportunity to take part in formal cooperation with the county administrative board in its work against doping. Representatives of fitness centres and training facilities agree to work in various ways to counter and prevent the use of AAS and other hormone preparations at the facility. The project also includes doping tests as part of the agreement between the centres and training facility and people who train there. In turn, the county administrative board provides training and skills development for key players at centres and training facilities, as well as supporting ongoing work and helping to develop policy and action plans. For more information, see the website for the project: www.dopingfritt.se (SOU 2011:10).

PRODIS – Prevention of doping in Sweden

In September 2008, STAD held its first network meeting for various anti-doping projects in Sweden. *Prevention of doping in Sweden* (PRODIS) was created as a result of this. The purpose of the PRODIS cooperation project is to develop, disseminate and evaluate a working model for preventing the use of AAS, based on the work carried out in a number of counties and municipalities in Sweden over the past few years. The starting point for the planned work on supporting and disseminating national prevention work relating to doping is the “community intervention” model (local prevention work), where research and practice are interlinked. There is currently a major need to develop doping prevention methods, although promising attempts are being made in a number of locations around the country at the moment. If municipalities working preventively to counteract doping join forces and work together on this, the effects will be greater than if they each work alone.

PRODIS work will act as a bridge until a Swedish NADO has been formed. All initiatives are taking place via close cooperation between practice and research, and are being evaluated. A working method of this kind not only enhances knowledge of the potential (e.g. effects) of various preventive methods, but also leads to further development and improvement of these methods.

With the aid of this cooperation between various counties and municipalities, PRODIS will be able to develop a collective evaluation model and consolidate knowledge. It is possible to compare evaluations and experiences from different regions and

towns; and the more evaluation studies there are, the safer the results will be, which in the long run will develop the prevention work. It will thus be possible to customise prevention work against the use of anabolic androgenic steroids more effectively to suit specific criteria for various environments and regions.

The work of PRODIS aims to develop coordinated, long-term AAS prevention work at training facilities by means of:

- 1 Training for key people (owners of training facilities, training managers, instructors, the police, local councils, municipalities, prosecuting authorities and schools) with a view to providing increased knowledge of the effects of preparations, as well as what methods have a demonstrated effect in prevention work
- 2 Certification of training facilities. To be certified, training facilities have to meet the following criteria: trained staff; a policy against hormone preparations which is applicable to all staff and people who train at the facility; a training environment that does not encourage the use and sale of hormone preparations; participation in doping tests on people who train at the facility; cooperation with the police and/or the Swedish Sports Confederation
- 3 Development of active cooperation between players in local society (the police, fitness centre owners, health personnel, social services, schools, parents, etc.) to reduce access to hormone preparations
- 4 Contribution to a national knowledge base which can be passed on to other municipalities in the country

PRODIS is coordinated by STAD, and other PRODIS players are representatives of doping prevention projects, the Anti-Doping Hot-line, the Swedish Criminal Investigations Department, Swedish Customs, the Swedish National Institute of Public Health and Linnæus University. The Swedish Sports Confederation is represented via the Norrbotten Sports Federation, Värmland Sports Federation, Västernorrland Sports Federation, Örebro County Sports Federation, Östergötland Sports Federation and Smålandsidrotten.

The Swedish Council for Information on Alcohol and other Drugs (CAN)

CAN's job is to pass on information about alcohol and other drugs. This is done via various publications, courses, conferences and websites. CAN has more than 40 member organisations. CAN manages Drogportalen (the Drug Portal), which collates information about drugs online and is a unique cooperation project involving 13 organisations and authorities. The website www.drogportalen.se has research reports, methods and law texts which have been collected and categorised into subject areas such as drug facts, prevention work, care and treatment, etc. (SOU 2011:10).

Ren Idrott

Ren Idrott (Go Clean) is a foundation which describes its concept as being all about insight, knowledge and attitude. With extra doping controls, *Ren Idrott* is working to bring about doping-free sports and to act as a role model for our next generation of sportsmen and women. *Ren Idrott* appoints ambassadors who stand as living proof that elite sportsmen and women can achieve success and make their dreams come true without taking shortcuts or illegal preparations. The primary target group is children and young people who play sports, along with their parents and leaders. Sportsmen and women in Sweden are another target group. Formers of public opinion, mainly in schools and media, are a third. *Ren Idrott* says that it now has 60 ambassadors. Their declaration of intent means that they have promised not to use illegal preparations, to help out with extra doping controls and to act as role models for the next generation. More information on *Ren Idrott* is available on the *Ren Idrott* website www.renidrott.se (SOU 2011:10).

The work of the Swedish Sports Confederation

The Swedish Sports Confederation manages and coordinates work to promote doping-free sports in Sweden. These activities are financed by means of targeted state funding to the Swedish Sports Confederation, which amounted to SEK 26 million (3.0 million) in 2010 (SOU 2011:10).

The Swedish Sports Confederation (RF) is responsible for anti-doping work in the field of sports in Sweden. All 70 special federations have their own anti-doping programmes, and the 21 district federations work to prevent doping (information taken from www.rf.se). Anti-doping work for elite sports, general sports and exercise is conducted within the Swedish Sports Confederation. The Confederation's Vaccinera klubben mot dopning (Vaccinate your club against doping) programme aims to enhance knowledge levels and to influence attitudes and behaviour among officials and people who train. This programme is aimed at sports clubs all over Sweden and focuses on training courses and discussions between both members and boards. To achieve certification in accordance with the method, the club must compile an action plan against doping. The Swedish Sports Confederation's biggest anti-doping initiative is devoted to upholding doping rules in sport, which has an impact on norms and laws. Doping controls are carried out regularly on members in order to influence attitudes and behaviour. The number of positive test results has declined in elite sports, and only a few cases are being detected nowadays. This is probably an effect of the intensive control (Swedish National Institute of Public Health, 2011).



“100% pure hard training”

6.1.1. Who is behind the campaign?

A number of studies implemented by parties such as STAD show that men who do weight training at fitness centres use AAS, narcotics and intoxicating drinks more, and more frequently, than their peers who do not go to the fitness centre (Leifman et al., 2011). At the same time, crimes involving violence in society are worsening and can be traced more and more frequently to abuse of dope or drugs. The studies carried out by STAD show that an estimated 4–5% of men who work out at fitness centres in the county of Stockholm use or have used AAS. To deal with this, STAD implemented a campaign which aimed to minimise the number of young adults starting to experiment with AAS.

6.1.2. Who is financing the campaign?

The campaign was financed with funding from the Swedish National Institute of Public Health.

6.1.3. Target groups

The campaign – “100% pure hard training” – is aimed primarily at men aged between 16 and 25 who work out at fitness centres. The campaign emphasises a hard but real training ideal with which the target group can identify. Working on the basis of the training culture, a simple message is put forward: Real weight training is not about what you take, but about what you give: 100%.

6.1.4. Media channels

The campaign was implemented in close cooperation with 20 training facilities in the county of Stockholm, all of which are working to meet the requirements to become a “100% Gym”.

These requirements include active cooperation with the police, drawing up of a local anti-doping policy and action plan, and training for all staff. Fitness centres/sports associations acted as ambassadors for the campaign.

The website www.hundraprocent.com was launched on the day the campaign started – 1 April 2009. This is where we meet “100%” ambassador Musse Hasselvall. The site includes three main elements designed to inspire, motivate and engage, all focusing on the major attraction for the campaign, chin-ups – or “chins” for short. Part 1 is a fake documentary, or “mockumentary”, about Swedish chidders. The aim is to create a phenomenon relating to chinning – a fantastic form of training for super-cool, strong, “buff” guys and girls who are, of course, completely clean. Part 2 is a training programme to maximise the number of chins in twenty weeks, and Part 3 is the Chidders Championship competition, a chinning championship which was at the Ung 08 Festival in August 2009.

When the campaign was launched, STAD also presented the results of an observation study involving 64 training facilities in the county of Stockholm. This study showed, among other things, that a total of 5% of men who work out at fitness centres in Stockholm were thought to use AAS, and of men who work out at what are known as “hardcore gyms”, 21% were thought to use AAS. STAD asked a communications agency to deliver the results to the media, with the aim of bringing the campaign to prominence. To ensure an effective breakthrough, the report was submitted in advance to certain selected media such as TV, radio and daily newspapers.

The mockumentary about “chidders” was released at the same time, with the aim of creating awareness of the “100%” campaign and driving traffic to the campaign site at www.hundraprocent.com. The video was placed on a large number of national and international video sites and linked back to the campaign site. Bloggers, forums and sites were canvassed once the video had been made public. The video was distributed widely to people interested in fashion, lifestyle and working out. Forums on 15 different sites relating to training and fitness were also canvassed. The video has been viewed more than 51,200 times and is currently available on more than 15 video sites.

To market and spread the “chins” wave still further, all facilities included in the initiative received a marketing kit consisting of posters, flyers, T-shirts, water bottles and stickers. The facilities were encouraged to hold “chin evenings”, where members took part in chinning competitions and the material was handed out. The campaign was also launched at a number of fairs, festivals and similar events.

A fitness handbook with advice and guidelines on anti-doping was developed for fitness personnel as a later part of the “100% pure hard training” campaign.

6.1.5. Evaluation and evaluation criteria

To evaluate the campaign, an online questionnaire was run which was aimed at owners/training managers, staff, and people who work out. The questionnaire included questions about overall impressions of the campaign, the message, attitude, information, website, material, chin evenings and the issue of anti-doping. Among other things, the evaluation showed that 100% of owners, 85% of instructors and 79% of people who work out found the overall impression of the campaign to be very positive.

Future direction of the work

More attention has been paid to doping in politics and among the working population over the past five years. Measures for restricting doping have focused on influencing values, norms and laws, illegal activities, and attitudes and behaviour. People’s knowledge of doping has increased, but knowledge is still limited. To gain a better understanding of the scope of the problem and to set the right priorities, there is a need to develop statistics in the field. To increase the chances of identifying and being able to offer help to people who use doping agents and individuals who are mistreated due to doping, general knowledge about doping outside sports needs to be enhanced. To enable prevention and treatment, more knowledge is required about who the dope users are, what motivates them, risk and protection factors, and effects resulting from use. At the same time, there is a need to develop and introduce preventive methods. Some work has been done and is ongoing at international, national, regional and local level. This work should continue and should be evaluated in order to provide methods and procedures with a sound scientific basis (Swedish National Institute of Public Health, 2011).

In its report *“Dopning – behov av utvecklad kunskap och uppmärksamhet”* (Doping – the need for developed knowledge and awareness) (2011), the Swedish National Institute of Public Health presents a number of recommendations for new measures aimed at placing doping on the agenda and at further developing a platform with knowledge and a structure on which future initiatives can be based.

To summarise, the Swedish National Institute of Public Health states in the report that it is important to keep doping on the agenda and that players at national, regional and local level should give exposure to the issue and further develop a platform using knowledge and a structure that can be built on in future. To be able to work with prevention and treatment in mind, it is important to pass on what we know while at the



same time producing new knowledge. Factual knowledge is required, along with method development and extension of treatment and preventive measures (Swedish National Institute of Public Health, 2011).

In the coming years, the Swedish National Institute of Public Health will be giving priority to the following measures:

- Providing greater support for development and introduction of methods to prevent doping.
- Developing and coordinating national statistics on doping.
- Passing on knowledge in order to discover users of doping agents.

Poland

6.1. Preventive work and information campaigns

6.1.1. Who is behind the campaign?

In 2011, the Commission Against Doping in Sport, together with its partners, the Ministry of Sport, the Polish Olympic Committee, Totalizator Sportowy Sp. z o.o. [State Lottery] Institute of Sport and TVP Sport (a Polish TV channel), started an anti-doping campaign entitled “Be Aware – Be Clean”. The campaign ended on 31 December 2011.

6.1.2. Who is financing the campaign?

Half of the campaign costs were covered by the Commission Against Doping in Sport and the other half by Totalizator Sportowy Sp. z o.o., which is the national lottery organisation supporting activities connected with the promotion of sport and development of sport infrastructure. The role of the TVP Sport channel must be emphasised. The channel aired a commercial promoting the campaign. Considering the social nature of the campaign, the management of Polish Television decided not to charge any airing fees.

6.1.3 Target groups

The campaign is targeted at young amateur and professional athletes who are particularly interested in experimenting with different substances such as AAS, drugs, stimulants and legal highs, which are particularly popular and dangerous. The campaign aims to educate an aware generation of young amateur and professional athletes who, in their activities outside sport, should also follow the principles of fair play and apply them to themselves and others. A television commercial presenting the negative consequences of using anabolic steroids, namely impotence, is the basic medium promoting the campaign.

6.1.4. Media channels

The basic assumption of the campaign is to send a clear message about the hazards connected with the use of AAS. It should encourage readers to deepen their general knowledge about anti-doping issues. Basic information can be found on

the official website of the Commission Against Doping in Sport and at educational campaigns organised during sporting competitions and meetings. The commercial was aired on TVP Sport and was also published on Internet portals, i.e. YouTube and Facebook. Since the campaign launch, the commercial promoting the campaign has aired on TVP Sport 95 times. During the campaign, 12 promotional events were organised by the Commission Against Doping in Sport. These attracted over 1,000 athletes representing different sports.

On 20 June 2011 at a conference was held at the Polish Olympic Committee at which the campaign was officially launched and the commercial promoting it was officially aired for the first time. The conference focused on presenting the assumptions of the campaign, all the promotional material and the official website. The conference was attended by representatives of the media (e.g. Przegląd Sportowy, Polsat Sport, TVP Sport, Gazeta Wyborcza, Polityka) and the campaign partners. The conference was organised in collaboration with the Ministry of Sport and Tourism, which contacted and invited journalists and media representatives. Information about the conference was also communicated to the Polish Press Agency.

Link to the commercial: <http://www.youtube.com/watch?v=UtaHLsGDIPQ>

6.1.5. Evaluation and evaluation criteria

The basic measures of the campaign's effectiveness included the campaign website's visit statistics, viewings of the campaign promotional commercial and participation in the educational campaigns organised by the Commission Against Doping in Sport. A direct study on the recognition of logos used in the campaign and the knowledge of its objectives will be conducted at the beginning of 2012.

Cyprus

6.1. Preventive work and information campaigns

6.1.1. Who is behind the campaign?

The Cyprus Anti-Doping Authority is responsible for all anti-doping work in the field of sports in Cyprus. In this respect, the Cyprus Anti-Doping Authority organises information and educational activities for athletes, athlete support personnel (e.g. trainers, medical doctors, sports officials, etc.) and the general public (e.g. schools).

6.1.2. Who is financing the campaign?

All of the costs of the information activities of the Cyprus Anti-Doping Authority are covered by the Authority by means of Government funding.

Educational and information material used during the campaign is shown below.





6.1.3 Target groups

The campaign of the Cyprus Anti-Doping Authority is targeted at athletes of all ages and all competition levels. Special attention is given to those athletes who are already included in the various support schemes and receiving Government funding. In parallel, the campaign is targeted at athlete support personnel (e.g. trainers, medical doctors, sports officials, etc.).

A special information/education programme of the Cyprus Anti-Doping Authority designed in collaboration with the Cyprus Pedagogical Institute aims to educate elementary and high school teachers about anti-doping. The objective is to give teachers the knowledge as well as ideas that can help them to educate young people about the issue of doping in sport.

Finally, the campaign of the Cyprus Anti-Doping Authority targets the general public. With a series of open lectures, presentations, and workshops organised in collaboration with universities, local authorities or other institutions, the Cyprus Anti-Doping Authority aims mainly to increase knowledge and raise awareness of the risks of doping, and to emphasise the ethical aspect of anti-doping.

6.1.4. Media channels

To assist the information campaign of the Cyprus Anti-Doping Authority, the Authority's website www.cyada.org.cy is used. Through the website, information is provided about substances on the Prohibited List and their side effects as well as nutritional supplements and the risks associated with contaminated products. Moreover, the website hosts a video about doping control and publishes a leaflet entitled "*Dangers of Doping: Get the Facts*" both developed in partnership with WADA, and gives access to WADA's Doping Quiz. Finally, the website gives information about the information/education activities of the Cyprus Anti-Doping Authority.

As already mentioned above, a tool that is used in the information campaign of the Cyprus Anti-Doping Authority is the leaflet entitled "*Dangers of Doping: Get the Facts*", which was developed in partnership with WADA. This leaflet, a simple reference guide in Greek, provides athletes and the general public with information regarding the health risks associated with doping.

Denmark

6.2. Other national prevention projects for young people implemented by other relevant authorities (e.g. concerning similar risky behaviour) which in the future could include information about anabolic steroids

Studying campaigns and literature about preventive work give an idea of how the behaviour of young people can be

influenced and how their use of steroids can be limited. The following is a description of some recent Danish examples of preventive measures targeting young people and focusing on alcohol or substance abuse. However, there are no definite answers to the question of how best to prevent young people from smoking, drinking, taking drugs, etc.

Institutional contexts, player involvement, common goals, knowledge sharing and coordination

A report by S. Beck and S. Reesen (2004) examines the use of alcohol and drugs among upper secondary school students and a number of institutional aspects impacting on the issue. The report shows that alcohol and drugs function as an identity tool and are used in social groups where the individual can try out a new role and a new identity, out of sight of adults. In relation to adults, this behaviour is a form of "anti-structure" which breaks with adult norms for behaviour and self-control.

The report points out that the process of legitimisation in upper secondary school is important when investigating the possibilities of achieving change by means of an alcohol and drug policy. Danish upper secondary schools have a relatively flat organisational structure where teacher acceptance, in particular, determines the extent to which something can be done. It is therefore important to involve the teachers in the project as early as possible. The report also points out that both teacher and student representatives must be involved in the entire preventive work process so that they recognise their input in the wording of the final alcohol and drug policy. Beck and Reesen think that legitimisation and a feeling of co-ownership among project participants are important parameters if the project is to succeed. Beck and Reesen also state that, as part of their strategy, the schools need to look at their socialisation processes and any mechanisms that promote an inexpedient perception of expected behaviour among students. The report emphasises, however, that the individual increasingly forms an identity in a reflective manner and not through internalisation of existing norms. Values and norms at the school can therefore have a certain influence, but only if known to the students and acknowledged as valid (Beck et al., 2004).

In its report "*Forebyggelse i festmiljøer – om alkohol og stoffer*" (Prevention in party environments – about alcohol and substances), the National Board of Health, Denmark makes recommendations regarding preventive measures based on experience from similar projects – the Swedish STAD project and reports from the Crime Prevention Council, among others. The aim of the report is to support municipal planning projects and the implementation of preventive measures in the party environment. According to the report, preventive work in the party environment involves taking into account the way private companies operate, municipal policies, the behaviour of young

people, the managers and boards of voluntary organisations, police work, attitudes to health, as well as recommendations and legislation. According to the report, it is therefore essential to establish a basis of communication that is egalitarian and respects the legitimate financial interests of the party environment in order to achieve behavioural changes in this specific environment. Bars, for example, have a general interest in increasing the sale of alcohol. The report also points out that dialogue alone is not sufficient, as interests are at stake that can negatively affect the willingness to cooperate. Tough competition and other factors can make cooperation difficult on a voluntary basis. The authorities must exercise the amount of control allowed by legislation both in the commercial party environment and at Friday bars and similar events at educational institutions for young people. In addition, the report states that effective prevention is achieved by establishing a common goal for the work across all participants and that common agreement on marketing, collaboration with police, contact with individuals responsible for prevention and training of staff can create a basis for a safer party environment (National Board of Health, Denmark, 2005).

In 2007, the National Board of Health, Denmark published an evaluation of the model municipality project “*Narkoen ud af byen*” (The drug-free city). The model municipality project

comprised 14 municipalities which during the period 2004–2007 worked to establish collaboration with relevant parties working with youth and the alcohol and drug environment to create a targeted, coordinated and multi-disciplinary effort capable of reducing the availability of illegal substances and limiting young people’s use of the substances and the problems that follow. It appears from the recommendations in the evaluation that employment of a coordinator is of vital importance to the development of the preventive work. The responsibility of the coordinator is to ensure that the preventive work is all-encompassing, covering all sectors, which includes providing ongoing dialogue and meetings between the local partners in the collaboration. The evaluation also highlights the fact that the preventive work must be well anchored in the organisation in order to ensure clear areas of responsibility and that there must be clear guidelines for collaboration with the different municipal departments and other partners in the municipality. This will ensure coherence in the overall preventive work in the municipality and give staff working with alcohol and drugs an opportunity to be part of a relevant professional environment that can support their work to limit alcohol and drug abuse. The report emphasises that, to ensure professional development, it is important that staff with coordinator functions working with alcohol and drug issues be included in profes-





sional networks with similar staff from other municipalities, etc. (National Board of Health, Denmark, 2007).

Preventive measures, fear-based campaigns and risky behaviour

In 2006, the National Board of Health, Denmark published the leaflet *“Kommunikation om forebyggelse og sygdomsrisici”* (Communication about prevention and health risks) in which it presents three general strategies based on pedagogy, PR and dialogue. The purpose of the pedagogical strategy is to teach the population how experts perceive risk. The PR strategy acknowledges that there are subjective perspectives of risk and tries to use these perspectives to influence and convert people to living a healthier and less risky life. The purpose of the dialogue approach is to create the best possible conditions for dialogue and resolution of risk management issues. The strategies should be regarded as different approaches, all of which can be used depending on the situation (National Board of Health, Denmark, 2006: 9).

The leaflet points out that risk is meaningful because it generates social benefits for young men. They use risks in different ways and express different forms of masculinity by means of different risky acts. Specific forms of risky behaviour can give young men an opportunity to become part of social groups and experiment with different social roles. Surveys also show that young people smoke, drink and use drugs because they are bored or because they seek to escape from reality. Risky behaviour is therefore more than just foolish acts carried out by ignorant and immature individuals; it also involves meaningful and functional acts. For young people, risk can be both a necessity and a desired behaviour, whereas health is not necessarily seen as attractive (National Board of Health, Denmark, 2006: 25).

As regards the content of communication on prevention, the leaflet indicates that one of the strategies that can be tried with young men is to counteract the stereotypical perceptions of masculinity by making them unattractive and instead offer alternative and more responsible male roles. The leaflet also states that communication about risky behaviour is most effective if it is based on the perspective of the recipient. It is therefore a good idea to test slogans etc. on the target group to avoid misunderstandings. Feedback from the test group can also be used as input to improve the campaign. Another important requirement, according to the leaflet, is that the recipients must trust both the content and the experts or organisations communicating the message. Openness and honesty strengthen the credibility of the sender of the message, and telling the recipients that the figures are subject to uncertainty and variations can also help. Conversely, it can have a negative impact on the message if people receive contradictory information, or if the message is based on uncertain research results that can be perceived by

the population as a false alarm. Ultimately, this involves the risk that people will become immune to new information about health (National Board of Health, Denmark 2006: 15–16).

In its report *“Skrek som virkemiddel i sundhedsfremmende kampagner”* (Fear as a tool in health campaigns) (2004) the National Board of Health, Denmark states that fear-based messages are more credible and convincing than messages not using fear. Fear-based messages work because they increase vulnerability and instil fear, and they have the capacity to convince when combined with alternatives for action. Surveys show that fear can change behaviour, but it is necessary that the recipient feels able to follow the recommendations for action and believes that the action will remedy the threat. The leaflet refers to an American study (Beiner et al., 2000), which was carried out in connection with an anti-smoking campaign. The survey shows that fear-based messages are perceived as realistic, clear, simple and provoking. It also shows that the fear-based message is most positively received by non-smokers, former smokers and smokers who have thought of quitting. Smokers who have not planned to quit are more negative towards the campaign. Inveterate smokers have more difficulty remembering the campaign than others, which seems to indicate that the campaign created dissonance in the smokers' self-image and therefore was rejected. The results of this survey thus indicate that fear is a good tool to maintain non-smoking behaviour or give people the final push to quit (National Board of Health, Denmark, 2004: 11). In parallel with previously mentioned surveys, this survey mentions that the use of fear-based messages involves a risk that the campaign could have the opposite effect of what is intended. According to the report, this can occur if the sender of the message has limited credibility; if the message is about an effect that seems remote to the recipient; if a message increases the interest in a topic such as smoking and more people therefore want to try it; if the message goes against the personal interests of the sender, or if the recipient feels that the message does not apply to him/her (National Board of Health, Denmark, 2006: 17).

The report points out, that fear-based messages raise an ethical question: does the end justify the means? For example, fear-based campaigns have the capacity to marginalise groups, perhaps even more than they are already (National Board of Health, Denmark, 2004: 80).

In his report *“Risiko, ungdom og maskulinitet – i relation til forebyggelse af rygning, alkohol, stoffer og vold”* (Risk, youth and masculinity – in the context of the prevention of smoking, alcohol, drugs and violence), Mogensen writes that it is important in connection with prevention and health promotion to be aware that health is only one of many dimensions in the lives of young men and that preventive measures and the





risky behaviour of young men can be regarded as opposites. He therefore thinks that future preventive measures and research into masculinity and health should start by answering the question: What prevents health from also being masculine? In other words, people dealing with prevention should ask themselves: How can health become a positive value for young men? As he says, it is not natural for young men to want to prevent or reduce risk, as risk can be perceived as an identity-forming activity and a productive masculine characteristic. Unless health prevention can identify and offer young men an alternative to risk that can produce the same type of symbolic and cultural masculinity, young men are not likely to change their behaviour (Mogensen, 2006: 26–27).

Few surveys are available that can contribute specific knowledge about the prevention of risky behaviour in young men and ways to improve their health. Our study of available literature and studies by others (Mogensen, 2006; National Board of Health, Denmark, 2010b) show that additional surveys are required before it is possible to talk about best practice for the prevention of risky behaviour in young men.

The Netherlands

6.2. Other national prevention projects for young people implemented by other relevant authorities (e.g. concerning similar risky behaviour) which in the future could include information about anabolic steroids

The number of other national prevention projects or campaigns which can be associated with this is currently limited. Collaboration and/or harmonisation exist with campaigns about drugs and the risks of purchasing medicines via the Internet.

Regarding drug use in the Netherlands, the Trimbos institute is the most important health-promoting organisation. It is designated for this purpose by the Ministry of Health, Welfare and Sport. Any questions or information about doping are referred to the Doping Authority. Trimbos has also collaborated with the Doping Authority in the creation of a special leaflet about the effects and risks of doping-designated substances. This leaflet forms part of a series about drugs and other stimulants.

The supply of substances and pills via email and websites is widespread. These medicines are mostly uncontrolled. The Healthcare Inspectorate (IGZ), the National Institute for Public Health and the Environment and the WHO have established that this regularly involves counterfeit pills. These are poor in quality and may lead to serious side-effects and even death. A new website (2010) of the Ministry of Health, Welfare and Sport – www.internetpillen.nl – provides information about the risks of fake/counterfeit pills. These pills are often supplied via the Internet. The Doping Authority is participat-

ing in the advice group for this campaign. Its own research into the health risks associated with illegal doping via the Internet (Wassink et al., 2010) reached similar conclusions.

Sweden

6.2. Other national prevention projects for young people implemented by other relevant authorities (e.g. concerning similar risky behaviour) which in the future could include information about anabolic steroids

“Knark är bajs” (Drugs are crap)

In Sweden, a number of campaigns have been conducted in order to reinforce negative attitudes to various drugs among young adults. One example is the “*Knark är bajs*” (Drugs are crap) information campaign, which took place between 2003 and 2007. The aim of this campaign was to minimise the number of young adults trying narcotics. The campaign was devised after discovering that more and more young people were showing a willingness to try drugs. *Mobilisering mot narkotika* (Mobilisation against Narcotics), a committee at the Ministry of Health and Social Affairs with the task of coordinating initiatives relating to drug policy throughout Sweden, was responsible for this campaign. The communications agency that developed the campaign focused on reinforcing attitudes among young adults who were already dubious about narcotics. The primary message was: “There are loads of reasons not to try drugs”; and this was underpinned by information on how war, prostitution and child labour were negative effects from the drugs trade. Work on “*Knark är bajs*” (Drugs are crap) was disseminated via a number of channels. Attention was drawn to the campaign by means of a website, outdoor advertising, debates on MTV, and also using films for cinema and TV. “*Knark är bajs*” (Drugs are crap) was a renowned, much-debated campaign which, according to surveys carried out by the Government, reached out to 79% per cent of young people in the intended target group, people aged 16–25.

“Local Hero”

Another example of prevention work aimed at young people is the “Local Hero” project, which is being run by the Swedish Council for Information on Alcohol and other Drugs (CAN). This project aims to support young people, helping them to enjoy drug-free activities in the places where they live. When a group of young people have decided to become Local Heroes, they get to meet two process leaders on two occasions. These process leaders hold a workshop and help the young people to complete their final projects. Exercises are carried out together with the process leaders, and discussions are held about the situation in the place where the young people in question live and their thoughts on drugs, and they are then given assistance to plan their drug-free activity.

IQ

IQ-initiativet AB was founded in May 2005 and is an independent subsidiary of the Swedish Alcohol Retail Monopoly, tasked with finding new ways of reducing alcohol consumption in Sweden. The inspiration for IQ came from – among other things – the successful “Spola Kröken” (Flush the Bend) campaign from the 1970s, but this has been adapted to suit the attitudes and questions of today. IQ created a new concept for enhancing understanding – both in society and among individuals – of the risks of alcohol.

One central element of IQ’s work is to collect good examples and tell people about them, in order to inspire more people. IQ identifies and emphasises good examples of things that are done by both major and minor players in society. Good efforts are confirmed by being assigned to IQ projects. These IQ projects then spread inspiration to other people so that more people can do more. There are currently almost 1,000 IQ projects in operation all over Sweden. One thing they all have in common is the fact that they are individual initiatives run by enthusiastic people. Together, they have managed to influence many Swedish attitudes and aspects of behaviour with regard to alcohol. This has led to thought, discussion and action.

IQ projects must meet the following criteria:

1. They must prevent or reduce alcohol problems and/or reduce alcohol consumption
2. They must be implemented in Sweden
3. They must focus in the first instance on people’s own activities or their own local areas
4. They must focus on specific action, not just information.
5. They must have a purpose and a target that can be followed up
6. It must be possible to communicate them externally

All IQ projects are given their own IQ logos with a unique project number that they can use as much as they like.

Each IQ project is a specific activity which aims to prevent or restrict the harmful effects of alcohol. No matter what the size of the activity, every IQ project is a good example and acts as a role model. A company, an association, a municipality, an events arranger or any other type of organisation can implement activities. All IQ projects are shown on the website www.iq.se and can also be marketed in IQ’s campaigns, in printed matter, at seminars or in connection with other activities. The purpose is to explain what the IQ projects actually do so that more people can be inspired to do something, too.

IQ implements information campaigns in order to make people think and to pass on knowledge about alcohol and how it af-

fects us. The message is often carried by advertising films aimed at people in priority target groups, such as young adults aged between 18 and 25. IQ also implements campaigns for its own information-providing tools which can be found on the website, and which help people in various ways to develop more of an understanding of how alcohol affects us. The “calorie profile” converts alcohol into calories and also shows how much physical activity is required to burn up those calories. The “alcohol profile” allows everyone to check their drinking habits and get an idea of any risks. They can also compare themselves with others. And they can use the “Fyllefilter” (Booze Filter) to avoid publishing embarrassing posts on Facebook and Twitter.

Denmark

6.3. Information and prevention work in other relevant groups

6.3.1. Authorities

Police and customs

Anti Doping Denmark has held lectures in several police districts and for customs officials in SKAT’s smuggling control unit, especially about AAS, the effects and side-effects of the substances, characteristics of use, motivation for use, etc.

General practitioners

As part of the “*Steroids are stronger than you*” campaign, Anti Doping Denmark distributed the leaflet “*Kan du genkende en steroidmisbruger?*” (Can you spot a steroid abuser?) to all general practitioners. The leaflet contains information on anabolic steroids, the effects and side-effects of the substances as well as abuse symptoms. The website www.steroids.dk also has a page with information for general practitioners⁶, including detailed information about steroid abuse symptoms, advice regarding conversations with patients to determine the extent of steroid abuse, if any, relevant therapies that the doctor can draw on in connection with treatment of the abuse, as well as references to relevant research.

Defence Command Denmark

The Defence Force has appointed local anti-doping managers (see 3.4) at training centres in Danish military barracks. All centres have received Anti Doping Denmark’s leaflets and posters, and the staff at the training centres have received Anti Doping Denmark’s “Handbook for fitness centres”, with advice and guidelines on anti-doping (see 6.1). The “Steroids are stronger than you” leaflet is also distributed at the Defence Day.⁷

⁶ http://www.steroids.dk/Raadgivning/Til_laegen.aspx

⁷ All Danish men are automatically invited to attend Defence Day in the year in which they turn 18. On Defence Day, information is handed out on the Defence Force which explains the training and job opportunities available within the Defence Force and the Danish Emergency Management Agency. In addition, everyone invited to attend is tested to see whether they are suitable for compulsory military service.



The Netherlands

6.3. Information and prevention work in other relevant groups

There has been occasional contact with the armed forces. It has been indicated that many nutritional supplements are used within the armed forces, and the Doping Authority has been asked for its advice regarding health risks. There has been occasional contact with the police regarding detection, and information has been requested by the police about doping-designated substances which they have seized.

Common contribution

Summary of Chapter 6

The collection of data about the preventive work targeting the use of steroids among the countries contributing to the report shows that many different organisations are involved in preventive work and campaigns, e.g. NADOs, national health organisations and local institutions are involved in prevention. However, it is also important that the parties involved in the prevention of risky behaviour in areas such as narcotics, alcohol and smoking start looking at steroids as an equally important problem.

It should be emphasised that the preventive work is not limited to campaigns but includes initiatives and interventions such as information about the side-effects of common fitness-doping substances, guidelines for doctors, parents and partners if steroid use is suspected, an anti-doping hotline, advice on ways to increase muscle mass in natural ways by means of training and diet, education of professionals, advice on anti-doping work in fitness centres, support for research in this area, conversations with users about treatment, etc.

Several different communication platforms targeting different groups and locations such as fitness centres are used in the preventive work. The parties focus on identifying which communication platforms will be seen and heard by the target groups and in which locations. It is therefore logical that most of the preventive work with AAS takes place in fitness centres, as this is where the users can normally be found. Experience shows that it is very important for the effectiveness of a campaign that the fitness centres cooperate and support the efforts.

The preventive work involves a number of different methods and tools. One of the methods is the positive angle that focuses on good alternatives, for example “100% pure hard training” and “True Strength”. This method makes it clear to the users that there are valid alternatives to the use of steroids, while the sender tries to make it attractive to be “in” or “clean”. In this way, the sender tries to influence people to live healthier and less risky lives. Another and more fundamental approach to preventive work is to provide information about the potential

side-effects and in that way share the risk perception of the experts with the target group. The purpose is to ensure that the target group is well informed and on that basis, hopefully, makes healthy choices. In addition, “fear”, including a special focus on negative side-effects, can be used to motivate current and potential users to stay away from steroids.

Surveys in contributing countries show that there are variations in how well the individual methods work in relation to different target groups. However, the ongoing need to focus on the evaluation of initiatives and knowledge sharing to ensure that the work is carried out on the most professional and informed basis possible remains a challenge.

The preventive work in the area of steroids and fitness doping in general is largely financed by NADOs, ministries, national and local health and prevention organisations, the main sports organisations, the fitness industry and charitable foundations.









7. TRAFFICKING

The chapter addresses trafficking in general, customs administrations and the police action against production, distribution and sale of doping substances. In the first part the focus is on customs administrations. The chapter outlines the number of doping seizures, shipping, transit and destination countries and which doping substances the seizures contain. The action against doping substances calls for a joint and cohesive effort, and the chapter describes the workflow between the customs administrations and the police as well as the dialogue and co-operation between authorities in the EU. In the second part the focus is on the police action against doping and the available investigative tools.

Denmark

7.1. Customs

The Danish Tax and Customs Administration (SKAT) has contributed to the following section.

7.1.1 Where are doping seizures made?

SKAT primarily seizes doping substances at international mail centres. In addition, a substantial amount is found in courier mail and at airports (in luggage), while a small amount is seized in ports and at border crossings.

7.1.2. Any focus on doping?

In 2009, SKAT became part of the National Network against Anabolic Steroids (see 6.1). This led to close collaboration between Anti Doping Denmark and SKAT regarding anti-doping work in the form of ongoing counselling, education about illegal substances, etc.

This close collaboration resulted in increased knowledge among relevant staff at SKAT and an increased focus on the illegal doping substances, and quickly produced results in the form of more doping substances being seized on their way both in and out of the country. In addition, SKAT has distributed throughout the customs network profiles of chemicals and other substances that may be legal but can be used to manufacture illegal doping substances. When such substances are identified, SKAT examines whether the products are standard for the production of the company in question. If not, the matter is investigated further and relevant information passed on to the police. This has so far resulted in the discovery of at least one illegal doping laboratory in Denmark.

As a consequence of the positive results, SKAT decided in 2010 to target doping substances in its control work and therefore



launched a nationwide campaign in this area. The doping project comprised:

- further training of customs officers in doping-related matters
- further training of sniffer dogs to teach them to detect doping substances
- targeted control operations throughout Denmark at airports, ports, border crossings and mail and courier centres
- increased collaboration with key individuals at mail and courier centres who can alert SKAT to suspicious consignments
- risk analyses and blocking of consignments in the customs clearance systems, profiling of individual persons connected with doping substances, chemicals, ampoules and equipment and other items that can be used for illegal production of doping substances
- post-analysis of doping cases by SKAT
- creation of a relevant contact network with other authorities in Denmark and abroad, including customs authorities and the police
- preventive measures such as information campaigns, lectures, creation of a page on SKAT's website for preventive information, etc.
- collaboration on projects involving white-collar crime on the Internet (see 2.5)
- targeted PR regarding anti-doping work
- a focus on doping by police officers who investigate and deal with doping cases to enable prosecution of the parties involved

In July 2010, the project's first sniffer dog was approved. SKAT is working on training at least another two sniffer dogs to detect doping substances.

A total of 32 nationwide doping-related customs raids were carried out during the first six months of 2011. To date, the project has been so successful that there are plans to double the amount of resources allocated to the project with effect from 1 January 2012, taking the total amount to the equivalent of seven man years of work in Denmark.¹ From early 2012, the project will also include new drug substances. The doping project has resulted in the identification and seizure of large amounts of such drugs, as the illegal import of the two types of substances appear to follow the same pattern.

7.1.3 How are doping seizures registered?

All the substances seized by SKAT are recorded in a database. Generally, the substances are recorded unit by unit, and the specific substance and the amount involved (mg or ml) are recorded in each case.

All cases are then passed on to the police for processing.

The Netherlands

7.1. Customs

Customs in the Netherlands is part of the Tax Authority and consists of a national office and branches in 9 regions, including Schiphol airport and the port of Rotterdam. One of Customs' tasks is physical supervision, including checks on incoming and outgoing goods. There is free traffic of goods within the European Union. This work therefore involves postal packages which are despatched from outside the EU.

7.1.2 Any focus on doping?

No specific attention is paid to doping products, as there is no specific legislation requiring this. Attention is, however, paid to illegal medicines, and doping-designated substances can therefore be included in this, although Customs employees often do not have sufficient knowledge of doping substances. If packages containing suspect products are encountered and there is doubt about their contents, additional analysis may take place in the Customs laboratory. If large quantities of illegally trafficked medicines are found, these are transferred to the FIOD-ECD (Tax Investigation service), and the IGZ (Health Care Inspectorate) is almost always contacted. Small quantities are simply destroyed (Van de Ven, 2011). Raw materials for AAS cannot be confiscated, as no licence is necessary to transport these.

7.1.3 How are doping seizures registered?

As far is known, there is no systematic recording of doping products which are intercepted by Customs. It is possible, however, that figures for substances analysed by the Customs laboratory may exist.

Sweden

7.1. Customs

Swedish Customs is a state authority which controls the flow of goods into and out of Sweden, helping to make for a safe society and ensure competition-neutral trade. Swedish Customs aims to facilitate legal trade and prevent illegal trade by offering smooth customs procedures for international trade, simple border passage for travellers and effective protection of Sweden's borders. Swedish Customs is commissioned by the Riksdag (the Swedish Parliament) and the Government of Sweden, and was founded in 1636 (Swedish Customs, 2011a).

Sweden, together with other EU countries, forms part of a customs union. Customs and other trade barriers have been removed within the union, and a joint customs arrangement has been introduced with regard to countries not forming part of the union. 75 million travellers, ships, containers and vehicles pass Sweden's borders every year. Operational work takes place

¹ Status as at 1 October 2011



at two core Swedish Customs operations: Effective Trade and Crime-fighting (Swedish Customs, 2011a).

Swedish Customs has been commissioned by the Riksdag and the Government of Sweden to collect duties, value-added tax and other fees so as to ensure the financing of the public sector and help ensure that society works efficiently for citizens and trade. Swedish Customs also has to monitor and control traffic to and from places abroad so that there is compliance with regulations on the import and export of goods. Its commission also includes making it easier for Swedish companies and citizens to trade with countries outside the EU and making it more difficult for individual criminals and criminal organisations to smuggle illegal goods into the country. Swedish Customs has focused its crime-fighting activities on limiting large-scale organised crime and has helped to reduce the number of criminal networks (Swedish Customs, 2011b).

7.1.1. Where are doping seizures made?

Swedish Customs can mainly be found at airports, ferry ports and beside major roads which pass the border. However, it also has offices at locations all over the country. Swedish Customs can also be contacted via its website, by email or by telephone (Swedish Customs, 2011).

7.1.2. Any focus on doping?

Doping is not mentioned in the appropriation documents for the 2011 budget year from the Government, nor in the Swedish Customs business plan for 2011. Nevertheless, it is stated that Swedish Customs will help to reduce the number of criminal networks devoted to smuggling narcotics, alcohol or tobacco, or economic crime. As doping forms part of criminal and economic crime, there are motives for Swedish Customs to work to counteract doping (Ministry of Finance, 2010).

7.1.3. How are doping seizures registered?

Seizures are recorded as the number of seizures and divided into tablets, fluid form in millilitres and powder form in grams (Swedish Customs, 2011c)

Poland

7.1. Customs

7.1.1. Where are doping seizures made?

Smugglers of AAS are most often caught at airports, in ports and at the eastern border of Poland, which is also the border of the European Union.

7.1.2. Any focus on doping?

Customs officers mainly look for illegal pharmaceutical substances, drugs and AAS.

7.1.3. How are doping seizures registered?

When attempted smuggling is registered, the day, place, Customs office in the place where the smugglers were caught, name of the seized preparation, its quantity and the form in which it was transported (vial, tablet, powder, ampoule, etc.) are recorded.

Cyprus

7.1. Customs

7.1.1. Where are doping seizures made?

In Cyprus the Customs and Excise Department of the Ministry of Finance performs controls on goods imported into or exported from Cyprus at the airports and in ports as well as at the check-points to and from the area of the Republic of Cyprus which is occupied by Turkey.

7.1.2. Any focus on doping?

In line with its mission, officers of the Customs and Excise Department perform controls on goods imported, exported or in transit, with the aim of enforcing the applicable restrictions and prohibitions as well as protecting consumers' health and safety. In this respect, controls focus on AAS and other doping substances.

Denmark

7.2. Seizures

7.2.1 Number of doping seizures

In 2010, SKAT seized 123,984 tablets and ampoules (including 64,800 in transit), 7,883 ml (liquid) and 7,700 grams of powder (see Figure 7.1).

7.2.2 Shipped from which countries?

Based on the number of cases, most of the drugs seized by SKAT were shipments from the USA, Denmark, China, Thailand and Hong Kong. In total, SKAT confiscated doping from 26 different countries in 2010 (see Table 7.1).

7.2.3 Destination countries

The main destinations for the shipments seized by SKAT in 2010 were Denmark, USA and Portugal (see Table 7.2).

7.2.4 Transit countries

In 2010, SKAT seized one shipment of 64,800 units of AAS on a passenger flight transiting Denmark on its way from Thailand to Finland.

One shipment of 500 units of AAS was seized from a passenger flight from Thailand to Denmark via Turkey.

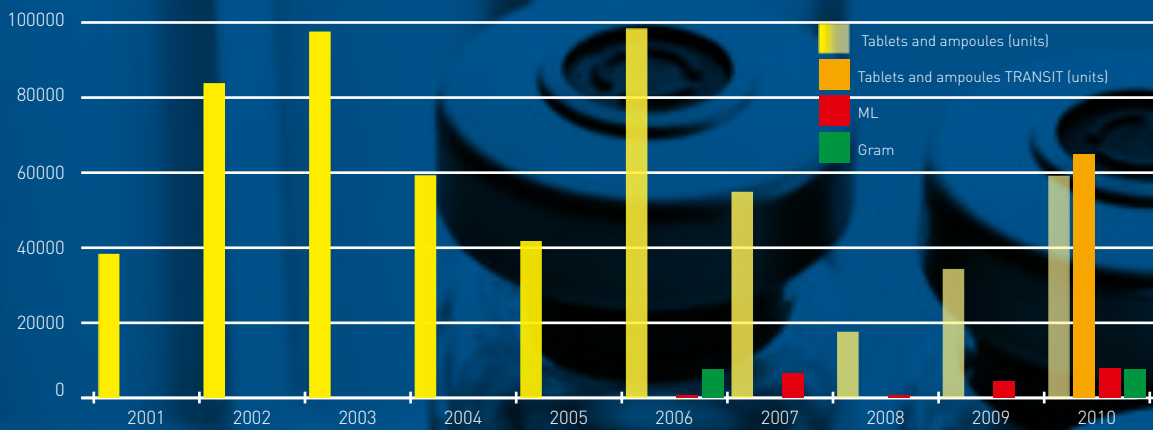


Figure 7.1 Seizures – Doping (Danish Customs)

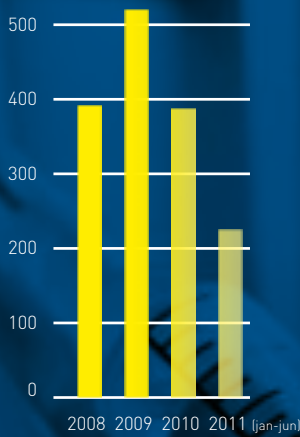


Figure 7.2: Total number of seizures of doping agents by Swedish Customs, 2008–2011. Source: Swedish Customs

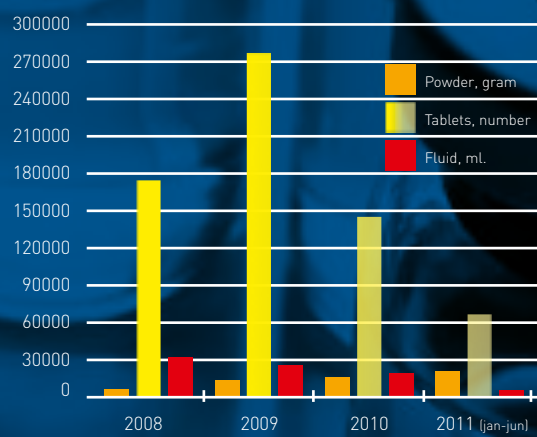


Figure 7.3: Amounts of doping agents (tablets, fluids and powders) seized by Swedish Customs. Source: Swedish Customs.

Shipping country	Number of cases	Percentage
USA	41	27.3%
Denmark	31	20.7%
China	21	14%
Thailand	15	10%
Hong Kong	9	6%

Table 7.1. Extracts of statistics from SKAT 2010

Destination	Number of cases	Percentage
Denmark	114	75.8%
USA	19	12.8%
Portugal	6	4%

Table 7.2. Extracts of statistics from SKAT 2010

7.2.5 Seized doping substances

SKAT seized the following preparations in 2010:

Anadrol (Oxymetholone)	IGF-1
Anavar (Oxandrolone)	Masteron (Drostanolone Propionate)
Andriol	Mesterolone (Proviron)
Androstenedione	Nandrolone
Boldenone (Equipose)	Oxymetholone
Clenbuterol	Pentadex 300 (5 testosterone)
Cut Mix (Trenbolone, Testosterone and Masteron)	Pregnenolone
Deca Durabolin	Primobolan
Dehydroepiandrosterone (DHEA)	Sustanon
Dianabol (Metandrostenolone/ Methandienone)	Testosterone Cypionate
Erythropoietin (EPO)	Testosterone Enanthate
Human Chorionic Gonadotropin (hCG)	Testosterone Propionate
Human Growth Hormone (hGH)	Testoviron (2 testosterone)
Diamondtropin	Trenbolone
Somatropin	Winstrol (Stanozolol)

(Source: SKAT)

The Netherlands

7.2. Seizures

7.2.1 Number of doping seizures

The authority in the Netherlands which is responsible for tackling the illegal trafficking of medicines is the Healthcare Inspectorate (IGZ). In the context of the overall illegal trafficking of medicines it also intercepts doping substances. The IGZ does not keep records of illegal doping substances which it intercepts. Probably a considerable number of products are involved.

At the request of the IGZ and the World Customs Organisation, in one week in October 2010, Dutch Customs seized 99 packages containing a total of 24,596 potentially harmful illegal medicines. Countries of origin were mainly China, Hong Kong and India. This action was carried out within the framework of Operation Pangea III, an international campaign against the illegal trafficking of medicines via the Internet. In the same week, 76 arrests were made worldwide. A total of 267,855 suspect packages were inspected by Customs from the 40 participating countries. This led to the seizure of 10,916 packages containing around 1 million pills in total with a total estimated value of around EUR 2 million. The seizure of illegal medicines mainly involved erection pills, slimming medication, sleeping pills, AAS, anti-depressives, painkillers, heart medication, insulin, cholesterol-lowering pills, hair growth drugs and anti-cancer medicines (IGZ, 2011).

During the last week of September 2011, a global action was once more undertaken in which Interpol was also involved. This time an estimated 2.5 million pills were seized (IGZ, personal communication).

7.2.2 Shipped from which countries?

Most doping-designated items and specifically AAS primarily come from Iran, Thailand, Pakistan, Turkey, Greece and, to a lesser extent, China (IGZ, personal communication).

7.2.3 Destination countries

For many of the substances, the Netherlands is their final destination. However, the Netherlands itself is also a country which produces doping-designated substances. These substances are then exported to neighbouring countries and Scandinavia.

7.2.4 Transit countries

The Netherlands is not really considered to be a transit country (IGZ, personal communication).

7.2.5 Seized doping substances

Various substances are involved, such as AAS but also including growth hormones.

Sweden

7.2. Seizures

The illegal use of doping agents in Sweden is fuelled mainly by preparations imported illegally over the border. Preparations are smuggled into the country in vehicles and personal luggage, or in the post when people place orders – for the most part – on the Internet (National Criminal Investigations Department & Swedish Customs, 2009). Tablets, capsules and injection fluids have been found in seizures since 1993. Powders were noted for the first time in the seizure statistics for 2006. Pure powder is less bulky and probably harder for Customs to find than the same amount of active substance present in a ready-mixed injection fluid, for example. The small quantity of powder can be prepared to make a large number of tablets, ensuing big profits for the manufacturer (Swedish National Institute of Public Health, 2009).

The steady increase in quantities seized, along with the number of seizures, indicates abuse which is extensive and growing. Customs and the police estimate that at least 50% of seized preparations are entirely fake or deviate from the original in some other way (National Criminal Investigations Department & Swedish Customs, 2009).

Statistics

Statistics concerning the number of seizures of doping agents are available from Swedish Customs and the police. In Figure 7.2 and 7.3 are statistics from the last three years plus the first six months of 2011.

7.2.1. Amounts

No authority has recorded annual prices for doping agents with a view to keeping statistics. Current prices for online sales can

be seen on the relevant websites, but knowledge is limited of the levels applicable to trade other than via the Internet. However, prices on the illegal market have been quite stable over the years of online trade (Moberg & Hermansson, 2006). The illegal market for doping agents is lucrative, and profitability from illegal handling is on a par with the corresponding handling of narcotics. Buying in pure powder and turning this into usable preparations which are then sold on results in big profits. Acting as a middleman for finished preparations is also profitable (Swedish National Institute of Public Health, 2009).

Examples of street prices in cities, small quantities

AAS, ampoules (1 ml): EUR 5–9 each	2 ml: EUR 10–12 each
AAS, tablets (5 mg): EUR 0.10–0.40 each	50 mg: EUR 2–5 each
Genotropin (growth hormone) 16 IE: approx. EUR 77 each	36 IE: approx. EUR 130 each

(National Criminal Investigations Department & Swedish Customs, 2009).

7.2.2. Shipped from which countries?

As regards preparations intended for the illegal market in Sweden, countries such as China, Russia and Bulgaria are common, but countries such as Spain and Portugal also appeared in 2009. Preparations are either in the form of ready-packed illegal preparations or as active substances which are prepared and packed in Sweden or outside the country (National Criminal Investigations Department & Swedish Customs, 2009).

7.2.4. Transit countries

Police information and operations show that products are smuggled on to Norway. However, the extent to which Sweden acts as a transit country is unclear (Swedish National Institute of Public Health, 2009).

7.2.5. Seized doping substances

Illegal manufacturing normally takes place in China and India. The active substances are then prepared to form tablets and injection fluid, for the most part. According to the National Criminal Investigations Department, the majority of doping agents sold are prepared in “underground laboratories” both in and outside Sweden. These underground laboratories are not controlled production premises, but are usually unsanitary areas located in basements, store rooms or old warehouses. The raw substance is mixed with substances such as oil in cement mixers or food processors if injection fluid is to be prepared. Fillers and binding agents are used if tablets are to be produced. No formal knowledge of chemistry is required for this. Tablets are stamped and ampoules are filled before then being packaged and marked with the company’s homemade label. The declaration of contents on the label rarely matches what the tablets actually contain (Swedish National Institute of Public Health, 2009).

Poland

7.2. Seizures

7.2.1. The amount

In 2010 100,000 units of AAS were seized.

In 2009 18,000 units of AAS were seized.

In 2008 25,000 units of AAS were seized.

7.2.5. Seized doping substances

In some cases it is difficult to give the exact name of the preparation because it is generally described as an AAS. Examples of precisely named preparations seized in the last three years include: deca-durabolin, cidoteston, sustanon, testosterone, nandrolone.

Denmark

7.3. Workflows (e.g. does seizure at customs lead to a police case?)

When SKAT has seized doping substances, they record the case and in some instances conduct a post-analysis. The matter is then handed over to the police for processing and subsequent prosecution, if relevant.

The Netherlands

7.3. Workflows (e.g. does seizure at customs lead to a police case?)

In 2001 the legislation covering the illegal trafficking of medicines was strengthened (see Chapter 2). In 2005 an investigation took place to determine whether that reinforcement had led to more criminal prosecutions, which did not appear to be the case (Snippe et al., 2005). It did, however, provide insight into the number of cases in the period 1998–2004. There were a total of 18 cases, and thus an average of 3 per annum. It was observed that more doping-related criminal proceedings were begun and that more serious criminal proceedings resulted. Little is known about the situation after 2004, but the impression is that the number of cases remained the same (Van de Ven, 2011). Furthermore, incidental interceptions are probably involved and the offences are principally based on other criminal offences (Van de Ven, 2011).

7.3.1 Experience/Evaluations

It is a striking fact that the trade in raw materials for medicines from which, for example, AAS can be produced is legal. The import, transit and/or export of doping substances are legal and cannot be dealt with as a criminal offence. Proceedings may only be instigated if the raw material is converted into pharmaceutical form, such as a pill, capsule or syringe barrel (Van de Ven, 2011).



Sweden

7.3. Workflows (e.g. does seizure at customs lead to a police case?)

Swedish Customs cooperates both operationally and strategically with other crime-fighting authorities such as the police, the Coastguard, the Swedish Tax Agency, the Swedish Prosecution Authority and the Swedish Economic Crime Authority in order to fight crime. As far as crime-fighting is concerned, Swedish Customs is dependent on well-developed international cooperation. Swedish Customs also forms part of a regional notification centre (*regionalt underrättelsecentrum* – RUC) together with other crime-fighting authorities. The police and Swedish Customs are constantly working to seize doping agents throughout the country and form part of local anti-doping networks in a number of locations. The authorities have also implemented measures which together aim to reduce the accessibility of doping agents (Swedish Customs, 2011a).

7.3.1. Experience/Evaluations

Example of cooperation: Operation Liquid

On 9 December 2009, around 40 people suspected of serious doping crime were raided. This raid was carried out in partnership by the police, Swedish Customs, the Swedish Tax Agency and the Enforcement Service in Sweden. Several hundred people were arrested, and doping preparations with a street value of at least SEK 6 million/EUR 0.7 million were seized. What started with a minor seizure at Arlanda in May 2009 ultimately resulted in interception on a large scale.

The seizure at Arlanda involved a few bottles which, according to the labels, contained olive oil, among other things, but analysis showed they contained something very different: AAS. It turned out that a network with international links was involved. The basic ingredients were ordered from China, and the doping preparations were then made from these at an illegal factory in Malaga, Spain. These were then sent on to Umeå for packaging and then forwarded for distribution to a number of subcontractors in places such as Gothenburg and Karlstad.

The verdict in this case involves 70 people. The main suspect, known as Mr Maxi, is still at large, but the court of first instance has convicted – among others – two of the defendants, a woman who had previously lived in Spain and a man from Sollefteå, of smuggling doping agents into Sweden together and in collusion with another person. This operation had a turnover of millions. Both were convicted of serious smuggling and serious doping crime; the man was sentenced to seven years' imprisonment and the woman to six years' imprisonment. The man's sister was convicted of acting as an accessory to serious doping crime, receiving a sentence of sixteen months' imprisonment. The court of first instance has convicted a man from Karlstad of serious smuggling and serious doping crime;

he smuggled doping agents, and also possessed and transferred doping agents on a large scale, and was sentenced to five years' imprisonment. The court of first instance has also convicted two men from Gothenburg of having together smuggled, acquired, possessed and transferred large quantities of doping agents. Among other things, they were found guilty of serious doping crime and serious smuggling; they were sentenced to three and a half years' imprisonment and three years' imprisonment respectively.

Poland

7.3. Workflows (e.g. does seizure at customs lead to a police case?)

7.3.1. Experience/Evaluations

Customs cooperate with the police and they exchange information on suspected crimes. When illegally smuggled objects are seized, the evidence is collected by customs officials, the person suspected of smuggling is detained by Customs, and then the police and prosecutor are notified. When the police have taken the case over, they try to collect relevant information, such as the country of origin, transit country, target country, recipients of the substances, etc.

In talks with the police and Customs, a great deal of valuable information and observations have been exchanged. Representatives of the Commission Against Doping in Sport and representatives of the police and Customs have agreed that it is necessary to cooperate more closely in order to increase the effectiveness of detection of crimes connected with the distribution of AAS. Increased effectiveness will be possible only when relevant changes are introduced to the law, which will facilitate the work of the police and the other services, and when good practices of cooperation between individual organisations and institutions have been developed.

Denmark

7.4. Dialogue and cooperation with the customs and police services in neighbouring countries/EU countries

SKAT and the Danish National Police have contributed to the following section.

PTN (Police and Customs Cooperation in the Nordic Countries)

Denmark is part of the Police and Customs Cooperation in the Nordic Countries (PTN). As part of this cooperation scheme, the Nordic countries have despatched police and Customs officers as liaison officers to a number of countries where there is deemed to be a special need for direct contact with the local law enforcement authorities. The liaison officers represent all the Nordic countries, regardless of which country has despatched the police or Customs officer in question. Originally,

the scheme focused exclusively on drug crimes, but it has been extended since 1996 and is now a general scheme covering all forms of cross-border crime, including the distribution of doping substances.

The liaison officers communicate via the central national units – in Denmark’s case, the Communication Centre of the Danish National Police and SKAT’s Control Information Centre. Currently, 35 Nordic liaison officers are stationed in 17 countries (as at 1 October 2011). Several of the liaison officers are also accredited to work for authorities in neighbouring countries.

Customs officers from the Nordic countries moreover cooperate directly with each other at an informal level, which is regarded as the most relevant form of cooperation on a day-to-day basis.

EU customs cooperation

One of the elements of the EU is the customs union, which entails close, binding customs cooperation among the 27 Member States. In addition to Denmark, these are: Austria, Belgium, Bulgaria, the Czech Republic, Cyprus, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK. In addition, the EU has decided to commence accession negotiations with Croatia and Turkey (www.skat.dk).

The EU customs union is based on the treaty establishing the European Economic Community dated 25 March 1957. This treaty has been amended several times, most recently by the Treaty of Lisbon, which took effect on 1 December 2009 (www.skat.dk).

In 2001, Denmark adopted the Act on Denmark’s Adoption of the Convention on Mutual Assistance and Cooperation between Customs Administrations whereby Denmark adopted the Naples II Convention. The Convention states, among other things, that “particular forms of cooperation involving cross-border actions for the prevention, investigation and prosecution of certain infringements of both the national legislation of the Member States and Community customs regulations should be regulated, and that such cross-border actions must always be carried out in compliance with the principles of legality (conforming with the relevant law applicable in the requested Member State and with the Directives of the competent authorities of that Member State), subsidiarity (such actions to be launched only if it is clear that other less significant actions are not appropriate) and proportionality (the scale and duration of the action to be determined in the light of the seriousness of the presumed infringement).”

In addition, the Convention states that “it is necessary to reinforce cooperation between customs administrations, by laying down procedures under which customs administrations may act jointly and exchange data concerned with illicit trafficking activities” (www.skat.dk).

Regional Intelligence Liaison Offices network (RILO)

Customs authorities fighting cross-border crime are organised under the RILO. The RILO is a global network of regional centres that collect and analyse data and other material of relevance to the international customs work with the purpose of promoting the efficiency of global information and intelligence. The RILO network is organised under the World Customs Organization (WCO). The network consists of 11 offices covering the WCO’s six regions. Denmark is represented in the Western Europe region.

The European customs authorities share general information via the “CEN” database administered by the WCO, and in other ways.

The CEN system electronically links all Customs administrations through the WCO’s network of global Regional Intelligence Liaison Offices (RILOs). These RILOs contribute to the CEN database by gathering national information and recording the data in the system. They in turn benefit by being able to use the common database to conduct regional or interregional analyses.

Sweden

7.4. Dialogue and cooperation with the customs and police services in neighbouring countries/EU countries

The Nordic Police and Customs Cooperation (PTN) means that Swedish Customs has direct contact with Nordic liaison officers all over the world. The Swedish crime-fighting authorities participate in the Baltic Cooperation to combat organised crime. Swedish Customs plays an active part in Europol work in The Hague, where there is another liaison officer. Swedish Customs also has links with staff in strategic locations in other countries and within other authorities, an arrangement which generates information (Swedish Customs, 2011b).

Poland

7.4. Dialogue and cooperation with the customs and police services in neighbouring countries/EU countries

It is apparent from the information obtained from customs and police that they run their operations in cooperation with the customs and police of other EU countries.



Year	1995	1996	1997	1998	1999	2000	2001	2010	2011
Cases	52	59	172	242	249	325	260	1,009	1,160
Units	227,614	97,987	167,667	220,747	69,077	133,874	254,638	199,589	183,189

Table 7.3 Seizure of doping substances registered by the Danish police

Denmark

7.5. What is the role of the police in connection with AAS?

The Danish National Police has contributed to the following section.

7.5.1 Are there specific groups focusing on AAS and doping in general?

The Danish National Police advise that they are not aware of any police districts that have established special groups to investigate doping cases. A few police districts have nevertheless chosen to focus on doping along with other drug investigations. This has resulted in more frequent dialogue between the police officers involved and Anti Doping Denmark, including advice in connection with the seizure of substances. In addition, this positive contact has led to Anti Doping Denmark holding lectures for all interested police officers at the police stations in question, which has improved the general knowledge of participating police officers.

7.5.2 Do police carry out searches and raids in specific environments?

To the extent that the police districts become aware of extensive illegal import, distribution, possession or manufacture of doping substances, they investigate the matter, which may include searches and raids to the extent permitted by law. Use of the Internet in the form of visits to websites and various forums can also form part of an investigation.

7.5.5 Data from police work – drug seizures

Doping substances are often seized in criminal environments, and it is not uncommon to seize doping substances together with other drugs. Seizures of large amounts of doping substances have also occurred in connection with extensive investigations of thefts and break-ins where doping substances have been stolen from pharmaceutical companies.

The Danish National Police record the seizure of doping substances in a database using a procedure similar to that for any other drugs they seize. The substances are recorded on the basis of reports from police districts. The recording was discontinued in 2002 but resumed in October 2010 at the request of the Danish Ministry of Justice. The substances are recorded in units, milligrams, millilitres and ampoules. The names of the preparations seized are not recorded in the police database.

Until record-keeping was resumed in 2010, police districts were not required to report the seizure of doping substances. The following figures from 2010 are thus incomplete, and the actual figures for amounts seized during these years are probably higher (see Table 7.3).

The Netherlands

7.5. What is the role of the police in connection with AAS?

The role of the police is relatively small in the detection of AAS. They occasionally encounter them by accident. In the past they were tolerated, but now they are more likely to be seized and reported to the IGZ. The IGZ then compiles an official report on what is to be included in the criminal proceedings. Each year there are around 10 of these types of reports by the police to the IGZ. A couple of times a year, the police call the Doping Authority's Info Line. When substances have been discovered, they often ask which substances are involved and whether the quantity indicates they are being trafficked or possessed for personal use.

Sweden

7.5. What is the role of the police in connection with AAS?

7.5.1. Are there specific groups focusing on AAS and doping in general?

Much of the doping work carried out by the police is information-controlled national work to fight individual criminals and criminal organisations, and this takes place in cooperation between the National Criminal Investigations Department and the operational county police authorities. However, the police are also working to combat doping on a local level with training facilities, for example (Swedish National Institute of Public Health, 2009).

7.5.2. Do police carry out searches and raids in specific environments?

Initiatives concerning training facilities

The police have raided several training facilities all over the country, including an extensive raid on approximately 40 fitness centres in Stockholm which took place in February 2011. This initiative targeted around 40 fitness centres in the Stockholm area where it was suspected that AAS were being used. This doping raid was the biggest initiative to date involving fitness centres and doping. Approximately 60 people were suspected of doping crime and were asked to provide urine samples. The police seized weapons and narcotics as well as doping prepa-

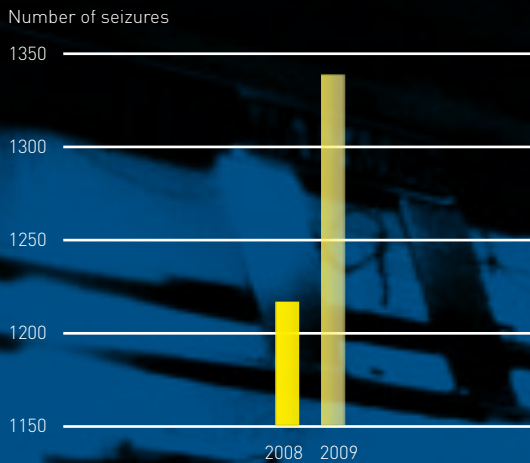


Figure 7.4: Number of seizures of doping agents carried out by the police, 2008 and 2009. Source: Swedish Customs and the Swedish National Criminal Investigation Department.

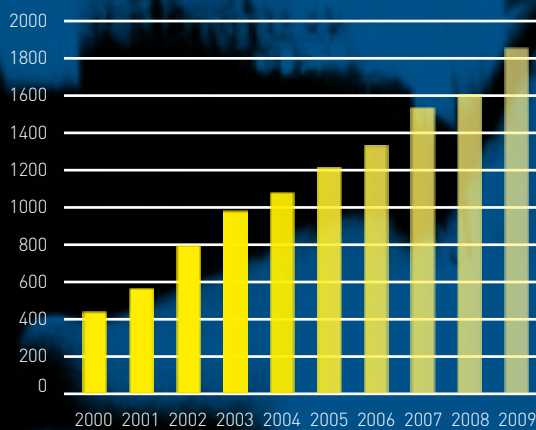


Figure 7.5: Number of seizures of doping agents carried out by the Swedish police and Swedish Customs, 2000 - 2009. Source: Swedish National Criminal Investigation Department & Swedish Customs, 2009

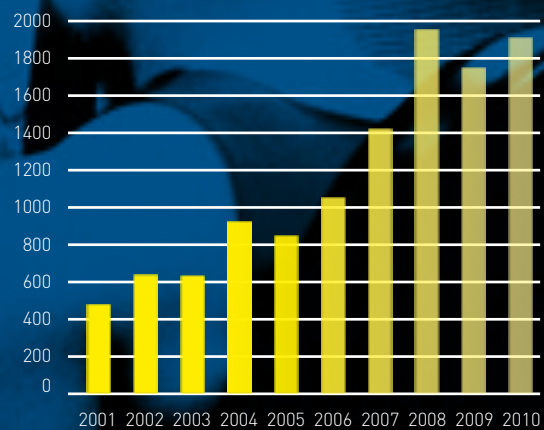


Figure 7.6: Number of crimes in contravention of the Doping Act, 2001-2010. Source: Swedish National Council for Crime Prevention

Number	2006	2007
Tablets	235,044	87,448
Fluids, ml	23,521	49,826
Powders, grams	641	1,261

Table 7.4 Number of amounts of doping agents (tablets, fluids and powders) seized by the Swedish police, 2006 and 2007. Source: Anti-doping Hot-line



rations. A major raid also took place in Gothenburg in May 2011. This raid covered 17 fitness centres, and 35 men aged 18–25 were detained so that samples could be provided. 16 homes were also searched.

Examples of other specific raids against doping

Raw Deal

The summer of 2007 saw the start of cooperation between the DEA (the U.S. Drug Enforcement Agency) and the information section at the Swedish National Criminal Investigation Department. The DEA had begun an operation against the illegal trade in hormone preparations in the U.S. One of the aims of their operation was to target the major sales of raw substances (100% purity) from China – raw substances which were highly likely to have been intended for own manufacture and sale of usable preparations. The idea was not only to eliminate the major sellers, but also to cover the entire distribution chain. The DEA contacted China, and a certain degree of cooperation was built up. During the investigation prior to the operation, it turned out that Swedish customers were involved, along with customers from Mexico, Australia, Canada, Germany, Thailand, Belgium, Spain and Denmark. Europol was contacted, followed by the National Criminal Investigation Department, which identified 20 or so people suspected of serious crime in accordance with the Doping Act. In September 2007, a collective action took place involving raids all over the world. 14 people were arrested in Sweden. The majority had not been suspected of any similar crimes before (Swedish National Institute of Public Health, 2009).

Bosco

When the police arrested a person in Malmö for serious doping crime in 2008, large quantities of AAS were found, including a 20 kg package from China. This hailed the start of Operation Bosco. A 5 kg pack had recently been sent by the person arrested to a person living in Gävle, and so a search of that person's home was requested. Large quantities of AAS, drugs and cash were found at the home of the suspect in Gävle. The National Criminal Investigation Department was involved, and a large number of people who had made purchases (probably via an Internet forum set up by the person from Gävle and/or the person from Malmö) were traced. At a specific time, two months after the arrest of the person from Malmö, a number of police authorities in Sweden carried out a collective raid, with searches and arrests (Swedish National Institute of Public Health, 2009).

7.5.3. Use of surveillance of specific groups, places and environments

There is no general, structured surveillance, but surveillance of various kinds does take place in connection with tipoffs and cases linked with doping.

7.5.4. Use of surveillance of websites and debate forums used for sale of AAS

Surveillance of various types takes place in connection with tip-offs and cases relating to doping; see 2.5.

7.5.5. Data from police work (e.g. seizures, etc.)

See:

- Figure 7.4: Number of seizures of doping agents carried out by the Swedish police, 2008 and 2009
- Figure 7.5: "Number of seizures of doping agents carried out by the Swedish police and Swedish Customs, 2000-2009"
- Figure 7.6: "Number of crimes in contravention of the Doping Act, 2001-2010"
- Table 7.4: "Number of amounts of doping agents (tablets, fluids and powders) seized by the Swedish police, 2006 and 2007".

Poland

7.5. What is the role of the police in connection with AAS

7.5.1. Are there specific groups focusing on AAS and doping in general?

The police focus on groups involved in the distribution of AAS. Usually they are organised groups, "professionally" involved in organised crime. In some cases, distribution of AAS is connected with the distribution of other illegal substances, such as medicines or drugs. In some cases, this type of activity is connected with other types of criminal activity.

7.5.2. Do police carry out searches and raids in specific environments?

Police make raids on members of organised criminal groups. It must be remembered that raids are only possible if the police have information confirming commission of a crime. Without such information there is no legal basis to start operations, searches or raids.

7.5.3. Use of surveillance of specific groups, places and environments

The police, like other services, make use of intelligence data provided by informants, data collected during investigations and data available on the Internet. The operation mode is identical to that followed in the case of other crimes committed by organised criminal groups.

7.5.4. Use of surveillance of websites and debate forums used for sale of AAS

According to the information provided by the police headquarters, the police monitor websites and Internet portals containing information about AAS. However, it is not easy to prosecute website owners for the inclusion of information which is contradictory to the principle of public health. Owners of

such Internet portals usually publish a disclaimer and state that they are not liable for the information published there and that they do not support or encourage the use of doping substances. Based on the information provided by the police, it is extremely difficult to monitor the illegal distribution and sale of AAS on the Internet because of the great complexity of such transactions, which are usually effected on servers located outside the EU.

Cyprus

7.5. What is the role of the police in connection with AAS?

7.5.1. Are there specific groups focusing on AAS and doping in general?

In Cyprus, a special unit of the Cyprus Police – the Drug Law Enforcement Agency – is given the task of investigating doping cases along with other drug investigations. There is close and constructive collaboration between the Cyprus Anti-Doping Authority and the Drug Law Enforcement Agency.

7.5.2. Do police carry out searches and raids in specific environments?

The Drug Law Enforcement Agency of the Cyprus Police performs searches and raids whenever there is information and/

or suspicion of activities that constitute potential violation of the Cyprus anti-doping laws such as import, trafficking, possession, or manufacture of doping substances. In 2010, premises searched and raided by the Cyprus Police included houses, stores selling nutritional supplements, and a so-called “kitchen laboratory” producing AAS and other doping substances.

7.5.3. Use of surveillance of specific groups, places and environments

The Drug Law Enforcement Agency and other departments and units of the Cyprus Police use surveillance of various kinds in connection with activities that constitute potential violation of the Cyprus anti-doping laws.

7.5.4. Use of surveillance of websites and debate forums used for sale of AAS

Surveillance of websites is practised by the relevant department of the Cyprus Police in connection to crimes including doping as defined by the laws of Cyprus.

Denmark

7.6 Knowledge of distributors (i.e. gangs)

The Danish National Police has contributed to the following section.





The Danish National Police have only limited knowledge about organised illegal import, distribution and manufacture of doping substances. The reasons are that Danish legislation does not permit proactive investigations on a par with, for example, drug investigations, and the number of doping investigations is therefore low.

7.6.1 To what extent is the trade organised?

Intelligence and a number of investigations indicate that illegal import, distribution and manufacture of doping substances are organised by criminal organisations and groups already known to the police in connection with drug crimes.

The Netherlands

7.6. Knowledge of distributors (i.e. gangs)

7.6.1 To which extent is the trade organised?

The doping trade in the Netherlands can be described as well-organised (IGZ, personal communication). According to Van de Ven (2011), the organisation of the doping trade in the Netherlands is different from that referred to in the study by Koert & Van Kleij (1998). The organisational structure does not very much resemble that of a classic criminal organisation, with large dealers at the top, intermediate dealers in the middle and many small dealers at the bottom of the pyramid. It is more a question of a social networking model, in which a number of important players make use of each other's strong/weak points and specialisations.

7.6.2 How is the organisation arranged?

In the Netherlands, 6–10 important players operate in the trade, production and distribution of doping-designated substances, and a number of them have connections abroad. There is a great deal of cooperation, especially in the field of importing and wide-scale distribution. Within doping networks, it is clearly evident that the close links with sport (specifically bodybuilding and fitness) are a common factor which binds people together. That connection is sustainable and consistent in comparison with drugs markets (Van de Ven, 2011). A great deal of advice is given on the use of these substances. Furthermore, there is a close relationship between trainers and their sports people. In September 2011, one of the central players was murdered. There is a strong suspicion that this killing had some connection with the doping trade.

Sweden

7.6. Knowledge of distributors (i.e. gangs)

Doping agents are sold openly on websites which can easily be found using the common search engines. These sites are searchable and are often available in both Swedish and English. A website may appear one day and disappear the next. There are many advantages for both sellers and buyers to doing business over the Internet. Sellers can reach their customers easily,

24 hours a day. There are no age limits. The take-up area is unlimited, as national borders and distances are of no significance. There is a great deal of anonymity and considerable opportunity to make money. Money is normally the driving force. On the other side of the transaction is the buyer, who receives up-to-date information from other buyers, on discussion forums, regarding which sales outlets can be considered reliable. By easily creating an encrypted email address which cannot be traced by the police, for example, the buyer can place orders and correspond with the seller by email. The order is paid for by direct bank transfer or by sending cash in an envelope through post. The goods are then sent to the recipient by post in discreet packaging or handed over in person. However, what has been ordered is not always what is supplied (Swedish National Institute of Public Health, 2009).

The Swedish National Criminal Investigation Department estimates that online trading in both illegal and legal substances is on the increase. It is thought that the range of websites advertising the sale of narcotics, pharmaceuticals classified as narcotics, unclassified drugs and AAS has never been greater. Users who do not buy their own doping agents directly online buy them from friends, for example. Contacts are also made at fitness centres, where deals are initiated and, sometimes, take place. These doping agents often come from online trading as well (Swedish National Institute of Public Health, 2009).

Preparations are smuggled into the country in vehicles and personal luggage, or in the post when people place orders on the Internet. The smugglers are often ethnic Swedes, but Swedes of other ethnic origins are also involved (RKP, Swedish Customs, 2007).

7.6.1. To what extent is the trade organised?

Criminal networks are often behind the websites selling doping preparations. For example, a criminal network was uncovered within the scope of the Government's police authority commission to combat serious organised crime when the police triggered the case that came to be called Operation Liquid (see 7.3.1).

Poland

7.6 Knowledge of distributors (i.e. gangs)

It is apparent from the information obtained from the police that organised criminal groups are predominantly responsible for smuggling and distribution of AAS. For them it is a source of revenue.

The Netherlands

7.7 Evaluation of projects and general experience

Quality of illegal substances

It is well known that doping-designated substances cause a risk to health. Little was previously known, however, about the quality of illegal doping products. This was researched in 2005 (De Hon & Van Kleij, 2005).

In addition to a study of literature, 336 product packs were analysed for the presence of doping-designated substances. In addition, 38 interviews were conducted with users and other informed persons and 14 discussion forums were visited on the Internet during a period of 16 months.

The results showed that the quality of illegally obtained doping-designated substances is poor. At least 50–60% of the products do not deliver what is declared on the packaging. There are all types of counterfeits: either they contain other, similar substances or they contain too little or even too much of the active substance. In 7% of cases, the product contained no active substance whatsoever.

Except in a few obvious cases, there is no good practical way of determining whether the substance concerned is counterfeit or not. A laboratory analysis is the most suitable method, but fitness centre members do not have access to this in practice. Therefore, in practice a trial-and-error approach tends to be used in which the extent of muscle development and/or increase in strength serves as evidence that the product is not counterfeit. But even using this method, reassured users run risks: the quality of the counterfeit products varies considerably, and a product which appears uniform on the outside, including having the same batch number and the same shelf life date, can contain very different doses.

The user market

The research results indicate that the use of doping-designated substances, whether of illegal origin or not, can be associated with a greatly concealed health problem. The risks to health are not only concealed in the side-effects which users of the substances themselves can suffer from, but also in the way in which these substances are used in various combinations with often very high (declared) dosages. Furthermore, the use of counterfeit doping substances also carries additional risks. The dosages are completely unpredictable, which means that the side-effects encountered are also unpredictable. Sometimes, the unhygienic conditions in which the counterfeits are manufactured can also create a health risk.

At the same time, there are many users who declare that they do not give any thought to the risk to health. These users have a great deal of contact with one another and mutually reinforce

their own ideas about “safe” use. The research and case studies available in medical literature regarding increased or reduced health damage due to doping use are played down by this group, perhaps because they are not personally confronted by them.

Alternative approaches, such as creating the opportunity to test illegally manufactured doping-designated substances in a laboratory prior to proceeding to use them or the introduction of medical counters for doping-related health questions, have the disadvantage that they could implicitly stimulate their use.

Trafficking via the Internet

In 2010, a study was carried out by the Doping Authority into the illegal doping trade via the Internet (Wassink et al., 2010). The aim of this research was to obtain a better picture of the Internet trafficking of doping-designated substances and the health risk and other risks associated with it. For this purpose, a summary was compiled of all of the research undertaken in the Netherlands into illegal doping trafficking via the Internet. In addition, during the period November 2009 to February 2010, websites offering AAS and growth hormones were viewed. A selection and qualitative analysis was thus made of all of the (extra) health risks on the basis of the information and recommendations on the websites concerned.

It can be concluded on the basis of the research summary that trafficking in illegal doping-designated substances via the Internet is on the increase. There are some indications that these substances are more frequently counterfeited than in the “regular” doping trade. The most recent estimate states that 30% of users purchase doping-designated substances via the Internet. The Internet plays an unmistakable role in the provision of information and the search for purchasing opportunities. In addition to health risks, there are also financial and legal risks associated with purchasing via the Internet.

The analysis of websites offering illegal doping reveals various risks. It is known that the use of doping already creates health risks and that 50–60% of the illegal substances are counterfeit, but, in addition to this, users incur extra risks as a result of the recommendations given. Strong initial doses are recommended, use is made easy, and there is evidence of the provision of biased information (risks are played down; high-risk groups such as minors and women are not specifically warned). The findings of this research are used in the Doping Authority’s prevention activities aimed primarily at sports people and fitness instructors in fitness centres. In order to be able to map trends better, future prevalence studies will need to incorporate this aspect. It is a known fact that the quality of everyday medicines sold on the Internet can vary greatly. It must therefore be recom-



mended that the quality and risks of the illegal doping trade on the Internet must (continue to) be monitored.

Common contribution

Summary of Chapter 7

The collection of data from contributing countries shows that the customs authorities are aware of the issue with the trafficking of AAS, etc. However, at present, the countries generally do not focus on or have special procedures for tackling the trafficking of doping substances. In the Netherlands, illegal medicine is a focus area, and in some cases doping substances are therefore included in this group. In Sweden, on the other hand, the customs authorities and the police focus on doping substances as part of their work with criminal networks and financial crime. In Denmark, the Tax and Customs Administration, SKAT, increased its fight against doping substances in 2010. As a result, and partially thanks to collaboration with Anti Doping Denmark, SKAT has increased its general knowledge about doping and the distribution of doping substances and is therefore able to combat trafficking more effectively.

The contributing countries have different procedures for recording doping seizures. As a result, it is difficult to compare the amount and nature of the substances seized. There is therefore a need to standardise records across the countries in order to improve transparency and knowledge in this area.

The AAS and doping market in general largely consists of counterfeit products that can be difficult to identify and are not subject to any form of government control. They can therefore potentially be extremely hazardous to health.

Endeavours to stop cross-border distribution create opportunities for improving collaboration between relevant organisations such as the customs authorities, the police, and organisations within the pharmaceutical industry. Networks of relevant organisations already exist in this area, but prioritisation of the fight against steroid abuse and other forms of doping in these networks remains a challenge, and it is difficult to ensure that the networks have the necessary expertise and knowledge.





8. TREATMENT OF STEROID ABUSE

In this chapter, the treatment options for abusers are examined. The chapter describes the experiences in form of number of clients, symptoms, diagnoses and treatment. At present, just a few specialised treatment options are available. An issue here can be, that offering treatment to abusers in some cases can seem to conflict with the desire to keep society free of steroid abuse.

Denmark

8.1. Specialized treatment options

Offering treatment to a group of steroid abusers seems to conflict with the fight against steroids and the desire to keep society free of the use of steroids. In reality, it amounts to a pragmatic measure that benefits both the steroid abusers and society.

At the present time, no specialised treatment options are available to abusers of steroids in Denmark, whether in the medical treatment system or in the sector dealing with substance abuse.

Consequently, steroid abusers and their relatives have to go through medical practitioners, who can refer the individual to relevant specialists within endocrinology or psychiatry, for example. It is nevertheless the impression of Anti Doping Denmark, based, among other things, on enquiries from steroid users and their relatives, that there is little or no specialised knowledge about this patient group among specialists at Danish hospitals.

The responsibility for the treatment of substance abusers rests with the country's individual municipalities. The municipalities refer patients for treatment according to a list of dependence-producing substances prepared and maintained by the National Board of Health, Denmark. Anabolic steroids are not currently on that list, and abusers of steroids are therefore not entitled to treatment under the public health system.

Bill regarding specialised treatment options for steroid abusers tabled in the Danish Parliament

In autumn 2009, a bill was tabled in Parliament to introduce specialised treatment options for steroid abusers on the same lines as the options available to drug addicts, alcoholics and anorexics, etc. In that context, the then Minister of Health asked the National Board of Health for a report on the options currently available to steroid abusers in the Danish health system. This report was to form the basis of a further debate on the question in Parliament. The results of this study were supposed to be available by mid-2010. The National Board of Health has not yet published the results of the study, and there has therefore not yet been any further debate on the treatment options for steroid abusers (as at 1 February 2012).

The Anti-doping hotline

Anti Doping Denmark offers telephone-based anonymous medical advisory services regarding doping agents, side-effects, etc. on the Anti-doping hotline. The purpose of the Anti-doping hotline is to prevent the use of anabolic steroids and other doping agents (see 2.5).

The Netherlands

8.1. Specialized treatment options

8.1.1. How many facilities are there?

Various projects

In 1994 it emerged from the report by Vogels et al. (1994) that users of doping-designated substances rarely had medical control and supervision, but there was in fact a need. When a prevention project (1993–1995) was begun in one of the regions where the research took place, attention was also paid to medical control by the GGD (municipal health authority) (Van Kleij & Van Kernebeek, 1995). Because the GGD also had an in-house Sports Medical Advice Centre (SMA), a surgery was specially arranged for bodybuilders and fitness members using the centre, for a period of 5 months. People could attend for personal medical questions and could also have a medical examination. This project component was called “Responding to a request for medical help”.

For the benefit of this component, a (medical ethics and legal) protocol was developed for the (sports) doctor. The protocol outlined what could and could not be said and done. It was emphasised that doping was neither provided nor prescribed. No injections were administered, nor was the doctor permitted to assist with injections. No treatment schedules were issued or advice given as to how much or how little could be used. The latter could be construed as medical advice. However, use was made of a questionnaire, case history, physical examination and urine and blood tests. A total of 20 weightlifters/bodybuilders made use of this. Disrupted bodily functions were measured in all users. Not one user ultimately ceased using the substances.

From the evaluation undertaken, it is evident, however, that this project component brought about more responsible use in terms of choice of substances and reduction of the amount of doping-designated substances (Van Kleij & Van Kernebeek, 1995). This was the case specifically when a link between disrupted bodily functions and past health problems and the use of doping-designated substances was established by the (sports) doctor.

Furthermore, it was evident that the protocol or guideline which was developed for the benefit of the (sports) doctor appeared to be a suitable resource for achieving the objectives of this project component. A diverse group of weightlifters and bodybuilders (from non-users to heavy users) made use of the

opportunity to allow their physical health to be examined by the SMA. It was, however, apparent that, despite the atmosphere of openness created in the region surrounding the use of doping, it continued to be very difficult for many weightlifters and bodybuilders to actually take the step toward the SMA.

In a follow-up project in the period 1995–1998, medical examinations were also offered in collaboration with several GGDs and SMAs. In the Central Brabant region, 23 persons reported to a doctor. Of those 23 persons, 14 were doping users. Ultimately, 10 bodybuilders ceased their use of doping following two consultations with the doctor (NeCeDo/NOCC*NSF, 1999).

During the same period, further work was carried out on a guideline for bodybuilders using anabolic steroids. This guideline briefly consisted of:

- An extensive case history (physical and psychological health, type, sort and quantity of substances, training, nutrition)
- Physical examination, including height, weight, percentage of body fat, blood pressure, skin, nipples and prostate and a general internal examination aimed at detecting the presence of absolute contraindications
- Laboratory tests (both blood and urine). A protein and glucose test was performed on the urine. Blood tests included: general haematological balance, liver function, kidney function, LH, testosterone, lipoproteins and glucose

After 1998, there was no longer a specific medical facility for the use of bodybuilders/fitness members. Of course, for medical problems and questions surrounding the use of doping the regular medical channels were available, such as the GP, specialist and potentially a sports doctor at a Sports Medical facility.

Anabolics Clinic

An anabolics clinic has existed in the Netherlands since 2010. This is currently the only specific facility for ex-users and users of anabolic steroids. This clinic was initially established in the Free University Medical Centre at the Free University, but in September 2011 it was relocated to the Kennemer Gasthuis hospital in Haarlem. The Anabolics Clinic was founded by endocrinologist Dr Pim de Ronde. The clinic focuses on investigating and treating the symptoms of users and ex-users. The clinic does not prescribe anabolic substances for cosmetic or performance-enhancing purposes. Nor do sports people receive any systematic guidance in the use of substances, and no individual recommendations are given to (potential) users of anabolic steroids who do not have health problems. This special surgery takes place once a week.

8.1.2. Which specialities do they cover (medical/psychiatric)?

The Anabolics Clinic is run by an endocrinologist in a hospital setting. If desired, use can be made of the other specialist departments in the hospital. If medical care is involved, users may also resort to regular care (GP).

8.1.3. Data (number of clients, symptoms, diagnoses, treatment)

Anabolics Clinic

The Anabolics Clinic is open almost every week, excluding holiday periods. Progress is good, with sports people attending from all over the country. The health problems identified are not shocking, but they are disturbing. Most complaints involve mood swings, dependence, joint problems, impotence and/or a loss of libido.

The details of visitors to the Anabolics Clinic in the period February 2010 to January 2011 have now been analysed. During this period, 58 male visitors between the ages of 21 and 55 and average 36 attended. This included 34 ex-users, 17 who were undergoing a course and 7 who were in between two courses of anabolics. The average age at which people became users was 24 (distribution 17–51). The average number of courses was 15 (1–100). A course lasted 10 weeks on average (4–16). Administration was both oral and intramuscular, and various types of anabolics were used: 23 persons used 2 substances, 15 used 3 substances and 2 persons even used 4 types. Other substances which were also used were HCG (25 persons), clenbuterol (24), clomiphene (22), tamoxifen (31), growth hormones or IGF-1 (13) and thyroid hormones (11).

GPs

From the research “GPs & Doping” (Hartgens et al., 1998) it was evident that already by 1998 one in five GPs had encountered doping in the previous year. GPs who were involved in sport came into contact with doping issues more frequently than GPs who were not involved in sport. It is estimated that every GP has an average of one to two patients in their practice who have used doping. In approximately 90% of cases, this involves recreational sports people who train in fitness centres. The most important reasons for doping users to visit their GP is to obtain information regarding the side-effects of doping and health complaints arising as a result of the substances used. However, their use is often concealed and the GP does not make the association between a health complaint and doping use.

Most of the GPs assessed their own knowledge of doping as poor and some three-quarters of them expressed a desire to improve their expertise in relation to doping. Almost all GPs reject the use of doping substances. Almost three-quarters of the GPs



questioned stated that they discourage doping at all times, and virtually no GP was prepared to prescribe doping substances without a medical indication. Two-thirds were not prepared to supervise a sports person during doping use (Hartgens et al, 1998).

GPs certainly have a role to play in the prevention and discouragement of doping use in the group of people doing sports for image enhancement. It is important to remain open to discussion, and it is possible to prompt discussion by being alert to the risk factors associated with use. If health complaints are related to the use of doping, this can create a starting point to reduce use. Users have a great deal of knowledge of doping-designated substances – or they think they do. Strategies which can be followed are: information regarding the consequences of doping-designated substances, referral to more expert professionals, or conducting a medical examination into the consequences of use. With a medical examination, the result may create a starting point for discouraging use. If there is no evidence of use and people request information out of interest or with the intention to become users, in addition to the provision of information, the opportunity exists to indicate healthy alternatives such as training, recovery, nutrition and food supplements. Because these factors are often not utilised to the maximum (also due to a lack of guidance), insufficient results are achieved and the tendency to begin to use doping-designated substances is greater.

8.1.4. Experience

“Guidelines for Sports Doctors”

In the Netherlands, the guidelines for sports doctors are laid down by the Association for Sports Medicine (VSG) and described in the “Guidelines for Sports Doctors regarding medical treatment” (VSG, 1995). The guidelines relating to doping are as follows:

- A doctor who is approached by a healthy sports person with a request to prescribe doping-defined substances must respond by refusing this request
- If, during the supervision of sports people, a doctor is confronted with the use of doping-defined substances, prescribed by another, treating doctor on medical indication in association with a medical condition, the doctor is obliged, with the sports person’s consent and in consultation with the sports person/patient and the treating doctor, to seek a similarly effective (alternative) treatment which does not appear on the (inter)national doping list(s)
- If, during the supervision of sports people, a doctor is confronted with the use of doping-defined substances by the sports person/people within the context of attempting to achieve performance enhancement, the doctor is obliged

to advise the sports person/people against the use of these substances

- A doctor cooperates with the obligatory doping controls for sports people laid down in sporting regulations if he is involved in this within his professional capacity and must not oppose any other obligations arising from the codes of conduct and guidelines
- The doctor is entitled to the freedom to provide his opinion to others regarding the problem of doping – regardless of whether he has a positive or negative attitude toward the use of doping-designated (medicinal) substances. This may not be done in a manner which is obstructive to patients/sports people and must be stated in a manner which does not prevent him from providing each patient/sports person with the best possible care to which the patient is entitled, regardless of his convictions

In 2003, the guidelines for sports doctors regarding medical treatment were evaluated (Sollie, 2003). This was done by way of a study amongst sports doctors and GPs. One of the specific subjects was the guidelines relating to doping. The conclusion was that the guidelines regarding doping were well known amongst sports doctors, but much less so amongst GPs. It emerged from the research that people found it unclear precisely what was intended regarding the supervision of sports people who use doping. It should be possible for this to be elaborated on in a “code of practice”. In addition, an appeal was made to distribute more doping information amongst sports doctors and GPs in particular.

Training of GPs

During the period 2004–2005, the Doping Authority organised regional information evenings for GPs regarding doping and sport organised in collaboration with the pharmaceutical company MSD. In addition to doping in high-level sport, doping in fitness members was also on the agenda. A total of some 300 GPs across the Netherlands received training. This training was accredited by the Dutch General Practitioners Association (NHG). Additional training is currently being provided in practitioner training sessions.

Written training material for GPs also contains chapters about doping which cover users of anabolic steroids (Coumans & De Hon, 2009; De Hon & Coumans, 2010).

8.1.5. Future possibilities

Former plans for an AAS testing facility

It was evident from research (De Hon & Van Kleij, 2005) into the quality of doping-designated substances in the Netherlands that 50–60% of the illegal substances were not authentic or even counterfeit. This could mean that the preparation contains more or less of a substance, something different, or even no

active substance at all. In addition to the quantity and type of effective substance, there are also quality issues such as hygiene and shelf life. Thus, the use of illegally acquired doping substances can clearly lead to additional harm to health.

Since 1992, the Netherlands has had the Drugs Information and Monitoring System (DIMS). This is coordinated by the Trimbos institute. The intention of this system is that drug users can check whether drugs are counterfeit and/or whether they contain harmful substances. The composition of the drugs can potentially be tested. In the event of serious risks, the DIMS may issue national warnings.

The Doping Authority's Doping Info Line is regularly asked by (prospective) users of illegal substances if there is somewhere they can have their substances tested. In the past, the DIMS carried out sporadic tests on a few substances, but the system is geared toward drugs and not anabolic steroids.

Several years ago, consideration was given to beginning a pilot study with a testing facility for anabolic steroids; however, the idea was ultimately shelved for political and organisational reasons and the project was never realised. Nevertheless, in preparation for a potential pilot study, the background, aims and criteria and conditions were outlined. These are summarised briefly below within the context of this report.

The background to and potential benefits of a testing facility for anabolic steroids are as follows:

- Study into the quality of illegal doping substances has generated insight into the quality of the drugs in recent years. In view of the large percentage of non-authentic substances (50–60%), it is desirable to continue to monitor quality. A testing facility would be a suitable way to monitor the actual quality of the market. It is also possible to obtain more information and insight concerning users and their use of doping substances
- A testing facility is also an opportunity to build better and increased contact with the group of substance-using hardcore bodybuilders
- A testing facility offers the opportunity to provide users with reliable and objective information. It is more likely that this information will be listened to with a non-judgemental attitude
- A testing facility enables early warning concerning hazardous products, as a result of which catastrophes can be avoided by issuing warnings. An example of this is the discovery in 2002 of growth hormones of human origin which were discovered by accident by the Healthcare Inspectorate

- Better provision of information can also improve awareness. Knowing what you are using is always better than having no idea at all what you are using

The objectives of a testing facility could be:

- To obtain insight into the quality of illegally traded doping-designated substances. "Quality" is defined as: discrepancies from the label declaration and potential bacteriological contamination
- To obtain insight into the actual use of illegally traded doping-designated substances. "Use" is defined as: type of substance, combinations of substances, dosages, duration and frequency of courses
- To obtain insight into the characteristics of the users of illegally traded doping-designated substances. "Characteristics" is defined as: age, gender, number of years of use, sales channel (in a general sense), knowledge of the substances, effects experienced and side-effects of the substances
- If details are collected over a longer period, trends can also be determined
- Better contact with a difficult-to-access target group: the (hardcore) users, as a result of which awareness is (more) achievable
- Early warning if acute and serious health risks are realistically possible. Examples of this are: strong bacteriological contamination or the discovery of growth hormones of human origin (which actually occurred in the Netherlands in 2002). There must also be an adequate warning system in place to tackle the spreading of the health risk concerned amongst users and to prevent concealment of the harm to health which has already occurred in individual cases

A testing facility is not:

- Intended to trace and monitor the perpetrators of criminal offences
- Primarily intended to reject or strongly discourage the use of doping substances. The approach is primarily one of the monitoring of substances and use, the objective provision of information and an attempt to limit damage to health. The underlying concept is, however, that if the opportunity presents itself, use will be discouraged

The following criteria and conditions could be considered for a testing facility:

- The experience of the DIMS will be utilised to the maximum in the design and implementation.
- For the time being, users of the testing facility will pay a small contribution themselves for testing, which is primarily intended as a small threshold



- No written information shall be provided, nor will a stamp be provided concerning the quality of the substances tested. These are measures to safeguard against misuse by criminals. The results of the test will only be provided verbally
- Testing is always anonymous; no names or addresses will be requested. Samples to be tested will be subject to maximum numbers and there will be a maximum quantity in respect of the quantity of tablets and injection solutions to be tested. If someone possesses more than the permitted quantity, it will be assumed that they are dealers and they will not be assisted. Only users (consumers) may make use of the testing facility
- Neither the tester, nor the participating organisation, nor the laboratory can be held liable for negative consequences of the use of any substance whatsoever. No rights may be derived from the test results
- Back-up must be organised with experts such as toxicologists, endocrinologists, etc. in difficult cases
- DIMS operates various protocols and guidelines. The testing facility for anabolic will make use of these as extensively as possible
- Most institutions within DIMS will be open once per week for 2 hours. It remains to be seen whether this is sufficient for the testing facility for anabolic steroids
- It is important within DIMS that test results are available within one week

As explained above, the concept of such a testing facility was abandoned at the time for political and organisational reasons.

Sweden

8.1. Specialized treatment options

There is no national estimate of the overall need for treatment in Sweden in respect of doping. In an American online study, 7% (35/500) of respondents said that they had sought medical assistance for problems arising as a consequence of AAS use (Parkinson & Evans, 2006). There are several ways of interpreting these figures: as meaning that doping does not cause any side-effects requiring care; that users seek medical assistance for individual symptoms in the belief that they are not caused by AAS use; or that there is no truly relevant treatment available. The fact that doping leads to serious side-effects is known from earlier studies, so the first assumption can be disregarded. A combination of the latter two explanations is more likely.

Users of doping agents appear to be present all over Sweden, possibly in greater concentrations around larger towns and cities. The nationwide Anti-doping Hot-line provides them with the option of receiving anonymous support and answers over the telephone and online. If necessary, the service refers callers to the treatment facilities available to them. There is an interest in building up a national knowledge centre in Stockholm, offering care and treatment to people who use doping agents.

When users or relatives seek treatment and when doping tests are positive at places of work, fitness centres, in the field of sports or in the Swedish Prison and Probation Service, there is a very limited range of care available to refer people to. Users seek care when problems arise, but rarely seek care for the actual use of doping agents. Awareness among users is limited to understanding what effects result from use, and knowledge in healthcare and treatment is considered to be too limited for doping agent users to be distinguishable. Their underlying use is rarely noticed. Research into effective treatment methods is very limited. This was also established by the Swedish Council on Health Technology Assessment when they worked together with the National Board of Health and Welfare in 2003 to review the methods available for the treatment of doping agent users (Swedish Council on Health Technology Assessment, 2003). The methods and experience available are also infrequently documented. Where an overall view is lacking, various side-effects are often treated rather than the issue as a whole. One opinion shared by people who possess practical experience is that treatment of people who use doping agents is very complex and requires a long period of time as well as a broad spectrum of care initiatives (Swedish National Institute of Public Health, 2009).

As things stand at present, there is very little targeted treatment for people with doping problems in Sweden. There is a need to develop a care and treatment programme. At present, the Anti-Doping Hot-Line refers AAS abusers to various bodies depending on the side-effects from which they are suffering (Swedish National Institute of Public Health, 2009).

8.1.1. How many facilities are there?

In the event of acute illness, sufferers can consult a clinic or the accident and emergency department at their nearest hospital. People suffering from physical side-effects and/or needing psychiatric help of a non-acute nature can be referred to a specialist by the clinic. People who want help to stop abusing doping agents can consult the nearest Centre for Dependency Disorder in their home county council area (Swedish National Institute of Public Health, 2009).

There are two Resource Centres for treatment of hormone preparation abuse in Sweden – one at the Department of Endocrinology at Sahlgrenska University Hospital in Gothenburg, and one at the Dependence Centre under the direction of Örebro County Council. Sahlgrenska Hospital offers a treatment project with an overall perspective, and the Örebro Centre for Dependence Disorder offers a consultancy service. The clinic in Örebro has experience of hundreds of patients with doping problems. The Anti-doping Hot-Line also has a well-established cooperation arrangement with the Centre for Andrology and Sexual Medicine, the Clinic of Endocrinology,



Methandrostenolone (Dianabol)	79.40%
Nandrolone Decanoate (Deca-Durabolin)	65.70%
Testosterone Propionate+Phenylpropionate+Isocaproate+Decanoate (Sustanon/Omnadren)	59.80%
Stanozolol (Winstrol)	58.80%
Testosterone Enanthate (Testoviron-Depot)	35.30%
Methenolone Acetate/Enanthate (Primobolan/Primobolan Depot)	34.30%
Trenbolone (Parabolan/Trenbolone)	32.40%
Oxymetholone (Anadrol)	28.40%
Testo Undecanoate (Andriol/Undestor)	22.50%
Insulin	18.60%
Thyroid hormones	10.80%
IGF-1	6.90%

Table 8.1: Table 8.1. "Higher mortality for patients" study. The most common AAS substances (n=102)

Karolinska University Hospital, Huddinge, for people who contact the telephone advice service and need a medical examination (Swedish National Institute of Public Health, 2009).

8.1.2. Which specialities do they cover (medical/psychiatric)?

There are no clear symptoms or clinical signs which in and of themselves allow use of AAS to be verified, but suspicion may be aroused. Diagnosis of a user is therefore based on an overall view of the case history, status and samples taken. The case history and status include somatic, psychiatric and social issues. Samples include both blood and urine samples, and are intended to assess both the nature of the use and any side-effects/effects. It is not uncommon for users of AAS to combine them with other drugs and preparations (Skårberg, 2010).

Örebro's consultancy service offers supportive discussions as the first step in its treatment of AAS abuse. These discussions aim to encourage the patient to give up drugs, teach him/her to live without drugs, and provide guidance on abstinence once the patient has stopped taking AAS. Motivation work is the primary factor in the initial contact with users of AAS (Skårberg, 2010).

They also offer advice on diet, the opportunity to get in touch with a dietician and discussion of nutritional supplements.

Training is another subject which it is important to discuss, particularly given the fact that training often feels different, both physically and mentally, when the patient has stopped taking AAS. There is also an opportunity for the patient to take part in a discussion in which his/her parents and/or partner are also involved (Skårberg, 2010).

An AAS team consists of a psychiatrist, a psychologist, a psychotherapist and a nurse. As every patient and his/her problems are unique, treatments are not set in stone. Instead, the content

of these treatment meetings is aligned to whatever the patient needs and is able to handle. The investigations started are also vital elements of the treatment. These investigations take place on five to eight occasions. Appointments are made for urine samples, blood samples and meetings with the doctor and the psychologist. Particular attention is paid to the patient if there is any risk of suicide. Patients' current problems are identified on the basis of their previous and current use of AAS, as well as other drugs/preparations. The AAS team also has the opportunity to refer the patient to other specialists: a cardiologist, orthopaedist, plastic surgeon, dermatologist, urologist, doctors at reproduction units, an endocrinologist or internist, psychiatrist and welfare officer (Skårberg, 2010).

8.1.3. Data (number of patients, symptoms, diagnoses, treatment)

The Resource Centre in Örebro has treated around 145 patients, and Sahlgrenska in Gothenburg has also treated around 140 patients since it began (K. Skårberg, personal communication, 8 September 2011).

The "Higher mortality for patients" study carried out by Sara Stanford at the Resource Centre for Hormone Abusers at Sahlgrenska University Hospital in Gothenburg included a total of 102 male AAS patients, all of them visiting the Resource Centre in the period 1999–2009. The patients had an average age of 27.4 years. Seven of these AAS patients died during the period. Almost 50% of the patients were prescribed antidepressants between 1 July 2005 and 31 December 2009, which indicates a high proportion of patients experiencing problems with depressive disorder. It was also found that around 50% of patients were hospitalised at least once during the period 1999–2008, with the primary diagnosis of mental disorders or behavioural disorders caused by psychoactive substances. The most common reason for visits to the Resource Centre in Gothenburg is an "AAS examination", where patients come in for information on their general state of health after several years of abuse without always showing any obvious side-effects. Otherwise the specific, already known side-effects of AAS use, such as hypogonadism (decline in production of testosterone), gynaecomastia (breast enlargement in men or "puffy nipples"), psychological problems and subjective heart problems are the dominant reasons for visits (see table 8.1).

Almost 60% of patients combine AAS with the abuse of other performance-enhancing preparations, growth hormones and ephedrine being the most common. More than 50% of patients abuse drugs, most commonly amphetamines and GHB (SNPE, 2011).

There are no reliable statistics available regarding how many patients have been treated at Karolinska University Hospital

in Stockholm, as most of them have been treated primarily for “side-diagnoses” and not for their AAS abuse (N. Gårevik, registered nurse at the Anti-Doping Hot-line, 9 September 2011).

8.1.4. Experience

The Centre for Dependency Disorder in Örebro and the Resource Centre in Gothenburg are both limited in scope, and they can see that the need for care is considerably greater than the resources they have available.

8.1.5. Future possibilities

Abuse of AAS and its consequences require a specific diagnosis; to achieve a specific classification, a diagnosis of this type needs to be formulated, reviewed and supported by one of the sections at the Swedish Society of Medicine and then sent to the National Board of Health and Welfare (N. Gårevik, registered nurse at the Anti-Doping Hot-line, 9 September 2011).

The Anti-Doping Hot-line has prepared an implementation plan for a project which aims to enhance knowledge about the abuse of hormone preparations in healthcare and treatment. The objective is to implement training bodies for the primary care sector prior to 2012 in all counties in Sweden and to make them aware of signs, side-effects and current treatment options. A working group was put together in 2010 which includes healthcare and treatment staff with considerable knowledge and experience in the field of anabolic androgenic steroid abuse. A summary will be compiled of what is currently known about treatment, and this will be printed in a document which will be made available to healthcare and nursing staff. The printed document will be disseminated, and it will include facts, diagnoses, classification, treatment and information on where expertise can be obtained (Anti-Doping Hot-line, 2011).

The Abuse Committee, *Bättre insatser vid missbruk och beroende* (Better efforts for abuse and dependency) (SOU 2011:35), emphasises the need for a national knowledge centre and a regional expertise centre which would create a structure and enhanced expansion of knowledge concerning the care and treatment of AAS abuse (K. Skårberg, Örebro Centre for Dependence Disorder, personal communication, 8 September 2011).

Poland

8.1. Specialized treatment options

In Poland there are many private and public clinics and hospitals where patients abusing drugs, alcohol and other substances can be treated. These clinics usually provide treatment to patients addicted to drugs, medicines and alcohol.

They also offer treatment to abusers or addicts of anabolic androgenic steroids. However, there are no institutions in

Poland which are specialist in treatment of abusers or addicts of anabolic androgenic steroids.

It seems that the structure of patient treatment described above is satisfactory. Addicts can find a relevant form of therapy, which, during the actual treatment, is adapted to the extent of addiction, type of substance and other diseases in addition to the addiction.

8.1.2. Which specialities do they cover (medical/psychiatric)?

They cover medical and psychiatric specialities.

Cyprus

8.1. Specialized treatment options

In Cyprus there are many clinics, in both the private and the public sector, for the treatment of patients abusing drugs and alcohol; however, at present there is no specific treatment offered for people using and/or addicted to anabolic androgenic steroids.

8.1.2. Which specialities do they cover (medical/psychiatric)?

The clinics mentioned differ in their organisation. However, the majority are well organised and offer a multidisciplinary approach to the treatment of their patients. Such organisation includes psychiatrist(s), psychologist(s), psychotherapist(s) and nurse(s) in most cases.

8.1.3. Data (number of patients, symptoms, diagnoses, treatment)

There is no available data in relation to the treatment activities of the clinics concerning patients abusing or addicted to anabolic androgenic steroids.

8.1.4. Experience

No experience to share.

8.1.5. Future possibilities

A first step could be the improvement of the knowledge and awareness of general practitioners in relation to anabolic androgenic steroid users. This will facilitate not only offering proper treatment to patients using and/or addicted to anabolic androgenic steroids but also early diagnosis of their condition. As far as the existing clinics are concerned, it is noted that their organisation and staffing as mentioned above (i.e. psychiatrists, psychologists, psychotherapists and nurses) can serve as good examples of clinics for the treatment of patients using and/or addicted to anabolic androgenic steroids.

The Cyprus Anti-Doping Authority has recently completed a nationwide survey examining the knowledge of medical doc-



tors in relation to doping substances in general. It is expected that the findings of this study could serve as the basis for an educational and informational programme aiming to improve the knowledge and awareness of general practitioners about anabolic androgenic steroid users.

Common contribution

Summary of Chapter 8

There are no national surveys of the need for treatment among current or former users of steroids. However, enquiries to anti-doping help lines from users of steroids and their families and the experience of general practitioners with the health issues and steroid-related dependency problems among citizens show that there is a group of patients with steroid-related problems who are in need of treatment.

There is often no knowledge or limited knowledge about this group of patients among general practitioners and specialists. There is generally little focus on eating disorders and body dysmorphic disorders, and any focus that does exist is mainly directed at women's health issues. As a result, the number of treatment options to which individuals in need of treatment can be referred is limited. Consequently, the anti-doping authorities in the Netherlands now cooperate with general practitioners by preparing information material and organising training courses for use in connection with the compulsory continuing education of general practitioners. The anti-doping authorities in other countries have also prepared pamphlets etc. for general practitioners on the subject of steroids and the health consequences of steroid abuse.

Since 2010, the Netherlands has had an anabolic clinic that focuses on examining and treating symptoms relating to the use of steroids. Sweden also has several facilities for treatment of hormone preparation abuse where several hundred patients have been treated in recent years. It is important to point out that the treatment facilities do not prescribe steroids for cosmetic or performance-enhancing purposes or give advice about the use of steroids. The purpose of the treatment facilities is to help the patients stop using steroids.

The Netherlands has a Drugs Information and Monitoring System where substance abusers can have the content of their substances checked and therefore learn whether they contain particularly dangerous substances. At present, the system does not include steroids, but this might be the next step. This could result in monitoring of the steroid market and dialogue with users and hence knowledge about their thought processes and use, while making it easier to provide information about the potential consequences of abuse as well as treatment options.





9. THE IMPACT ON SOCIETY

Common contribution

In this chapter, the impact on society of steroid abuse is made visible. The chapter introduces socio-economic methods of analysis and describes how the abuse affects the socio cost in form of the health sector, the police and the prison and probation service. At present, there is a lack of available data that makes it difficult to measure the economic impact of steroid abuse on society. To gain a better understanding of the scope and to set the right priorities, there therefore is a need to develop statistics in the field.

Socio-economic methods of analysis

Cost of Illness analysis (COI) is an obvious choice of method for calculating socio-economic costs. Cost of Illness analysis calculates the resource consumption and any resource gain in connection with a health issue. The analysis includes both direct costs relating to the actual problem and indirect costs. Examples of direct costs are treatment costs, social costs in the form of care and preventive measures, and crime-related costs. Indirect costs include abuse-related social problems as well as the loss of production caused by abuse-related illness and death. The production loss can be calculated using the human capital method. This treats the human being as a production factor with a value corresponding to the production with which an individual contributes to society throughout his/her life, e.g. the salary the person earns throughout his/her working life. When a person takes early retirement or dies as a result of abuse (self-inflicted or inflicted by others), society loses a production factor. The value of this loss is calculated by discounting the expected salary until retirement age with due regard for age and gender-related probability of survival until retirement (Ministry of Interior and Health, 1999: 7–8).

The socio-economic costs of steroid abuse thus cover the indirect consequences of the abuse, such as additional use of the health sector, society's loss of production due to the illness and death of users, if applicable, as well as crime related to steroid abuse, including cases involving the manufacture, distribution, etc. of illegal doping substances as well as violent crime.

In general, a number of different authorities and organisations work to combat steroid abuse, including NADOs, ministries, the police, the tax and customs authorities and the social authorities. It is therefore relevant to examine many of these authorities and sectors when calculating the impact of steroid abuse on the national economy.

The social costs of steroid abuse

The health sector

The use of steroids can have consequences for both physical and psychological health, including conditions such as heart failure, arteriosclerosis, reduced renal function, liver damage,

loss of libido, anxiety, depression, etc. A Danish study in 2006 by MD and Head of Department D. Bülow Keld and Chief Physician T. Hahn showed that 119 out of 571 general practitioners had seen patients in the past year who either stated that they were using or were suspected of using doping substances. The study concluded that the use of doping substances is common among patients in general practice, and that this primarily involves steroids (Keld et al., 2006). It can also be presumed that each year steroid abuse accounts for a number of hospitalisations, visits to the accident and emergency clinics as well as cases of treatment by relevant specialists such as cardiologists, endocrinologists, psychiatrists, etc. Steroid abuse thus results in increased use of the health sector.

In the Netherlands, in 2008 the Minister of Public Health, Welfare and Sport asked the Health Council to investigate the harmful consequences of doping use for public health in the Netherlands. The Health Council issued its report in 2010 (GR, 2010).

The Health Council was asked to commission a study into the nature and extent of the problem of doping use in non-organised sport (in particular in fitness centres), with specific emphasis on harmful consequences for health, both short-term and long-term, the implications of substances with a high risk in terms of health risks, burden of disease and healthcare consumption, and to issue recommendations on the subject. Proposals were also requested for potential improvement of measures to prevent harm to health, based on current scientific expertise.

In this study, doping was defined as the illegitimate use of medicines, whether legal or otherwise, with the intention of acquiring a muscular or slim appearance. The main focus was on the use of anabolic steroids and stimulants (GR, 2010).

In its report, the commission first outlined the prevalence and characteristics of doping use in non-organised sport and subsequently investigated the short-term and long-term consequences of such doping use for the burden of disease and healthcare consumption. The commission consulted various databases for this purpose. It emerged that information was in fact available regarding the various clinical situations, but that it was not clear to what extent these situations were caused by doping use. Many records referred to use of the substances and/or medicines, but there was no indication why a given substance was used. According to the commission, there was scope for obtaining more insight into the consequences of doping use for the burden of disease and healthcare consumption.

As regards the short-term consequences of doping use in non-organised sport, it has been established that damage to health

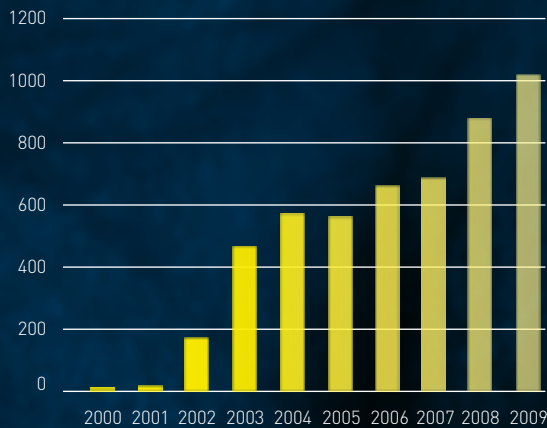


Figure 9.1: Number of cases relating to the Act concerning the Prohibition of Certain Doping Substances. Source: The Danish National Police (IDAN, 2010: 46)

Year	Reports	Charges	Indictments
2006	650	669	(Unknown)
2007	703	708	622
2008	888	891	738
2009	1,019	1,025	949
2010	1,087	1,070	1,077
2011*	633	611	529

Table 9.1

* 1 January – 30 June 2011

Note:

The charges include charges which were settled or pending in the year in which the charge in question was brought. This is calculated on the basis of the number of people charged per case number.

This assumes merely that the people charged are charged according to crime code 86245, irrespective of whether the charges are later settled according to a different crime code.

The reports are stated based on the year in which the report in question was made.

In the case of reports, calculations are done on the basis of unique case numbers. In other words: irrespective of the number of people charged for each case number, the case number will be counted only once.

The indictments are stated based on the year in which the indictment in question occurred

Decisions	2006	2007	2008	2009	2010	2011*
Decisions made in court, finding guilty**	317	356	361	527	640	359
Decisions made in court, acquitting***	10	5	10	9	26	10
Decisions made out of court, finding guilty****	242	214	268	331	379	305
Decisions made out of court, cases closed to due lack of evidence*****	39	25	31	50	61	37
Total	608	600	670	917	1,106	711

Table 9.2:

* 1 January – 30 June 2011

** Unsuspended sentence, fine, sentence/conviction (Penal Code § 68-70), suspended sentence, suspended sentence and fine, partially suspended sentence, judgment by default, agreement to be fined summarily in court, warning in court

*** Acquitted

**** Ticket fine, withdrawal of charges, etc.

***** Action dropped

Note:

The decisions are stated on the year in which the decision in question was made. This assumes merely that the case is settled according to crime code 86245, irrespective of whether the people charged are later charged according to a different crime code



may occur as a result. In terms of the long-term consequences, there are in particular detrimental effects on the heart and blood vessels, and the carcinogenic properties of some substances must also be taken into consideration. In an inventory of the available literature, various physical complaints were also described. In addition, a range of psychiatric problems are associated with doping use. This involves both the addictive effect of the substances and their influence on mood (depression) and behaviour (aggression). The harmful effects of doping per se are not disputed, but there is a lack of clarity regarding the extent of harm.

There are no precise epidemiological details of the consequences of the use of doping substances on the burden of disease and healthcare consumption. However, the commission considers that, in view of the existing knowledge regarding the harmfulness of the use of doping substances and its potential seriousness, it is worthwhile to investigate which areas of current

doping policy could be amended and/or improved. In this way, potentially serious harm to the individual users' health could be prevented and/or restricted whenever possible.

On the basis of known side-effects of steroid abuse, it can also be presumed that the abuse results in a loss of production each year due to illness and death. There is, however, no available data on early retirement and death relating specifically to steroid abuse.

Crime – the Police and the Prison and Probation Service

According to Italian researcher A. Donati, the global doping market is enormous and comparable with the drug market, and the manufacture and sale of steroids generate huge profits (Donati, 2007).



The combination of huge profits on the sale of steroids and – for most countries – the much more lenient punishment for manufacture, import, export, sale and possession of steroids compared with the drug legislation can also act as an incentive for crime involving steroids. In fact, the Danish National Police reports that intelligence and investigations indicate that criminal organisations and groups already known in connection with drug crimes (see 7.7) are involved in the distribution, purchase and sale of anabolic steroids. In its report “Handlingsplan for bekæmpelse af motionsdoping” (Action Plan to Combat Fitness Doping) (2008), the Ministry of Culture concluded that the financial gain from the manufacture and distribution of doping substances tempts criminal organisations, and that the maximum penalty in this area (see 2.3) is insufficient to act as a deterrent (Ministry of Culture, 2008: 12).

The European Commission’s White Paper on Sport from 2007 proposes focusing on prevention and law enforcement to combat doping. In this white paper, the Commission recommends that the trade in illegal doping substances be treated on the lines of illegal drug trade throughout the EU (European Commission, 2007: 10).

Statistics from the Danish National Police on cases relating to the Act concerning the Prohibition of Certain Doping Substances (see 2.3) show a marked increase in the number of police cases between 2001 and 2009. The figures cover cases the police have been able to identify by searching their POLSAS case management system¹ (IDAN, 2010: 46) (see Figure 9.1).

According to the Danish National Police, it is not known why there were so few cases prior to 2002, followed by a marked increase in the following years. The Danish National Police points out that the increase in the number of cases from 2002 to 2008 could reflect a societal development in which body ideals have changed, a growing number of people train at fitness centres, and doping substances have become more readily available thanks to the Internet. The Danish National Police explains the increase in the number of cases in recent years (since 2008) by its special focus on crime in gang and biker environments, as illegal doping substances are often found in these environments during raids and other investigations (IDAN, 2010: 46–47).

Figures from the Director of Public Prosecutions, Denmark for the number of reports, charges and indictments relating to the Act concerning the Prohibition of Certain Doping Substances also indicate an increase (see Table 9.1).

Figures from the Director of Public Prosecutions, Denmark also show decisions made in cases concerning charges based on the Act concerning the Prohibition of Certain Doping Substances (see Table 9.2).

Known side-effects of steroid abuse include aggression, lack of impulse control and reduced empathy (Moberg et al., 2006: 96). This can translate into criminal or violent behaviour among users (Klötz et al., 2007 and Lundholm et al., 2010) and an increased risk of violent crime, resulting in additional costs for the police, the legal system and the Prison and Probation Service.

Public sector costs to fight fitness doping

The use of AAS affects many sectors of society and include cost for the public sector in many areas. Unfortunately, there have been no studies to estimate the total public sector costs for fighting fitness doping. The Anti Doping Denmark has in the text below tried to estimate their cost in 2010 from public funding. Anti Doping Denmark is the main organization in Denmark in the fight against abuse of steroids.

In Denmark, the Ministry of Health and Prevention (now the Ministry of Health) and the Ministry of Culture presented the Action Plan to Combat Fitness Doping in 2008. The initiatives outlined in the plan included support for Anti Doping Denmark’s information campaign to combat doping among fitness members (see 6.1), implementation of the compulsory Smiley scheme for fitness centres (see 2.1) and increased penalties for distribution of doping substances (see 2.3). In the action plan, the two ministries allocated slightly more than DKK 4 million/EUR 538,000 over three years and, in addition, sports organisations also supported the project to the extent of DKK 1 million/EUR 135,000 over three years. This support was additional to the fixed annual amount allocated to Anti Doping Denmark (Ministry of Culture, 2008: 5–9).

In 2010, Anti Doping Denmark received a total of DKK 5.4 million/EUR 726,000 in public funding.² Combating steroid abuse was initial not one of Anti Doping Denmark’s main tasks, but considerable resources have been allocated to this area since the action plan was launched. A survey of the amount of time spent by the secretariat on different daily tasks shows that approximately 40–45% of the secretariat’s time was spent on the fitness/steroid abuse issue in 2009 (Anti Doping Denmark, 2010: Preface). These figures are also representative of the time spent by the secretariat in 2010.

¹ There is no special code in POLSAS for cases relating to the Act concerning the Prohibition of Certain Doping Substances, and the statistics are therefore based on free text searches and are subject to a certain degree of uncertainty (IDAN, 2010: 46).

² In 2010, Team Denmark and the main Danish sports organisations provided approximately DKK 8.4 million in funding to Anti Doping Denmark pursuant to the Act on the Promotion of Doping-Free Sport. Team Denmark and the main Danish sports organisations are primarily funded by the Ministry of Culture’s share of gambling and lottery funds, but as they are private organisations, their funding for Anti Doping Denmark does not count as a public expense.



In 2010, a total amount of DKK 2.2–2.4 million/EUR 300,000 from public funding was spent on steroid abuse via Anti Doping Denmark.

In regard to the near future, the Ministry of Health has approved Anti Doping Denmark's application for funding of its continuing work to combat fitness doping in the amount of DKK 600,000/EUR 80,700 per year for a four-year period from 2011 to 2014. In addition, the membership of the National Network against Anabolic Steroids (see 7.1) is seen as an important factor that reflects the general recognition of the problems in this area.

Being a relatively new focus area, steroid abuse and its funding is not given high priority. The different anti-doping and preventive organisations are therefore working proactively to maintain the focus on the issue.

Summary of Chapter 9

The lack of available data makes it difficult to measure the economic impact of steroid abuse on society. The authorities do not keep records of diseases or deaths caused by doping, so deaths caused by doping-related health issues are not recorded. There are also no records showing how often perpetrators of violent crime are under the influence of steroids, and no estimates of the amount of money criminal organisations earn from the production and sale of steroids. To gain a better understanding of the scope of the problem and to set the right priorities, there is a need to develop statistics in the field. It is clear, however, that steroid abuse can have a major impact on social costs relating to the health sector, the police, and the prison and probation service, and that illness and death related to steroid abuse also contributes to a loss of production.

close contact you

▶ **SIDE EFFECT**

Although side effects
get one of the
if you have



10. OVERVIEW AND ANALYSIS

Chapter 10 provides a coherent overview of the situation in terms of the use of AAS and other similar doping substances. How different subsystems such as consumption, distribution and sale, social norms, legal sanctions and social, economic and health consequences interact is analysed. This chapter is inspired by Harold D. Holder's system theory approach to achieve a coherent insight in terms of prevention of abuse.

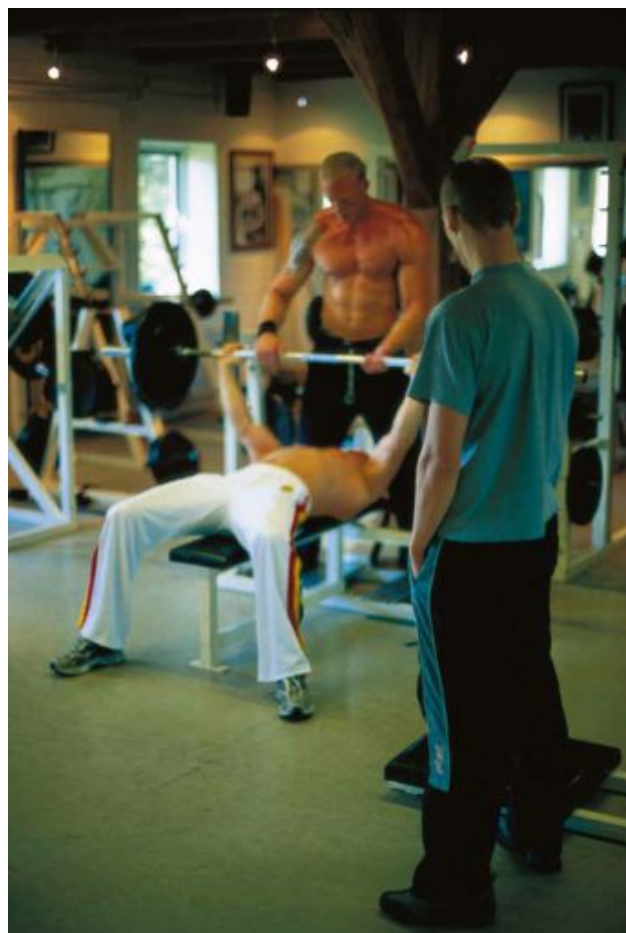
How do we prevent further abuse of doping in the future? Not much research has been conducted related to prevention of doping abuse. Instead, we need to look to research of related areas such as use of alcohol, tobacco and drugs, especially the use of tobacco and alcohol has been analysed intensively during the years. The focus of prevention research can be divided into two groups: Supply and demand. The research focused on supply looks into the availability regulated through legislation, whereas the demand side researches the factors that have an impact on individual and group behaviour and therefore leads to informative, opinion-building and/or educational prevention efforts (Swedish National Institute of Public Health, 2008: 5-6) Traditionally, prevention efforts have been based on the idea, that if a certain action is taken (e.g. young people are educated about the dangers of alcohol use), a specific predictable result will follow (e.g. they will not start drinking). However, evaluation of such efforts often shows that the desired results have not been obtained due to influence by other factors outside the control or concern of the project (Holder, 1998: 14).

The data collection in this report supports this experience, as it points to the fact that many factors and many players, not to mention their reciprocal influence, have to be taken into account in the fight against the abuse of AAS and related doping substances (PIEDs). Therefore, a holistic model is needed when planning preventive initiatives in the future.

The American researcher Harold D. Holder, PhD, from Berkeley University, USA, is a leader in the field of the system theory approach to the prevention of abuse, and the material he has written on this subject includes "Alcohol and the Community: A Systems Approach to Prevention" (1998). The book describes a broad, holistic approach to preventive work in the field of alcohol abuse; a model, which has later been extended to a general model for psycho-active substances, including all relevant parameters relating to both the individual and society rather than isolated initiatives targeting abusers or potential abusers. Having a system theoretical approach entails a premise that the individual and the system influence each other intersubjectively, i.e. the individual (and individual behaviour) is affected by the society in which we live, which in turn is influenced by our behaviour.

Abuse and strategies to reduce abuse should therefore be viewed in a broad perspective (Holder, 1998: 4). In this context, as Holder states, the following views are fundamental:

- Drug problems are the natural result of dynamic, complex and adaptive systems called "communities"
- Working only with high-risk individuals or small groups produces, at best, short-term reductions in drug problems, because the system will produce replacements for individuals who leave high-risk status, and the system will adapt to changes in the composition and behaviour of subgroups and populations
- Interventions in complex adaptive systems do not always yield the desired results, and they often produce undesired and unexpected outcomes that are counterintuitive
- The most effective prevention strategies are those that seek to alter the system that produces drug problems
- Historically, prevention strategies have been "single solutions" attempting to accomplish a goal by means of one massive programme or strategy, rather than concurrent, mutually reinforcing approaches
- Without an understanding of the community as a dynamic system, it is unlikely that effective long-term prevention of drug problems will occur in practice (Holder, 1998: 8-9).



In the model the central factors which both increase and reduce the use of drugs are identified to be: Price, availability, norms, and dependence. These four factors are interdependent in the way that price is affected by availability; availability is in turn affected by societal norms (and thereby also indirectly by law making and enforcement). Dependency is determined by the number of users, which is affected by all three above mentioned factors.

The community systems perspective

Holder describes his community system as “a whole composed of a set of interacting parts or subsystems. Each subsystem has its own organizing processes that influence, and in turn are influenced by other subsystems. The entire system is organized at yet a higher level that transcends the organizing process if any one subsystem” (Holder, 1998: 10)

A “community” is viewed as a set or sets of persons engaged in shared socio-cultural-politico-economic processes which interact and thereby influence each other to such an extent that prevention must be aimed at system-wide structures and processes in order to be effective. In this connection, drug problems are seen as the outcome of processes driven and sustained by the community. These processes potentially affect all members of the community but produce adverse effects in certain groups more than others because of individual and environmental factors that contribute to disproportionate exposure or increased susceptibility. Therefore the community systems perspective considers a potentially wide-ranging set of drug-involved problems instead of only addressing a single type of problem behaviour. Likewise, it studies the entire community instead of only individuals at risk and employs interventions that alter the social, cultural, economic and physical environment (Holder, 1998: 12–13).

A system is “a set of interrelated elements, each of which is related directly or indirectly to every other element and no subset of which is unrelated to any other subset”. Given the community systems’ ability to adapt to changes, a prevention programme must result in system-level changes in order to sustain its impact. Even if, for example, the users of PIEDs are identified and “cured”, the system will continue to generate new abusers if the system structure remains unchanged (Holder, 1998:14–15).

The community system and its subsystems concerning the fight against fitness doping

In connection with alcohol use and alcohol-related problems, Holder has divided the community system into interacting subsystems that have proven to be important in this connection (Holder, 1998: 22).

Inspired by Holder’s work concerning alcohol, and fundamentally because his community systems also has its validity in this area, his model and subsystems have been found relevant and has been adopted in the fight against abuse of AAS and fitness doping (Swedish National Institute of Public Health, 2008). Of course, the context is different in the fight against doping, and therefore, the model has been adapted. The subsystems are:

Consumption

This is the central subsystem, since it affects and is directly affected by almost all other subsystems in the community system. Changes in this subsystem are the primary aim for initiatives made in all other subsystems.

Marketing, Sale and Distribution

Nutritional supplements and PIEDs are made available to consumers through marketing, sale and different distribution channels. Within this subsystem, the two key factors of availability and demand interact to determine the level of sales which is equivalent to the overall level of consumption.

Formal Regulation and Control (rules, administration and enforcement)

This subsystem reflects government rules and controls to regulate distribution, marketing and sale of both supplements and PIEDs. The strength of rules and regulations is affected by enforcement activities and the severity of penalties for violation. The purpose of enforcement is not only to punish those who violate the laws, but also to deter or prevent such behaviour or events through the threat of punishment.

Social Norms

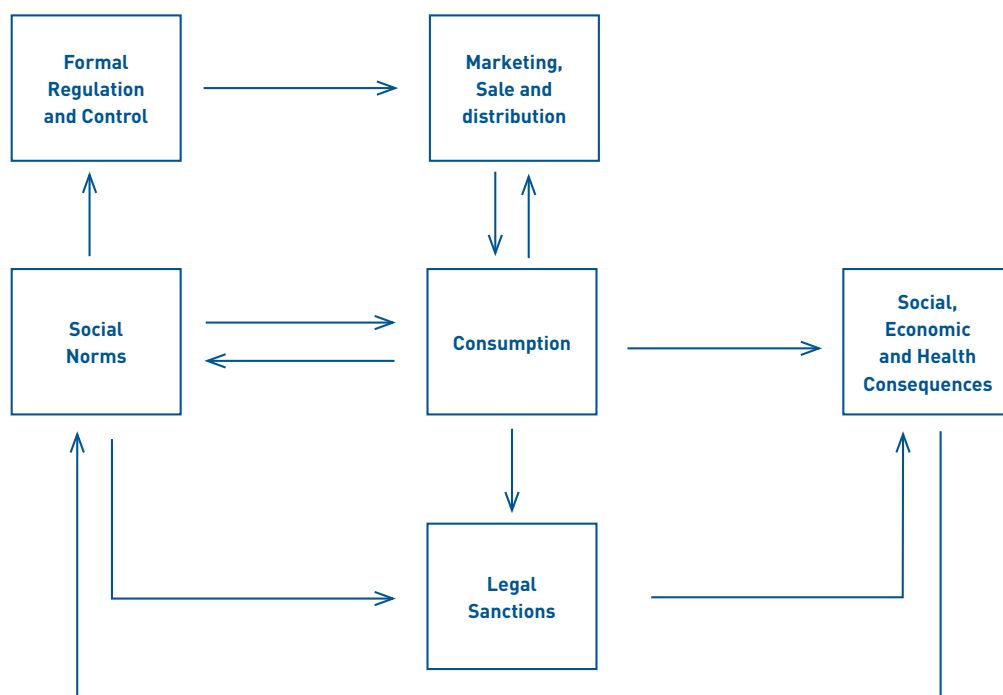
The Social Norms subsystem reflects community values. In social science, the norm refers to informal social rules or proscriptions defining acceptable and unacceptable behaviour within any social group. Norms are reflected in the homogeneity of behaviour among people with sufficient social contact and exposure to language, social values, mass messages and images.

Legal Sanctions

The Legal Sanctions subsystem reflects the community’s use of police powers to respond to and control behaviour and events that are defined as illegal.

Social, Economic and Health Consequences

This subsystem addresses consequences of use of PIEDs, i.e. numbers of AAS-related injuries or deaths and criminality which vary by factors such as age, gender and level of consumption. The Social, Economic and Health Consequences subsystem has three functions in the community; first, definition and identification of PIED-involved problems, second, remedial or



preventive response to these problems, and third, direction of public attention to these problems.

Effective and long-term preventive work in the field of fitness doping requires taking the different players into account and thus viewing the problem from all relevant angles and, in particular, taking their reciprocal influence into account.

Consumption subsystem

Users of PIEDs are generally divided into three main groups:

- Sports people
- Aestheticists, including bodybuilders and others who generally train at fitness centres
- Criminals who use the substances in connection with criminal acts (Moberg and Hermansson, 2006: 13)

Since the focus on this area is relatively new, it is difficult to conclude on the basis of the data collected in the five countries whether the extent of the problem both nationally and more generally in the European countries is stable or on the increase compared with, for example, ten years ago. Very few population surveys exist, and although the customs authorities, e.g. in Denmark, confiscate much larger quantities of doping substances today than they did in the past, it is difficult to determine whether this is because there are larger quantities in circulation or because there is more focus on these particular substances. Existing data indicates, however, that the problem is, in fact, increasing.

Fitness has become one of the most popular forms of physical activities. This may partly be due to the more flexible access to this activity compared with traditional, functional sports, and partly to the increased focus on body and appearance. The data currently available shows that PIEDs are typically used by young men training frequently at fitness centres, and a typical motivational factor for training in this group is the desire for larger muscles or changes to the body. Consequently, the most liberal approach to the use of PIEDs is found among young male fitness centre members.

In general, consumption is affected by the individual's age, gender, income and marital status, and the present data collection shows that this also applies to the use of PIEDs. In addition, the use of PIEDs is affected by relevant legislation as well as regulations and enforcement, which determine the availability of the substances and their price level. Social norms regarding body ideals also play a major role. Whether an individual chooses to start using the substances or not depends on the influence the immediate environment has on body ideals and even more on the degree of general acceptance of substance use.

Obviously, consumption affects the market in terms of availability and price. Social norms are also affected, as the users of PIEDs and their physical appearance contribute to creating role models and ideals. Similarly, consumption affects the social norms by influencing the level of general acceptance of the substances. The larger the number of users are the greater the tendency to consider the substances a natural component

of training. Last, but not least, consumption impacts on the Social, Economic and Health Consequences subsystem in the form of increased costs in the health system, loss of productivity due to the harm caused by substance abuse, and crime.

Marketing, Sale and Distribution subsystem

Nutritional supplements are primarily sold via fitness stores and the Internet, whereas illegal doping substances are manufactured and distributed both through criminal networks and via the Internet. The key factors in this subsystem are supply and demand.

Nutritional supplements

In connection with the prevention of the use of PIEDs, it is relevant to also consider the marketing and sale of nutritional supplements, as individuals who train frequently at fitness centres often use different nutritional supplements as well – primarily pre-workout products that increase energy, protein, creatine and fat-burning products. A study by Dodge and Jacard (2006) has shown that the use of nutritional supplements can be a precursor to the use of PIEDs.

The international market for nutritional supplements is enormous, with a value which is estimated to reach USD 93.15 billion by 2015 (Global Industry Analysts, 2011¹) There are innumerable websites that sell nutritional supplements designed for physical training, muscle-building and fat-burning. There are huge differences between how and how much the individual countries regulate the nutritional supplement market, both in terms of what can be sold and how it can be marketed. However, consumers, regardless of nationality, have access to all kinds of nutritional supplements via the Internet.

Geyer et al. (2004) are responsible for a study that examined the occurrence of prohibited and harmful substances in products which, judging by the list of ingredients should be pure nutritional supplements. The products were bought in 13 countries from 215 different companies, some of which also sell prohormones. The study showed that:

- 14.8 % of 634 nutritional supplements were contaminated by prohormones not listed among the ingredients
- 21 % of the nutritional supplements from companies also selling prohormones contained steroids
- 10 % of the nutritional supplements from companies not selling prohormones contained steroids

These percentages are very high considering that many of the nutritional supplements tested were marketed as harmless vita-

min supplements not normally suspected of containing doping substances.

Retailers who wish to operate in the domestic market in a country, where marketing and sale is regulated, can simply register their websites and companies, if applicable, in another country with less regulation. This makes the company and the website subject to the laws of the other country, while it remains easy to target the marketing to consumers in the home market, e.g. by means of the language used on the website. The language is relevant for Google searches and for advertisements in debate forums and on other relevant websites in the home country.

PIEDs

The illegal doping substances are distributed via criminal networks, and there are many links in the chain from manufacturer to end user. However, thanks to the Internet, unlimited amounts of PIEDs are now also available to anyone who might be interested. Anyone can purchase doping substances from their home computer with a simple click of the mouse and have them delivered by postal service.

One can find many debate forums on the Internet that will allow you to log on anonymously and read or even participate in discussion threads. In forums relevant for the use of PIEDs, the users exchange experience and give each other advice about subjects such as nutritional supplements, PIEDs, the nature of so-called “courses”, side-effects and preparations to “treat” these side-effects, injection guidelines and much more. In these forums, it is easy for buyers and sellers of doping substances to establish contact, and further talks and final negotiations can then take place in the public space and be finalised via email or an private Internet messaging service. Nothing illegal therefore takes place in the forums, and this makes it difficult to prevent or regulate the effect these forums have on the supply of the substances.

The Internet has also made it possible for the manufacturers of doping substances to order ingredients and remedies for the manufacture of doping substances from many different parts of the world via international networks. In this way, anyone can start manufacturing doping substances; even in a private home under highly problematic conditions in terms of poor hygiene or sterilisation. This presents a health hazard, as the products may contain impurities and bacteria that can cause serious infections. The debate forums are also relevant in this context, as they are an obvious platform for launching and promoting products, perhaps concealed in normal discussions in the form of questions and/or answers.

1 http://www.prweb.com/releases/herbal_supplements/herbal_remedies_aloe_vera/prweb8058158.htm



The Marketing, Sale and Distribution subsystem particularly affects the Consumption subsystem for both nutritional supplements and PIEDs.

The motives for using both legal and illegal products and those in the intermediate grey area are normally identical. Both the availability of the products and the willingness to take a risk are important parameters, as there seems to be a tendency to move on from the relatively innocent nutritional supplements to the more potent and harmful doping substances in the constant quest for better results – a different appearance.

The availability affects the price of the individual products, making the products easy to access. A low price makes the market attractive and relevant for almost anybody who is interested, even young people who do not necessarily have a high income.

In addition, the marketing used in connection with both nutritional supplements and PIEDs influences our social norms for body image and body identity, as unnatural body ideals are often promoted simultaneously as the result of using the given product.

The Marketing, Sale and Distribution subsystem is affected by the Formal Regulation and Control subsystem, as the latter

determines which products can be sold, the extent to which it is practical to focus on the enforcement of current rules, and thus availability. It is also affected by the social norms for body ideals, as it becomes relevant to buy the products as part of the effort to obtain the current body ideal.

In addition, this subsystem is generally influenced by economic factors such as the income of the buyers and the prices of the products.

Formal Regulation and Control subsystem: Rules, administration and enforcement

Regulation of the marketing and sale of nutritional supplements and PIEDs

There are huge differences between how the different countries regulate which products are permitted for sale both in shops and online. Consequently, some countries permit the sale of products that are prohibited in other countries. Due to the Internet, the potential for targeted marketing using a specific language is great, and the free movement of goods across borders in the EU contributes to this, so the international trade in harmful substances should be regulated with this behaviour in mind.



As regards Internet pages selling nutritional supplements and especially illegal doping substances registered in one country but clearly targeting the market in another country, IT investigations can determine whether the nationality or citizenship of the owner matches the country in which the company is registered and thus whether the correct rules for taxation, VAT payments, etc. are being applied. On that basis, it might be possible to sue the person in question and perhaps close the website and thus a channel for sale and distribution to a given market. Investigations into online trading can also help clarify the extent of sales and hence the amounts generated by online sales of both nutritional supplements and PIEDs.

Trafficking

There are huge differences between the individual countries legislation on doping substances and the maximum penalty for breaking the law in connection with PIEDs. Generally, however, it is illegal to manufacture, import, export, buy and sell PIEDs in almost all countries. There are nevertheless significant differences in the way laws are enforced in the different countries. This affects the choice of focus areas and any initiatives such as investigations and actions targeting the relevant substances and the recording of any seizures by the police as well as the focus areas and initiatives of the customs authorities with regard to these substances. The distribution of doping substances both nationally and across borders is essential to the availability of the substances, and this has considerable impact on the price level, demand and consumption.

Prioritisation and recording of cases and seizures are also essential to provide a true picture of the scope of the market as well as the cash flows generated by this market. As the people behind the trade are often organised criminals, the profit from the production and distribution of PIEDs can have an impact on the extent of other criminal activities involving weapons and drugs, for example. Agreement on a standard unit of measurement for the substances, e.g. items, ml, mg or units, would also make it easier to form a realistic picture of the volume of sales – also internationally. The international networks of police and customs authorities are well established and have relevant experience to draw on, e.g. with drug crimes.

Doping control at fitness centres

The fitness centre is an essential arena for the abuse of PIEDs, as training is a condition for achieving the desired result in the form of a changed appearance.

Doping control at fitness centres may therefore be an effective tool that can change the behaviour of established steroid users, who may not be receptive to information due to their background of existing abuse, but can perhaps be influenced by the risk of the consequences of abuse. A positive doping test

prevents a member not just from training in familiar, quality facilities, but also from training in a social environment that may play a key role in the member's everyday life.

The immediate environment plays a major role as a catalyst for trying steroids and perhaps commencing regular use, and doping control therefore have a preventive effect. Doping control at fitness centres is used to send a clear signal to members who feel tempted to try steroids that unnatural muscle development leads to selection for doping control, with the concurrent risk of exclusion from training. In addition, when unnaturally large members are excluded from training, they are simultaneously removed as role models for young people, and the steroid users are removed from a potential market at the centre.

Doping control at fitness centres targets a very different group from the doping control in elite sport. For elite sports people, doping control is part of their professional career, and the control is accepted as a tool to ensure that all participants compete on equal terms. At the fitness centres, doping control primarily aims to improve the health of the individual, and here the control is not generally accepted. This should be kept in mind when recruiting test personnel. In the light of the main reason for the control at fitness centres (health), it is also important to consider the rules that govern this control, including the procedural requirements, and what substances to test for.

Doping control in connection with crime

Science has proved that the use of AAS can result in aggressiveness, a short fuse, a lack of impulse control and reduced empathy – even after the use has been discontinued. In addition, studies have shown that criminals use AAS in connection with criminal acts due to these particular effects. These days, it is standard practice in most countries to test for the influence of alcohol and/or stimulants and drugs, especially in connection with traffic violations, but also in connection with arrests on account of violence, yet testing is rarely carried out for AAS in these situations. Few data is therefore available validating the connection between steroid use and violence, for instance, and the extent of any such connection. Such data would help provide a realistic picture of the cost of crime (Social, Economic and Health Consequences subsystem).

Legislation, and the extent to which applicable legislation is enforced, determines market limitations and thereby not only the availability of the substances but also the degree of acceptance of the proposed body ideal. If no legislation is in place or applicable legislation is not enforced, the availability and the supply will instead be determined by demand. The degree of enforcement depends, of course, on the resources allocated to the task.



The Formal Regulation and Control subsystem is influenced by the Social Norms subsystem, which reflects body ideals, the attitude to the use of PIEDs, as well as the general awareness of the issues associated with the use of PIEDs.

Social Norms subsystem: Community values and social influences that affect the use of PIEDs

As far as fitness doping is concerned, it is relevant to look at society's norms for body ideals and the use of PIEDs as a means to change one's appearance.

Body ideals

Body identity and gender have long been considered the factors that can explain how man shapes his identity by shaping his body. Today, there is a considerable focus on body and appearance, especially among young people, and on efforts to live up to the "beauty ideal". The ideal body, as it tends to be presented in the media, is slim, defined and muscular, and sends signals about health and control. In training environments, the male ideal is even more bulging and muscular and glorifies a masculinity that is rarely compatible with average physiology. This ideal has nevertheless become well rooted, and the current data collection has indeed shown that, for men, changing appearance and developing large muscles is a major motivational factor for training at a fitness centre. Health is also a motivational factor for training at a fitness centre for both men and women, but the perception of health is affected by the beauty ideal, as the covers of health magazines and the like also show beautiful, ideal bodies. In this way, beauty becomes equal to health, but the question of how the individual body ends up looking the way it does is not addressed. Some try so persistently to live up to the beauty ideal, measured by appearance, that this leads to eating disorders (e.g. Body Dysmorphic Disorder), overtraining and abuse of harmful substances. The Social, Economic and Health subsystem thereby becomes affected, as the physical and psychological consequences of the efforts to achieve the ideals require treatment and may at times prevent the individual from attending school and/or work.

The body ideal is influenced by the marketing of both nutritional supplements and PIEDs, as it mainly consists of pictures of slim, defined and muscular bodies. This subsystem is therefore also influenced by market regulations governing both the marketing and sale of nutritional supplements and PIEDs.

In turn, the body ideal influences the market, as the purchase of the products showing "ideal" bodies become relevant and attractive, thereby impacting on the Consumption subsystem.

Information campaigns, education, etc.

General awareness of an abuse issue such as the use of PIEDs reduces society's general tolerance of the problem. Public

information, education and media coverage of relevant social issues related to the abuse, e.g. its impact on the health system and its connection with crime, including substance sale and violence, are therefore necessary to maintain public interest in the problem.

Investigations of the scope of fitness doping show that fitness centres play a key role in the use of PIEDs. It is among fitness centre members that the most liberal attitude to the substances can be found. In addition, the fitness centre is one of the places where users can train to achieve the desired benefit of the substances. The centres are also venues where users can show their results to like-minded people and be part of a social environment that revolves around training and muscle-building. The fitness industry as a whole and the individual fitness centres are therefore key players in the fight against fitness doping. The fitness sector is perhaps the most important communication platform for anti-doping messages in the form of general information material, as this is where the target group can be found. In addition, the fitness industry's own approach and actions regarding this issue determine the success of the preventive work, as they are an important voice in the environment and the social arena which the centre represents to the target group. It is essential that the industry/centres make it clear that the use of doping substances is unacceptable and that instead they offer clean and healthy training. This includes a focus on the instructors and the signals the fitness centre sends via the physical appearance and general behaviour of the instructors, who act as ambassadors and role models. The fitness industry and the individual centres can send clear signals by formulating and integrating an anti-doping policy into their employment contracts and membership agreements and, in general, by implementing anti-doping strategies in the day-to-day operation of the centre. In addition, certification schemes can be established with requirements for anti-doping work as a condition for the right to operate a fitness business.

Information work is relevant among all affected authorities and organisations, from the police and customs authorities to the health sector. A general focus and broadly coordinated work in this area can be achieved through alliances and networks between the different players.

Information campaigns generally have an impact on general awareness in the population and thus on the degree of general acceptance of the use of PIEDs. This has an impact both on legislation and regulations in the area and on consumption in general.

The Social Norms subsystem is also affected by the legislation and regulations in question, as they determine the prioritisation of resources allocated to targeted campaign work, teaching

activities, etc. It is also influenced by the Social, Economic and Health Consequences subsystem, as awareness of the extent of social issues related to the use of PIEDs can help make the issue more relevant to the general population.

Legal Sanctions subsystem: Prohibition of production, distribution, buying, selling, use and possession of PIEDs

The data collected in the five countries demonstrates that legislation, and thus the focus on doping substances, differs considerably even within the EU. Generally speaking, there is also very little focus on shipments within the EU, due to the free movement of goods. It may be assumed that persons trafficking in doping substances will carefully select the EU country into which the goods are imported, as the goods can subsequently be distributed around Europe without being subject to any major controls.

The maximum penalty for breaking the law on doping substances often determines the amount of attention relevant authorities; customs officers and police pay to this area. The maximum penalty determines the powers of the police and other parties in connection with the investigation, including the possibility of using phone tapping and surveillance. In addition, it is important for the motivation to investigate a case that the work will produce results. PIEDs are often found by accident in connection with searches for weapons or drugs, both of which have a higher maximum penalty, and in these cases the doping substances often “drown” among other offences on the charge sheet (if they are included at all), due to the lower maximum penalty. This also makes it less relevant to carry out activities such as searches purely for doping substances, as they are regarded as less important. This is despite the fact that it has been scientifically proven that doping substances can have serious consequences both for the individual and for society in general and that, in financial terms, the market is equal to the drugs market at a global level.

The low maximum penalty, which results in a lack of focus or reduced focus on this area, can make doping substances a lucrative market for organised crime, as the risk involved in the manufacture and sale of these substances is low and the potential profit high.

The Legal Sanctions subsystem is affected by the Consumption subsystem, which illustrates the scope of the problem and determines the societal problems often caused by fitness doping. It is also affected by existing social norms regarding fitness doping, as it is less likely that an area will be given high priority if it is not perceived as relevant by the general population. Moreover, the subsystem is affected by regulations, as the number of cases can determine how relevant an area is perceived to be.

Conversely, this subsystem impacts on the Formal Regulation and Control subsystem, as current legislation determines the extent to which the enforcement of current legislation is given priority. The Social Norms subsystem is also affected by current legislation, as it signals whether the use of PIEDs is acceptable. The Consumption subsystem is therefore also affected.

Social, Economic and Health Consequences subsystem: Community identification of and organised responses to problems related to use of PIEDs

A PIED-related problem of relevance to this subsystem is often involved if, for example, there is a risk to the health of the user and others and a risk of violent crime.

As already mentioned, social work relating to problems such as abuse of PIEDs is primarily based on legislation but also involves offers for treatment of sequelae and social services via the Social, Economic and Health Consequences subsystem.

For many years, most European countries have given priority to research, prevention and treatment of diseases relating to the use of alcohol, tobacco and substances, including the treatment of substance abuse. In many countries, there is also a focus on eating disorders such as anorexia and bulimia in terms of research and treatment, whereas little has been done about Body Dysmorphic Disorder (BDD) or megarexia, the eating disorder that primarily affects men and can be linked to the use of PIEDs.

Most knowledge produced about the abuse of PIEDs, including the societal and health consequences is carried out by the education and research sectors. This makes it difficult to generate the necessary motivation to tackle what would be a huge task.

It has been documented that abuse of PIEDs is often accompanied by abuse of stimulants, typically hashish, cocaine and amphetamines. In connection with treatment for substance abuse, it is essential that the abuse of PIEDs is also identified and treated, as these substances can have a direct, negative impact on the detoxification process and abstinence. Unidentified and untreated abuse of PIEDs can therefore present a considerable risk that the treatment for abuse of stimulants will fail and that the individual will relapse into abuse.

If the health consequences of the abuse of PIEDs are not defined as such, a patient may be treated for different or recurrent physical and psychological conditions without the root of the problem being treated. The individual would then become a constant burden on the health system, with the corresponding costs, without an attempt being made at eliminating the abuse which is causing the problems. Health consequences of abuse can also prevent the individual from attending school or work,



thus resulting in a loss of productivity and a need for social services by the individual in question.

Science has shown that abuse of AAS can have serious physical, psychological and social side-effects for the individual. It has also been demonstrated that the use of AAS can have serious consequences for society in the form of public health sector costs or crime, including the distribution of the doping substances and violent crime, which often follows in the wake of abuse. Research, prevention and/or treatment of PIED abuse is nevertheless given limited or no priority in most European countries, which has been shown to result in considerable costs to society, even at the current stage. To obtain a true picture of the costs to society, which could provide motivation for action in this area, it is necessary to give priority to data collection in the health sector, by police, customs authorities and other relevant parties about matters relating to PIEDs.

The Social, Economic and Health Consequences subsystem is especially affected by the current use of PIEDs by the individual and by society in general (the Consumption subsystem). It is also affected by the Social Norms subsystem, as increased awareness of PIED-related problems through personal experience, media coverage or information campaigns will generate increased expectations and demands in society for action to eliminate the problems.

The Legal Sanctions subsystem also affects this subsystem, as the general prioritisation of this area in terms of resource allocation is based on current legislation.

This subsystem affects the Social Norms subsystem, as general awareness and the degree to which society regards an area such as abuse as relevant are determined by the degree of awareness of the social, economic and health consequences of abuse. Awareness of PIED-related illness, death and crime can also affect the Formal Regulation and Control subsystem, as it can provide motivation for action to reduce the problematic abuse.

Summary of Chapter 10

The purpose of preventive work is to prevent and reduce future consumption. As shown in this chapter, the affected areas and players constitute a complex and sensitive system in which all parties influence each other.

It is possible to target selected groups with “local” initiatives and to share knowledge and experience about the initiatives through strong alliances and networks between the parties involved. This will also make it possible to identify which and how many different parties can potentially be influenced by an initiative targeting a special group. This makes it possible

to give top priority to the initiative that will have the greatest potential effect.

A long-term and effective preventive effort will, however, require that the area is given priority financially and that several areas are targeted in order to change the entire system in the long term. To achieve maximum efficiency, overview and control, the work should be coordinated by a central party. This party should have broad insight into the area and thus insight into which initiatives within the respective subsystems can potentially achieve a long-term preventive effect on the abuse of PIEDs. This knowledge should be based on data collected from all relevant parties.





11. PERSPECTIVES AND RECOMMENDATIONS

The data collection and preparation of this report clarifies some challenges and perspectives for the continuing work in the fight against abuse of Anabolic Androgenic Steroids (AAS) and other illegal Performance and Image Enhancing Drugs (PIEDs).

As pointed out throughout the report, abuse of AAS and other illegal PIEDs is a societal problem that is not limited to the fitness sector or sport as such. It is a widely held view that body ideals as presented in magazines and other media – plus a distorted perception of one's own body – can result in a body and training culture that focuses on an exceptionally muscular body. In this context, steroids and similar substances can be perceived as a shortcut to visible results.

The use of steroids can, however, be an extremely dangerous shortcut. Steroids can have consequences for both physical and psychological health and can lead to severe conditions such as heart failure, arteriosclerosis, reduced renal function, liver damage, loss of libido, anxiety, and depression. More than fifty per cent of the illegal trade in doping substances involves counterfeits, which creates additional risks. Other known side-effects of steroid use include aggressiveness, lack of impulse control and reduced empathy.

As a general rule, it is illegal to manufacture, distribute, sell and possess the substances in almost all EU countries. The use of and trade in steroids and other illegal PIEDs is nevertheless extensive. The global criminal market is comparable to the drugs market and the manufacturing and sales of the substances is quite profitable. A multi-faceted strategy in this area is therefore a prerequisite for obtaining the best results when it comes to influencing behaviour relating to fitness doping.

The analysis of the collected data points to a number of focus areas, perspectives and recommendations that are relevant to consider for future work. The recommendations take into account the fact that the European countries are at different stages in terms of the initiatives deployed in this field. The recommended measures are thus not all equally relevant for the challenges and work currently carried out in the individual countries. It should therefore be up to the individual countries to prioritise the measures according to their situation. Thus, the recommendations are not listed in order of priority.

1. General coordination of national work

The data collection shows that the preventive work, as well as work in other areas, is either handled by many different organisations without sufficient consistency or coordination, or it is under-prioritised. The reason may be that abuse of AAS and other illegal PIEDs and the serious health consequences and criminal problems that ensue have only just attracted an incipient, but much-needed and justified attention in recent years.

To produce a combined, consistent and coordinated effort, it is relevant to consider whether or not to place the overall responsibility for the work with a national authority. If so, the choice of authority should be determined by who has the knowledge of the area and the overview required to be responsible for coordinating the work. This could, for example, be the national anti-doping organisations, the NADO's. The task for the authority in question would be to coordinate and implement national initiatives in dialogue and collaboration with relevant organisations. The implementation of initiatives should, and could with advantage, be delegated to the organisations with authority to act in this area.

To enable the authority in question to carry out the task of coordinating the work, it is, of course, necessary that the State allocates sufficient funding to the organisation to match the considerable scope of the task.

2. Updating of anti-doping legislation to combat distribution

There are huge differences in the way legislation in the different countries treats doping substances and in the penalty range for doping-related offenses. As a general rule, however, it is illegal to manufacture, distribute, sell and possess the substances in almost all EU countries. The severity of the maximum penalty also determines the powers at hand to the police and other authorities in relation to the process of investigation, including the possibility of phone tapping and surveillance. The penalty range for doping-related offences also often has an impact on the degree of attention devoted to the subject by relevant authorities, customs and police officers.

Due to the free movement of goods within the EU, shipments within the EU normally attract little attention. The free movement of goods within the EU combined with national differences in maximum penalty of doping-related crime and how highly the subject is prioritised in the different countries implies that it pays off to carefully select the EU country into which the goods are imported, as the goods can subsequently be distributed around Europe without the same extent of control that applies to the importation of goods from countries outside the EU.

In general, the maximum penalty for violations relating to doping substances is lighter than for drugs. This appears to apply despite the European Commission's White Paper on Sport from 2007, which recommends that the trade in illegal doping substances be treated in the same manner as trade in illegal drugs throughout the EU.

It is relevant to consider if a review of doping legislation, including the penalty range for breaking the law, will contribute

toward a tightening effort and its effectiveness against production, distribution, sale and possession of steroids and other illegal PIEDs.

3. Including the fitness sector in the preventive work

The fitness sector and the individual fitness centres play an important role in the efforts to reduce the use of AAS and other illegal PIEDs among fitness centre members. It is among fitness centre members that the most liberal attitude to the substances can be found, and the fitness centre is also one of the places users can train to achieve the desired outcome of using the substances in the form of muscle mass. In addition, the centres are a venue where users can show off their results to like-minded people and be part of a social environment that revolves around training and muscle-building.

As a necessary starting point in the fight against the use of AAS and other illegal PIEDs at fitness centres, the industry must send a clear signal that it distances itself from doping e.g. via rules, policies, or certification schemes. The individual fitness centre is an obvious platform for preventive work. First, the local fitness centres can communicate clear anti-doping messages both internally to instructors and to members and local stake-

holders via a visible anti-doping policy, information material and other relevant preventive measures. In addition, the centres can bring better and clean training methods, diet and eating habits, and recovery into focus. Second, the centres can react to abuse and distribution of substances among members on the basis of general and/or local sets of rules, policies, certifications, or action plans. In this connection, doping control can act both as a tool to exclude members with an undesired behaviour and as a preventive measure to keep doping substances out of the individual centres, thereby also keeping both bad role models and dealers separate from young fitness centre members.

It is relevant to consider if the fitness sector and the individual centres as an arena for the users of AAS and other illegal PIEDs should and maybe be required to take more responsibility and if so, what “taking responsibility” entails.

4. Regulation of nutritional supplements

Nutritional supplements are often a standard component of hard physical training. In several cases, nutritional supplements have turned out to contain prohibited and harmful substances not mentioned in the list of ingredients. It has also been shown that the use of nutritional supplements increases the risk of





later use of doping substances. A large number of websites sell nutritional supplements, and the international market for nutritional supplements is expected to reach USD 93.15 billion by 2015. The nature and amount of regulation of the nutritional supplement market differ considerably between the countries – both in terms of what can be sold and how it can be marketed. However, consumers, regardless of nationality, have access to all kinds of nutritional supplements via the Internet.

It is relevant to consider whether EU countries should focus more on regulating and controlling the products offered and sold according to the content of active ingredients as well as the purity of the product and its health benefits.

5. Knowledge about the effect of preventive work targeting the use of AAS

The data collection shows that the contributing countries carry out many different forms of preventive work, which varies in terms of content, communication platforms and methods, and target groups. Surveys in contributing countries show some ambiguity when determining how well the individual methods work in relation to different target groups. This is a challenge also encountered in preventive work and risk communication relating to areas such as alcohol, smoking and drugs.

In future work it is relevant to focus more on the evaluation of initiatives and sharing knowledge to ensure the initiatives are based on documented professional knowledge to the greatest extent possible.

6. Coordination of international customs and police collaboration

Trafficking in doping substances is of disconcerting proportions; this is borne out by the fact that the global criminal market can be compared with the market for drugs. Customs and police work is essential to combat the distribution of doping substances and thereby also determines the general availability of these substances. Therefore, a greater focus on detecting doping substances in connection with seizures, as well as surveillance and actions across borders in view of the considerable sale taking place internationally via the Internet is needed. The customs authorities and the police are aware of the issue, but it is still the exception rather than the rule for this area to be given special attention.

It is relevant to consider if the established international networks for customs and police work, dealing with international trafficking in narcotics could also be used in the fight against trafficking and sale of steroids and other illegal PIEDs for the purpose of coordinating and sharing knowledge and resources in the field.

7. Focus on abuse of AAS in the treatment system

It has been shown that abuse of AAS can have serious physical, psychological and social side-effects for the individual. Abuse of AAS and other PIEDs is often accompanied by abuse of stimulants, typically hashish, cocaine and amphetamines. As a general rule, health personnel, including general practitioners and specialists, are the people who come into contact with steroid abusers when they seek help for the physical and psychological side-effects of their abuse. General education about substances is therefore required for this group of professionals – not only to make it easier to identify steroid abuse as a catalyst for the current condition but also to assist the individual as effectively as possible.

In the event of AAS abuse, qualified treatment and long-term behavioural changes are essential to combat the abuse of the individual. In connection with treatment for other substance abuse, it is essential that the abuse of PIEDs is also identified and treated, as these substances can have a direct negative impact on the general detoxification process and abstinences. Unidentified and untreated abuse of PIEDs can therefore present a risk that treatment for abuse of stimulants will fail and that the individual will relapse into abuse. It is therefore relevant to educate treatment providers at abuse treatment centres about the symptoms of AAS abuse, the reasons for abuse and the potential physical and psychological side-effects. This would make it possible to also treat AAS abuse.

It is relevant to consider how health sectors can increase the focus on eating disorders, body dysmorphic disorders and abuse of AAS and other PIEDs to ensure that proper treatment is available to substance abusers. Cross-disciplinary and specialised treatment encompassing the somatic, psychological and social side-effects of steroid abuse is an important prerequisite for qualified treatment of the individual and lasting change in the behaviour relating to the abuse in question.

8. Staff education

The data collection shows that, with a few exceptions, there are a need for upgrade the qualifications of staff employed by all relevant authorities and organisations such as the police, customs authorities, abuse treatment centres, etc. This reflects the fact that it is only in recent years that work with abuse of AAS and other illegal PIEDs and the serious health and criminal problems that ensue have begun to attract attention.

It is therefore relevant to consider how best to upgrade the qualifications of employees who come into contact with steroid-related issues as part of their work.

9. Development and implementation of a standardised data collection system

The availability of data is essential for information and insight into the situation of AAS and other PIEDs. It is therefore important to promote research into this area so that knowledge is produced and to prioritise the recording of seized substances and cases relating to doping abuse by the police and customs authorities, including the relationship between the abuse of AAS and violence as well as the impact of doping-related health issues on the established health system. To gain a better understanding of the scope of the problem and to set the right priorities, there is a need to develop standards and statistics in the field.

It is therefore relevant to give priority to research and to develop and implement standardised data collection systems that can contribute information about the situation involving AAS and other PIEDs across different sectors.



APPENDIX 1

Anti-doping contract between the “Fitness Centre” and Anti Doping Denmark (ADD)

1. Background and purpose

Pursuant to Section 9 of Act no. 1438 of 22 December 2004 on promotion of doping-free sport and Article 3 of Executive Order no. 1506 of 13 December 2007 on promotion of doping-free sport, Anti Doping Denmark shall endeavour to enter into collaboration agreements (anti-doping contracts) with fitness centres to combat doping with the purpose of preventing the use of doping outside the sport federations.

The purpose of this anti-doping contract is to ensure that the “Fitness Centre” implements doping controls in an effective and responsible manner, see Clause 3.

2. Definition of doping

Doping is defined as the occurrence of one or more infringements of the WADA (World Anti-doping Agency) prohibited list (the doping list) as applicable from time to time.

3. Doping control

Anti Doping Denmark’s doping control is carried out in accordance with the WADA code and ADD’s doping control procedure as applicable from time to time. ADD is certified according to ISO 9001:2008.

ADD shall make two unannounced visits (doping controls) per year, taking two samples per visit.

ADD’s doping control may take place following a written/ phone request from the “Fitness Centre”. However, ADD shall be free to choose the time of the visit.

The doping control shall be carried out by a team of doping control officers/chaperones.

The “Fitness Centre” undertakes to make the following facilities available to the doping control officers/chaperones:

- Own room with table and chair and access to toilet and hand basin
- Waiting room
- Water

The “Fitness Centre” shall be informed of the result of the doping control as soon as the outcome of the analysis is available. The information shall include the test result and the name of the member providing the sample. The “Fitness Centre” shall also be informed if a member has refused to take part in a doping control.

ADD shall have a duty of confidentiality regarding test results and all information relating to the samples until such time as a final sanction, if applicable, has been imposed by the “Fitness Centre”. ADD can then inform relevant business partners about the member who tested positive or refused to take part in the doping control.

4. Information about doping control

The “Fitness Centre” undertakes to make sure its members are informed about the agreement between the “Fitness Centre” and ADD about unannounced doping control at the “Fitness Centre”.

As part of their membership, the members shall, as a minimum, be made aware:

- *that* ADD has the right to undertake doping control of any member at the “Fitness Centre” at any time, including requesting the member to provide a urine sample in the presence of an ADD doping control office
- *that* sanctions will be imposed in the event of a positive test and that a refusal to take part in doping control has consequence, see Clause 5
- *that* positive test results may be passed on to relevant ADD partners together with information about any sanctions, however, see Clause 3.

In the event of a positive test or a refusal to take part in doping control, the “Fitness Centre” shall inform ADD within eight weeks of the sanction imposed on the member in question.

5. Sanctions imposed on members

The rules of the “Fitness Centre” regarding sanctions for breaching Clause 2 shall comply with the WADA code, cf. Article 3(2) of Executive Order no. 1681, 2006.

6. Grievances

Decisions by the “Fitness Centre” regarding breaches of Clause 2 may be brought before the Danish Fitness & Health Organisation (DFHO) by the member in writing. The grievance shall be submitted no later than four weeks from receipt of the sanction notice.

7. Information material, etc.

The “Fitness centre” shall receive the following material from ADD (standard package):

- 2 different posters
- 2 brochures “Antidoping og mig” (Anti-doping and me)
- 1 fitness handbook
- 100 brochures “Steroider er stærkere end dig” (Steroids are stronger than you) and two display racks



- 1 smiley for display on the entrance door and a sign to be placed on the counter
- Mention on the ADD website, including a link
- Permission to use the ADD logo on the fitness centre's own website
- Advice by phone and/or e-mail

In addition, the "Fitness Centre" shall have the option to enter into an agreement with ADD for further information on doping and assistance with the prevention of doping abuse, including a course, further information material, etc.

8. Fees

ADD may charge fees for its services as set out in this anti-doping contract, see Section 11 of Act no. 1438 of 2004.

The doping control fee (see Clause 3) is divided into the following items:

- 2 unannounced visits at DKK 3,800.00/ EUR 511 each
DKK 7,600.00/EUR 1022
- 4 analyses at DKK 900.00/EUR 121 each (as at 1 Feb 2011)
DKK 3,600.00/EUR 484
- Total DKK 11,200.00/EUR 1506
- False alarm (no members to test; counts as one unannounced visit) DKK 2,500.00/EUR 336
- Confirmation of a positive test (as at 1 February 2011)
DKK 1,670.00/EUR 225

The fees are adjusted once a year at the end of January

Referral of grievances to DFHO about decisions made by the "Fitness Centre" are free of charge if the "Fitness Centre" is a member of DFHO. If the "Fitness Centre" is not a member of DFHO, a fee of DKK 250.00 applies, which is paid by the complainant.

9. Termination and cancellation

This anti-doping contract has been approved by the Danish Ministry of Culture pursuant to Executive Order no. 1681 of 2006. The contract comes into force when signed and expires on 31 December 2011. The anti-doping contract is automatically extended by one year at a time, unless notice of termination is given no later than 30 days prior to expiry.

In the event of a material breach by one party, the other party may cancel the agreement with immediate effect.

Disputes under this contract shall be brought before the ordinary courts.

Anti Doping Denmark

The "Fitness Centre"

APPENDIX 2

Act on Promotion of Doping-free Sport - Act No. 1438 of 22 December 2004

WE, MARGRETHE THE SECOND, by the Grace of God Queen of Denmark, hereby make it known that the Danish Parliament has passed and We have granted Our Royal Assent to the following Act:

Definition of doping

1. The Minister for Culture shall lay down further rules on which groups of substances and which performance-enhancing methods shall be treated as doping.

Anti-Doping Denmark

2. Anti-Doping Denmark shall be a self-governing institution charged with promoting the fight against doping in sport.
3. Anti-Doping Denmark's activities shall comprise
 - 1) doping control,
 - 2) information and education,
 - 3) research and development relating to the fight against doping,
 - 4) international collaboration on the fight against doping, and
 - 5) provision of advice and support for public authorities on matters within Anti-Doping Denmark's sphere of activity.
4. Anti-Doping Denmark shall be led by a board of 12 members appointed by the Minister for Culture. Four members shall be chosen by the Minister for Culture, two by Team Danmark, two by The NOC and Sports Confederation of Denmark (DIF), one by the Danish Federation of Company Sports (DFIF) and one by Danish Gymnastics and Sports Associations (DGI). The Minister for Culture shall also ensure that one member is appointed to represent coaches in top-level sport and one to represent active top-level athletes.
2. The members of the board shall be appointed for a term of four years and may be reappointed for one further term. Should a member depart before the end of his or her term, a replacement shall be appointed for the remainder of that term.
3. The Minister for Culture shall select the chairman of the board from among the members appointed by the Minister.
5. The board itself shall determine its rules of procedure according to which the chairman shall be given the casting vote in the event of a tie.
6. The day-to-day running of Anti-Doping Denmark shall be carried out by a secretariat, the senior management of which shall be appointed by the board of Anti-Doping Denmark.

7. The Minister for Culture shall approve Anti-Doping Denmark's statutes and budget and its annual report and accounts.
 2. The Minister for Culture shall lay down further rules on the submission and auditing of accounts.
 3. The Ministry of Culture may obtain additional material for use by the National Audit Office of Denmark for a more detailed review of the accounts.
 4. Funding awards may be paid to Anti-Doping Denmark in advance.
 5. Awards granted may be cancelled, and awards paid may be required to be repaid, in the event that Anti-Doping Denmark does not fulfil the conditions for the award.

Participation of sports organisations and associations in the fight against doping

8. The Minister for Culture shall lay down further rules on the duty of sports organisations and associations to introduce and implement rules on doping control and sanctions as a condition for the issue of statutory funding awards.
 2. The Minister shall lay down rules to the effect that the awards referred to in paragraph 1 may be reduced or cancelled in the event of breaches of the rules laid down in paragraph 1.

The fight against doping in other sporting environments

9. In order to prevent the use of doping in sport outside the sports organisations referred to in section 8, Anti-Doping Denmark shall endeavour to enter into collaborative agreements on the fight against doping with the following parties:
 - 1) owners of relevant businesses and others offering sports or related activities, including public bodies, and
 - 2) groupings of athletes not affiliated to the sports organisations referred to in section 8.
2. The collaborative agreements referred to in paragraph 1 shall ensure that the parties concerned implement doping control and sanctions in such a way as to comply with the guidelines applying to the sports organisations, cf. section 8.
3. The Minister for Culture shall lay down further rules on the formulation of the collaborative agreements referred to in paragraph 1.



Funding

10. The Ministry of Culture shall award funding to Anti-Doping Denmark each year.
2. A condition for the payment of the award referred to in paragraph 1 shall be that Team Denmark and the sports organisations that are entitled to lottery/pools funding issue a grant to Anti-Doping Denmark to be determined in consultation with the Ministry of Culture.
11. Anti-Doping Denmark may charge fees for services in relation to the collaborative agreements referred to in section 9.

Entry into force etc.

12. This Act shall enter into force on 1 January 2005.
13. This Act shall not apply to the Faeroe Islands and Greenland.

Given at Marselisborg Palace on 22 December 2004 Under Our Royal Hand and Seal

MARGRETHE R./Lene Espersen

Law amending the Law on Promotion of Doping-free Sport

(Signage scheme for exercise- and fitness centers)

WE, MARGRETHE THE SECOND, by the Grace of God Queen of Denmark, hereby make it known that:

The Danish Parliament has passed and We have granted Our Royal Assent to the following Act:

§1

Act No. 1438 of 22 December 2004 to promote doping-free sport is amended as follows:

1. *In the heading* of § 9 is inserted after ‘sporting environments’:’ and sanctions.”
2. After § 9, the following is inserted:

‘§ 9 a. Exercise- and fitness centers shall clearly mark whether they have entered into cooperation with Anti Doping Denmark, see § 9. Information must be done by signage at each center’s entrance in such a way that it is visible to customers. If the center has a website, cooperation with Anti Doping Denmark shall also be shown here.

Subparagraph 2. Anti Doping Denmark sets the detailed requirements for the design of the information after the approval of the Minister of Culture.

Subparagraph 3. A fine will be imposed on anyone who fails to inform following subparagraphs 1. There may be imposed criminal liability on companies etc. (legal persons) under the rules of Penal Code Chapter 5.”

§ 2

The Act shall come enter into force on 1 July 2008.

Given at Amalienborg Palace, 29 May 2008 Under Our Royal Hand and Seal

MARGRETHE R / Brian Mikkelsen

Executive Order No. 1447 of 14/12/2005 (current) on the Promotion of Doping-free Sport

Pursuant to Section 1, Section 8(1) and Section 9(3) of Act No. 1438 of December 22nd 2004 on the Promotion of Doping-free Sport, the following provisions are hereby specified:

Definition of doping

1. The agents and methods specified in Annex 1 (translation of WADA’s (World Anti-Doping Agency) list of banned substances 2012) shall be deemed to constitute doping in the Act on the Promotion of Doping-free Sport and in this Executive Order.

Minimum requirements regarding sports organisations

2. It shall be a precondition for qualifying for funding under the Act on Pools and Lotto to Team Denmark and the three major sports organisations The NOC and Sports Confederation of Denmark, The Danish Gymnastics and Sports Associations and the Danish Company Sport Federation that the organisations introduce and enforce rules on doping control and sanctions in accordance with the rules set out in Annex 2 (translation of the World Anti-Doping Code). Team Denmark and the three sports organisations shall make it a condition for qualifying for support for sports associations or federations etc. and for individual athletes that they comply with the above doping rules.

Subparagraph 2. It shall be a condition for qualifying for funding under the Act on Funding for Youth and Adult Education for voluntary work pursuant to the work etc. for sports associations which are members of one of the organisations mentioned in Item 1 or leagues etc. which are members of one of these organisations that the association comply with the rules on doping control and sanctions set out in Item 1. The provision contained in Item 1 shall similarly apply to the allocation of indoor and outdoor facilities under the Act on Funding for Youth and Adult Education.

Anti Doping Denmark's partnership agreements with exercise and fitness centres etc.

3. Pursuant to Section 9(1) of the Act on Promotion of Doping-free Sport, the Danish Anti-Doping Organisation shall seek to enter into partnership agreements with exercise and fitness centres and other private or public institutions, companies etc. which offer sporting activities or related activities as well as sports associations and unions with no connection to the sports organisations set out in Section 2. ADD may charge a contract fee for services pursuant to Section 11 of the Act.

Subparagraph 2. Such partnership agreements shall define doping in accordance with Annex 1, and the rules on doping control and sanctions agreed shall be in accordance with Annex 2.

Subparagraph 3. Such partnership agreements shall lay out detailed rules for the carrying out of doping controls and shall bind the institution, company or union etc. to advise its clients, members etc. of the consequences of entering into the partnership agreement.

Subparagraph 4. Such partnership agreements shall not be valid unless approved by the Minister of Culture.

Effective date 4. This Executive Order shall come into force on January 1st 2012.

Subparagraph 2. Executive Order No. 1579 of 16 December 2010 on the promotion of drug-free sport is repealed.

Ministry of Culture, 19 December 2011

Uffe Elbæk/ Bente Skovgaard Kristensen







REFERENCES

- Agathangelou, S. (2010). *Anabolic Steroids use, or nutrition and physical exercise for better physical appearance: a study of the beliefs of young adult male gym users in Cyprus*. MSc Thesis, Leeds Metropolitan University, United Kingdom.
- Anti Doping Denmark (2010). *Anti Doping Danmark Årsberetning 2009* (Annual Report 2009).
- Anti-Doping Hot-line. Sweden (2011). *Treatment document project*. Downloaded on 8 September from: <http://www.dopingjouren.se/sv/for-halso-sjukvard/>.
- Arnvig, M. & Bjerregaard, M. N. (2006). *Body image i senmoderniteten. En sociokulturel undersøgelse af individets oplevelse af krop, køn og udseende*. Institut for Psykologi, Københavns Universitet; ISBN: 87-91337-99-2.
- Arvary, D. & Pope Jr., H. G. (2000). *Anabolic-androgenic steroids as a gateway to opioid dependence*. The New England Journal of Medicine, 2000; 342:1532, May 18, 2000.
- Bach, A. R. (2005). *Mænd og Muskler. En bog om styrketræning og anabole steroider*. Tiderne Skifter
- Beck, S. & Reesen, S. (2004). *Festkultur og rusmidler i gymnasieskolen*. Dansk Institut for Gymnasiepædagogik, Syddansk Universitet.
- Bergman, S. (2008). *Beperkt Houdbaar*. VPRO, Hilversum.
- Biener, L., McCallum-Keeler, G. & Nyman, A. L. (2000). *Adults' response to Massachusetts anti-tobacco television advertisements: impact of viewer and advertisement characteristics*. Tobacco Control 2000; vol. 9: 401-407.
- Boer, A de, Haren, S. F. van, Hartgens F, Boer, D de & Porsius, AJ. (1996). *Onderzoek naar het gebruik van prestatieverhogende middelen bij bodybuilders in Nederland*. Rotterdam: NeCeDo.
- Bojsen-Møller, J. & Christiansen, A. V. (2009). *Use of performance- and image-enhancing substances among recreational athletes: a quantitative analysis of inquiries submitted to the Danish anti-doping authorities*, Scandinavian Journal of Medicine and Science in Sports, 2010 Dec;20(6):861-7.
- Bordo, S. (1999). *Mandekroppen*. Tiderne Skifter, ISBN: 8774458914.
- Bun, C. & Hirasings, R. (2011). *Negative body image and weight loss behaviour in Dutch school children*. European Journal of Public Health, 2011.
- CBS: <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=80167ned&D1=a&D2=a&D3=0&D4=%281-11%29-l&VW=T> (laatst bezocht 07 September 2011).
- CEDRO (1999). *Licit and illicit drug use in the Netherlands: 1997*. Amsterdam.
- CEDRO (2002). *Licit and illicit drug use in the Netherlands: 2001*. Amsterdam.
- Christensen, K. & Juel, K. (2007). *Helbred og dødelighed hos mænd og kvinder – et paradoks*. Ugeskrift for Læger, 169/25, 18/6 2007.
- Christensen, K., Graugaard, C., Bonde, H., Wulff, H. J. & Madsen, S. A. (2005). *Kend din krop, mand*. Lindhardt og Ringhof, ISBN: 8711265000.
- Coumans, B. & De Hon, O. (2009). *Doping. In: Sportgeneeskunde (onderdeel van de reeks Praktische Huisartsgeneeskunde)*. Baarveld F, FJG Backx & Th B Voorn eds., Bohn Stafleu Van Loghum Houten, blz. 391-407, 2009.
- De Hon, O. & Coumans, B. (2010). *Doping in de praktijk. In: Bijblijven 2010-10 Bewegingsapparaat*. Tijdschrift Praktische Huisartsgeneeskunde: 42-50, 2010.
- De Hon, O & Coumans B (2007). *The continuing story of nutritional supplements and doping infractions*. Br J Sports Med. 2007 Nov; 41.
- De Hon, O. & Kleij, R. van (2005). *Kwaliteit van Illegale Dopingmiddelen; een inventarisatie van de kwaliteit van illegaal verhandelde dopinggeduide middelen en de gezondheidsrisico's bij gebruik*. NeCeDo, Capelle aan den IJssel, 2005.
- Detmar, S. B., Wiefferink, C. H., Vogels, T. & Paulussen, T. G. (2003). *Sporters en sportschoolhouders over het gebruik van prestatieverhogende middelen in de sportschool*. Capelle a/d IJssel: NeCeDo, 2003.
- Dodge, T. L. & Jaccard, J. J. (2006). *The effect of high school sports participation on the use of performance-enhancing substances in young adulthood*. The Journal of adolescent health: official publication of the Society for Adolescent Medicine, 2006 Sep; 39(3):367-73. Epub 2006 Jul 10.
- Donati, A. (2007). *World traffic in doping substances*. (http://www.wada-ama.org/rtecontent/document/Donati_Report_Trafficking_2007-03_06.pdf)

- Dorsselaer, S. van & Looze, M. de (2009) *Gezondheid, welzijn en opvoeding van jongeren in Nederland*. Trimbos, Universiteit van Utrecht, Sociaal en Cultureel Planbureau, 2009
- Eklöf, A. C., Thurelius, A. M., Garle, M., Rane, A., & Sjöqvist, F. (2003). *The anti-doping hot-line, a means to capture the abuse of doping agents in the Swedish society and a new service function in clinical pharmacology*. *European Journal of Clinical Pharmacology*, 59(8-9), 571-577.
- European Commission (2007). *White Paper on Sport..* Brussels.
- European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2010a). *The state of the drugs problem in Europe. Annual report 2010*. ISBN: 978-92-9168-432-8.
- European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2010b). *Statistical Bulletin: Table GPS-8: Last 12 months prevalence of drug use in nationwide surveys among the general population*. (<http://www.emcdda.europa.eu/stats10/gpstab8b>).
- Fundberg, J. (2003). *Kom igen gubbar! Om pojkfotboll och maskuliniteter [Come on lads! About boys' football and masculinities]*. Stockholm: Carlssons bokförlag.
- Geyer, H., Parr, M. K., Mareck, U., Reinhart, U., Schrader, Y. & Schänzer W. (2004). *Analysis of non-hormonal nutritional supplements for anabolic-androgenic steroids - results of an international study*. Institute of Biochemistry, German Sport University, Cologne, Germany. *International Journal of Sports Medicine*, 2004 Feb; 25(2):124-9.
- General Auditor of the Republic (2011). *Financial Statements of Cyprus Sports Organisation for the year ending 31 December 2010*. <http://www.audit.gov.cy/> (visited 22 September 2011).
- GR – Gezondheidsraad (2010). *Dopinggebruik in de ongeorganiseerde sport*. Gezondheidsraad, Den Haag.
- Graham, K. (2000). *Preventive Interventions for On-Premise Drinking: A Promising But Underresearched Area of Prevention*. *Contemporary Drug Problems* 27(3):593–668.
- Global Industry Analysts (2011) *Global Herbal Supplements and Remedies Market to Reach US\$93.15 Billion by 2015, According to a New Report by Global Industry Analysts, Inc.* . http://www.prweb.com/releases/herbal_supplements/herbal_remedies_aloe_vera/prweb8058158.htm.
- Guttormsson, U., Andersson, B., & Hibell, B. (2004). *Ungdomars drogvanor 1994-2003: intervjuer med 16-24-åringar*. The Swedish Council for Information on Alcohol and other Drugs (CAN), Stockholm.
- Guttormsson, U. (2007). *Mönstrandens drogvanor. 2006*. The Swedish Council for Information on Alcohol and other Drugs (CAN), Stockholm.
- Gårevik, N. & Rane, A. (2010). *Dual use of anabolic-androgenic steroids and narcotics in Sweden*. *Drug and Alcohol Dependence*, 2010 Jun 1;109(1-3):144-6. Epub 2010 Jan 12.
- Hartgens, F. & Kuipers, H. (red.) (2000). *Verboden middelen in de sport*. Houten: Bohn, Stafleu Van Loghum.
- Hartgens, F., Rietjens, G., Haren, S. F. van, Vogels, T. & Vrijman, E. N. (1998). *Huisarts & doping. Een onderzoek naar de aard en omvang van consulten over doping bij huisartsen en naar de kennis en attitude van huisartsen en doping*. NeCeDo, Rotterdam.
- Hibell, B., Andersson, B., Bjarnason, T., Ahlström, S., Balakireva, O., Kokkevi, A. & Morgan, M. (2004). *The 2003 ESPAD REPORT*.
- Hildebrandt, T., Langenbacher, J., Carr, S., Sanjuan, P. & Park, S. (2006). *Predicting intentions for long-term anabolic-androgenic steroid use among men: a covariance structure model*. *Psychology of Addictive Behaviors*, 20(3), 234-240.
- Hoff, D. (2008). *Doping- och antidopingforskning; En inventering av samhälls- och beteendevetenskaplig forskning och publikationer 2004-2007*. R&D report 2008:1. Swedish Sports Confederation, Stockholm.
- Hoff, D. & Hergren, E. (2008). *En kartläggning av träningsvanor och doping i Kalmar 2007*. Department of Human Sciences at the University of Kalmar.
- Holder, H. (1998). *Alcohol and the Community: A Systems Approach to Prevention*. Cambridge University Press, ISBN: 0 521 59187 2.
- Hvitfeldt, T. & Gripe, I. (2010). CAN report no. 124. *Skolelevers drogvanor 2010*. The Swedish Council for Information on Alcohol and other Drugs (CAN).
- IDAN (Steele, R., Bang, S., Brandt, H. H. & Kirkegaard, K. L.) (2010). *Indsatsen mod motionsdoping i kommercielle motions- og fitnesscentre – en evaluering af mærkningsordningen*. Idrættens Analyseinstitut (IDAN), ISBN 978-87-92120-23-6.



- Inspectie voor de GezondheidsZorg (IGZ) (2011). *Jaarverslag 2010*. IGZ, Den Haag.
- Institute for Local and Regional Democracy (2009). *Kartläggning av träningsvanor och användning av prestationshöjande preparat i Kronobergs län*. Kronoberg County Administrative Board, Växjö.
- Johannisson, M. (2010). *Anabole androgene steroider – et overset stof i misbrugsbehandlingen*. STOF 15, Tidsskrift for stofmisbrugsområdet, nr. 15, sommer 2010, ISSN: 1397-3385.
- Johansson, T. (1998). *Den skulpterande kroppen; Gymkultur, friskvård och estetik*. Carlssons bokförlag. Stockholm.
- Kanayama, G., Cohane, G.H., Weiss, R.D. & Pope Jr., H.G. (2003). *Past anabolic-androgenic steroid use among men admitted for substance abuse treatment: an underrecognized problem?* The Journal of Clinical Psychiatry, 2003 Feb;64(2):156-60.
- Kartakoullis, N., Phellas, C. Pouloukas, S., Petrou, M. & Loizou, C. (2008). *The Use of Anabolic Steroids and Other Prohibited Substances By Gym Enthusiasts in Cyprus*. International Review of the Sociology of Sport. September 2008 vol. 43 no. 3, p. 271-287.
- Keld, D. B. & Hahn, T. (2006). *Brug af androgene anabole steroider, erythropoietin og væksthormon som dopingmiddel blandt patienter i almen praksis*. Ugeskrift for læger 168/37, 11. september 2006.
- Kindlundh, A. M., Isacson, D. G., Berglund, L. & Nyberg, F. (1998). *Doping among high school students in Uppsala, Sweden: A presentation of the attitudes, distribution, side effects, and extent of use*. Scandinavian Journal of Social Medicine, 26(1), 71-74.
- Kindlundh, A. M. (2002). *Epidemiological and neurobiological evidence for misuse of anabolic androgenic steroids*. Unpublished doctoral thesis, Uppsala University, Uppsala.
- Kirkegaard, K.L. (2007a). *Overblik over den danske fitness-sektor. En undersøgelse af danske fitnesscentre*. Idrættens Analyseinstitut (IDAN); ISBN 978-87-92120-03-8.
- Kirkegaard, K.L. (2007b). *Fra muskelmasse til massebevægelse – indblik i den kommercielle fitness-sektors historie*, Idrættens Analyseinstitut (IDAN); ISBN 978-87-92120-01-4.
- Kirkegaard, K.L. (2009). *Portræt af de aktive fitnesskunder – træningsmotive, tilfredshed og selvvurderet sundhed. Delrapport 2 i projektet 'Sundhed for millioner*. Idrættens Analyseinstitut (IDAN); ISBN 978-87-92120-16-8 / 978-87-92120-17-5.
- Kirkegaard, K.L. (2011). *Finanskrisen ramte fitnessbranchen i 2010*. Idrættens Analyseinstitut (IDAN).
- Kleij, R. van & De Hon, O. (2005). *Kwaliteit van illegale dopingmiddelen. Een inventarisatie van de kwaliteit van illegaal verhandelde dopinggeduide middelen en de gezondheidsrisico's bij gebruik*. Capelle a/d IJssel: NeCeDo.
- Klötz, F., Petersson, A., Isacson, D. & Thiblin, I. (2007). *Violent crime and substance abuse: a medico-legal comparison between deceased users of anabolic androgenic steroids and abusers of illicit drugs*. Forensic Sciences International, 2007 Nov 15;173(1):57-63. Epub 2007 Mar 2.
- Koert, A. W. A. & Kleij, R. van (1998). *Handel in Doping: een verkennend onderzoek naar de handel in dopinggeduide middelen in Nederland*. NeCeDo.
- Kouri, E. M., Pope Jr., H. G., Katz, D. L. & Oliva, P. (1995). *Fat-free mass index in users and nonusers of anabolic-androgenic steroids*. Clinical Journal of Sports Medicine, 5(4), 223-228.
- Krogsgaard, N. (2009). *Forfølgelighed gør unge syge*. (<http://www.b.dk/danmark/forfaengelighed-goer-unge-syge>).
- Ku (2009). *Antidoping Sverige – En ny väg för arbetet mot doping*.
- Labre, M. P. (2002). *Adolescent boys and the muscular male body ideal*. Journal of Adolescent Health. 30(4), 233-242.
- Larance, B., Degenhardt, L., Dillon, P. & Copeland, J. (2005). *Rapid assessment of performance and image enhancing drugs (PIEDs) in New South Wales: Feasibility study*. NDARC Technical Report No. 239. University of New South Wales, Australia.
- Leifman, H. & Rehnman, C. (2008). *Studie av svenska folkets användning av dopningspreparat*. Report 34.
- Leifman, H, Rehnman, C., Sjöblom, E. & Holgersson, S. (2011). *Anabolic Androgenic Steroids – Use and Correlates among Gym Users – An Assessment Study Using Questionnaires and Observations at Gyms in the Stockholm Region*. International Journal of Environmental Research and Public Health, 2011, 8, 2656-2674.
- Lucassen J. & Schendel, M. Van (2008). *De Fitnessbranche in beeld – 2008. Resultaten van de nationale fitnessmonitor*. Mulier Instituut/Arko Sports Media, Den Bosch/Nieuwegein.

- Lundholm, L., Käll, K., Wallin, S. & Thiblin, I. (2010). *Use of anabolic androgenic steroids in substance abusers arrested for crime*. Drug and alcohol dependence 2010 Jun 3.
- Malmö City Office Public Health Unit (2008). *Sammanfattning av resultat från enkätstudie riktad till tränande på gym i Malmö*. Malmö.
- Middleman, A. B. & DuRant, R. H. (1996). *Anabolic steroid use and associated health risk behaviours*. Sports Medicine (Auckland, N.Z.), 1996 Apr;21(4):251-5.
- Ministry of Finance. Sweden (2010). *Regleringsbrev för budgetåret 2011 avseende Tullverket*. Ministry of Finance, Stockholm.
- Moberg, T. & G. Hermansson (2006). *Mandom, mod och morse män. Anabola Androgena Steroider - medicinsk, rättsligt och socialt*. Mediahuset i Göteborg, Sverige, ISBN: 91-87514-25-7.
- Mogensen, K. (2004). *Unge mænds brug af doping*. Center for Ungdomsforskning, Learning Lab Denmark, Danmarks Pædagogiske Universitet.
- Mogensen, K. (2006). *Risiko, ungdom og maskulinitet – i relation til forebyggelse af rygning, alkohol, stoffer og vold*. Sundhedsstyrelsen, Viden- og dokumentationsenheden, ISBN: 87-7676-434-6.
- Mogensen, K. (2011). *Body punk: en afhandling om mandlige kropbyggere og kroppens betydninger i lyset af antidoping kampagner*. Roskilde Universitetsforlag, ISBN: 9878791387470.
- Møller, K. & J. Demant (2011). *Unge påbegyndelse af illegalt rusmiddelbrug. Et litteraturstudie over den nordiske forskning*. Center for Rusmiddelforskning, Aarhus Universitet, ISBN: 978-87-89029-83-2.
- National Board of Forensic Medicine (2010). *Årsredovisning 2010*. National Board of Forensic Medicine, Stockholm.
- National Swedish Criminal Investigation Department, Swedish Customs (2007). *Den illegala drogsituationen i Sverige 2007*. National Swedish Criminal Investigation Department, Swedish Customs, Stockholm.
- National Criminal Investigations Department & Swedish Customs (2009). *Drogsituationen i Sverige – Lägesbild i Sverige 2008-2009*. National Criminal Investigations Department, Swedish Customs, Stockholm.
- NeCeDo/NOC*NSF (1999). *Lijf, Sport & Middelen. Eindrapportage 1995-1998*. NeCeDo/NOC*NSF, Rotterdam/Arnhem.
- Nilsson, S., Baigi, A., Marklund, B., & Fridlund, B. (2001). *The prevalence of the use of androgenic anabolic steroids by adolescents in a county of Sweden*. European Journal of Public Health, 11(2), 195-197.
- Palsma, A. (2008). *Klanttevredenheidsonderzoek Dopinginfolijn*. Capelle a/d IJssel: Dopingautoriteit.
- Parkinson, A. B. & Evans, N. A. (2006). *Anabolic androgenic steroids: a survey of 500 users*. Medicine and Science in Sports and Exercise, 38(4), 644-651.
- Parr, M. K., Geyer, H., Reinhart, U. & Schanzer, W. (2004). *Analytical strategies for the detection of non-labelled anabolic androgenic steroids in nutritional supplements*. Food Additives and Contaminants, 21(7), 632-640.
- Pedersen, I. K. (2004). *Kropslige perfektioneringsekspert. Om doping og andre præstationsfremmende midler i motions- og fitnessmiljøer*. Kvinder, køn og forskning, Idrættens og kønnets grænser, 13. årg. Nr. 2-3.
- Pedersen, I. K. & Benjaminsen, L. (2006). *Er dopingerfaringer forbeholdt lavtuddannede? – doping som en social praktik*. Dansk Sociologi, 17(3-4), 2006, s. 51-71.
- Pope Jr., H. G., Phillips K. A. & Olivardia, R. (2000). *The Adonis Complex. The Secret Crisis of Male Body Obsession*. Touchstone, ISBN: 0-684-86910-1
- Private Schools of Gymnastics Regulations, 1995*, <http://cyprusg-la.com/> (visited 22 September 2011).
- Prop 1998/99:3. *Åtgärder mot doping*.
- Prop 1990/91:199. *Förbud mot vissa dopningsmedel*.
- Prop 2010/11:47. *En samlad strategi för alkohol-, narkotika-, dopnings- och tobakspolitiken*.
- Quaglio, G., Fornasiero, A., Mezzelani, P., Moreschini, S., Lugoboni, F. & Lechi, A. (2009). *Anabolic steroids: dependence and complications of chronic use*. International Emerg Med.
- Reinicke, K. (2004). *Mænd i lyst og nød*. Det Schønbergske Forlag, København, ISBN: 87-570-1653-4.
- Rodenburg, G., Spijkerman, R., Eijnden, R. van den & Mheen, D. van de. (2007). *Nationaal Prevalentie Onderzoek Middelengebruik 2005*. Rotterdam: IVO.

- Saltin, B., Poulsen, H. E., Mikkelsen, F., Ibsen, B., Jessen, T. & Pedersen, I. K. (1999). *Doping i Danmark. En Hvidbog*. Kulturministeriet
- Schapendonk, W. & Coumans, B. (2005). *Verkenmend onderzoek implementatiestrategie Eigen Kracht-campagne*. NeCeDo, Capelle a/d IJssel.
- Sdr. Omme State Prison (2003). *Evaluering af forsøgsprojekt jf. indstilling om indretning og brug af kondilokaler samt dopingkontrol*.
- SFS 1991:1969. *Lagen om förbud mot vissa dopningsmedel*.
- SFS 2011:112 *Act concerning amendment of the Act Prohibiting Certain Doping Substances (1991:1969)*.
- SFS 1968:64, *Act on Penal Law on Narcotics Kolla!!*
- Shirazeh, N. (2008) *Stageverslag Evaluatie Eigen Kracht Campagne*. Den Haag, Hoge School Den Haag.
- Sierosławski J. (2006). Substancje psychoaktywne. Postawy i zachowania. Raport z ogólnopolskich badan ankietowych zrealizowanych w 2006 roku. Krajowe Biuro ds. Przeciwdziałania Narkomanii, <http://www.narkomania.gov.pl/>
- Sierosławski J. (2007). Używanie alkoholu i narkotyków przez młodzi szkoln . Raport z ogólnopolskich bada ankietowych zrealizowanych w 2007 roku. Europejski program bada ankietowych w szkołach ESPAD. Instytut Psychiatrii i Neurologii, Warszawa 2007, <http://www.narkomania.gov.pl/>
- Singhammer, J. & B. Ibsen (2010). *Motionsdoping i Danmark – En kvantitativ undersøgelse om brug af og holdning til muskelopbyggende stoffer*. University of Southern Denmark, ISBN: 978-87-90923-87-7.
- Sjöqvist, F., Garle, M. & Rane, A. (2008). *Use of doping agents, particularly anabolic steroids, in sports and society*. Lancet, 371(9627), 1872-1882.
- SKL (2010). *Årsberättelse 2010*. Linköping: SKL.
- SKOP. (1993). *Ungdomsundersökning*. Skandinavisk opinion ab.
- Skärberg, K. (2009a). *Anabolic-androgenic steroid users in treatment: social background, drug use patterns, and criminality*. Unpublished doctoral thesis, Örebro University, Örebro.
- Skärberg, S. (2010). *Kartläggning av och vårdprogram för användare av Anabola Androgena Steroider (AAS)*. Centre for Dependency Disorder, Örebro.
- Snippe, J., Ogier, C., Naayer, H. & Bieleman, B. (2005). *Stimulerende zaken opgespoord. Evaluatie wetswijziging bestrijding doping in de sport*. Intraval, Groningen-Rotterdam.
- SNPF (2008). *Tema droger och våld*. Journal of the Swedish Narcotics Officers Association. 2008:1. Mediahuset, Gothenburg.
- Sollie, P. (2003). *VSG Richtlijnen voor artsen omtrent het sport-medisch handelen. Evaluatie en aanbevelingen*. VSG, Bilthoven.
- SOU 1996:126 part A. *Doping i folkhälsoperspektiv: del A: betänkande av utredningen om doping*. Fritze. Stockholm.
- SOU 2011:10. *Antidoping Sverige En ny väg för arbetet mot doping*. Fritzes Kolla!! Stockholm.
- SOU 2011:35. *Bättre insatser vid missbruk och beroende: Individen, kunskapen och ansvaret*. Fritzes. Stockholm.
- Spangenberg, F. & Lampert, M. (2009). *De grenzeloze generatie en de eeuwige jeugd van hun opvoeders*. Amsterdam, Nieuwezijds.
- Spangenberg, F. & Lampert, M. (2011). *De grenzeloze generatie en de onstuitbare opkomst van de B.V. IK*. Amsterdam, Nieuwezijds.
- Statistics Sweden (SCB). <http://www.ssd.scb.se/databaser/makro/start.asp>
- Stubbe, J. H., Chorus, A. M. J., Frank, L. E., De Hon, O., Schermers, P. & Van der Heijden, P. G. M. (2009). *Prestatiebevorderende middelen bij fitnessbeoefenaars*. Dopingautoriteit, Capelle aan den IJssel.
- Swedish Bodybuilding and Fitness Federation, www.skkf.org.
- Swedish Customs (2010). *Beslagsstatistik för hela landet 2008-2010*. Swedish Customs, Stockholm.
- Swedish Customs (2011a). *Detta är tullverket*. Swedish Customs, Stockholm.
- Swedish Customs (2011b). *Verksamhetsplan 2011*. Swedish Customs, Stockholm.

- Swedish Customs (2011c). *Beslagsstatistik jan-juni 2009-2011*. Swedish Customs, Stockholm.
- Swedish National Institute of Public Health (2009). *Dopningen i Sverige—en inventering av utbredning, konsekvenser och åtgärder*. Report 2009:15; Swedish National Institute of Public Health (Statens folkhälsoinstitut): Östersund, Sweden.
- Swedish National Institute of Public Health (2009a). *Delstudie i Statens folkhälsoinstituts prevalensprojekt som har till syfte att kartlägga narkotikaanvändandet bland universitets- och högskolestuderande i Sverige*. Unpublished questionnaire study. Lund University, Statistics Sweden, Swedish National Institute of Public Health.
- Swedish National Institute of Public Health (2009b). *Delstudie i Statens Folkhälsoinstituts prevalensprojekt som har till syfte att kartlägga narkotikaanvändandet i Sverige*. Unpublished questionnaire study. Lund University, Statistics Sweden, Swedish National Institute of Public Health.
- Swedish National Institute of Public Health (2009c). *Det drogforebyggande arbetet i Sverige. Rapport om det forebyggande arbetet mot alkohol-, narkotika-, tobaks- och dopningsproblem*. Report 2009:11. Östersund: Swedish National Institute of Public Health.
- Swedish National Institute of Public Health (2010). *Folkhälsopolitisk rapport 2010 – Framtidens folkhälsa – allas ansvar*. Report 2010:16. Östersund: Swedish National Institute of Public Health.
- Swedish National Institute of Public Health (2011). *Dopning – Kunskapsunderlag för Folkhälsopolitisk rapport 2010*. Report 2011:18; Swedish National Institute of Public Health: Östersund, Sweden, 2011.
- Swedish National Institute of Public Health (unpublished). *Ren träning - En handbok kring dopning för personal på träningsanläggningar. Ännu ej publicerad*. Östersund: Swedish National Institute of Public Health.
- Swedish Prison and Probation Service (2011). *Kriminalvårdens organisation*. Downloaded on 2 September from: <http://www.kriminalvarden.se/sv/Publikationer/Typer/Faktablad/>
- Swedish Sports Confederation (2008). *Swedish Sports Confederation's sports and exercise survey*.
- Swedish Sports Confederation (2010). *Dopingkontroll – dina rättigheter och skyldigheter*. Doping Commission, Stockholm.
- Swedish Sports Confederation (2011). *Hur går en kontroll till?* Downloaded on 2 September from: <http://www.rf.se/Vi-arbetar-med/Antidoping2/Dopingkontroller/Hur-en-kontroll-gar-till/>
- Söderström, T. (1999). *Gymkulturens logik. Om samverkan mellan kropp, gym och samhälle*. Umeå University, Umeå.
- TEMO (1993). *Bruket av psykofarmaka, narkotika och anabola steroider. För CAN våren 1993*. FS-9318/21.
- TEMO (1994a). *Bruket av psykofarmaka, narkotika och dopningmedel. För CAN våren 1994*. FS-9408/10.
- TEMO (1994b). *Systembolaget. Ungdomsundersökning*. T-10004.
- TEMO (1995). *Socialdepartementet. Utredningen om dopning*. T-11213.
- TEMO (1996a). *Bruket av psykofarmaka, narkotika och anabola steroider. För CAN våren 1996*. FS-9607/13
- TEMO (1996b). *Systembolaget. Ungdomsundersökning*. T-12601.
- TEMO (1998). *Systembolaget. Ungdomsundersökning*. T-14011.
- TEMO (2000). *Bruket av psykofarmaka, narkotika och dopningmedel. Fråga psykofarmaka*. FS-200130/FS-200170/FS-200200/FS-200230.
- Terkelsen, L. H. (2010). *Sundhed og den lille (STORE) forskel*, (http://www.sst.dk/publ/Publ2010/CFF/MaendsSundhed/Seminar29nov_smdrag.pdf)
- Thaler, R. & Sunstein, C. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press, New Haven.
- The Danish Act on Promotion of Doping-Free Sport*. See: <http://www.antidoping.dk/da/Regler/Love/Lov%20om%20aendring%20af%20lov%20om%20fremme%20af%20dopingfri%20idraet.aspx>.
- The Danish Exercise and Nutrition Council (2008). *Fysisk aktivitet, kosttilskud og sportsprodukter – prestations- og helbredsmaessige aspekter for motionister*.
- The Danish Institute of Public Health (Juel, K., Sørensen, J. & Brønnum-Hansen, H.) (2006). *Risikoadferd og folkesundhed i Danmark*. ISBN: 87-7899-104-8.

- The Danish Institute of Public Health (2009). *KRAM-undersøgelsen i tal og billeder*. Ministeriet for Sundhed og Forebyggelse og TrykFonden smba (TrykhedsGruppen smba), København, oktober 2009, ISBN: 978-87-992261-2-2.
- The National Board of Health, Denmark (Jensen, T. A., Andersen, N. B. & Olesen, B. R.) (2004). *Skræk som virkemiddel i sundhedsfremmende kampagner*. Viden- og dokumentationsenheden, Sundhedsstyrelsen, ISBN: 87-91437-67-9.
- The National Board of Health, Denmark (2005). *Forebyggelse i festmiljøer – om alkohol og stoffer*. Sundhedsstyrelsens Publikationer, 1. udgave, 1. oplag, ISBN: 87-7676-230-0.
- The National Board of Health, Denmark (Frendved, C.) (2006). *Kommunikation om forebyggelse og sygdomsrisici – et temahæfte*. Sundhedsstyrelsen, Viden- og dokumentationsenheden, ISBN : 87-7676-418-4.
- The National Board of Health, Denmark (2007). *Narkoen ud af byen. Evaluering af 14 modelkommuner*. Muusmann Research & Consulting (http://www.sst.dk/publ/Publ2007/CFF/NUB-proj/Evaluering_april07.pdf).
- The National Board of Health, Denmark (Kjøller, M., David- sen, M., Juel, K., Boje, A. B. & Hoxer, C. S.) (2010b). *Mænds sundhed – en oversigt over mænds sundhedstilstand og en gennemgang af effektive forebyggelsesmetoder*. ISBN: 978-87-7104-137-8
- The Ministry of Culture, Denmark (2008). *Handlingsplan for bekæmpelse af motionsdoping*. ISBN: 87-7960-105-7.
- The Ministry of Interior and Health, Denmark (1999). *De samfundsøkonomiske konsekvenser af alkoholmisbrug*. Nyt Nord- isk Forlag Arnold Busck, ISBN: 87-17-06959-9.
- The National Board of Health, Denmark (2010a). *Narkoti- kasituationen i Danmark 2010. Årsrapport til det europæiske over- vågningscenter for narkotika og narkotikamisbrug, EMCDDA*. Sundhedsstyrelsen, ISBN: 978-87-7104-117-0.
- The Swedish Council for Information on Alcohol and other Drugs, CAN (2010). *Drogutveklingen i Sverige: Rapport 2010:125*. The Swedish Council for Information on Alcohol and other Drugs (CAN), Stockholm.
- The Swedish Council on Health Technology Assessment (2003). *Missbruk av androgena steroider: Prevention och behand- ling*. SBU 03-12-29: www.sbu.se.
- The World Anti-Doping Code*. See: [http://www.wada-ama.org/ World-Anti-Doping-Program/Sports-and-Anti-Doping-Organ- izations/The-Code/](http://www.wada-ama.org/World-Anti-Doping-Program/Sports-and-Anti-Doping-Organ- izations/The-Code/).
- Van de Ven, K. (2011). *Dopingnetwerken in Nederland. Een analyse van de Nederlandse dopingmarkt binnen de georganiseerde sport*. Masterthesis Criminologische Wetenschappen, Univer- siteit Utrecht.
- Van Kleij, R & Van Kernebeek, E. (1995). *Evaluatierapport Lijf, Sport & Middelen. Voorlichtingsproject voor krachtsporters, bodybuilders en sportschoolhouders in Eemland. Een verkenning van de mogelijkheden en beperkingen van voorlichting over doping gericht op gedragsbeïnvloeding van sporters in sportscholen en hun 'omgeving'*. NeCeDo, Rotterdam.
- Van Rooij, A. J., Schoenmakers, T. M. & Van de Mheen, D. (2011). *Nationaal Prevalentie Onderzoek Middelengebruik 2009: De kerncijfers*. IVO, Rotterdam.
- Venhuis, B. J. & Zwaagstra, M. E. (2009). *Trends in werkzame stoffen aangetroffen in illegale afslankmiddelen. Een overzicht van 2002-2007*. RIVM, Bilthoven.
- Vereniging voor Sportgeneeskunde (VSG) (1995). *Richtlijnen voor artsen omtrent het sportmedisch handelen*. VSG, Utrecht.
- Vogels, T., Brugman, E., Coumans, B., Danz, M. J., Hirasing, R. A. & Kernebeek, E. van. (1994). *Lijf, sport en middelen. Een verkennend onderzoek naar het gebruik van prestatie verhogende middelen*. NIPG-TNO Leiden.
- Wallin, E., Gripenberg, J. & Andréasson, S. (2002) *Too drunk for a beer? A study of overserving in Stockholm*. *Addiction*, 97, 901-907.
- Wallin, E., Norstrom, T., & Andreasson, S. (2003). *Alcohol Pre- vention Targeting Licensed Premises: A Study of Effects on Violence*. *Journal of Studies on Alcohol* 64(2):270–277.
- Wassink, H., Coumans, B. & De Hon, O. (2010). *Gezondheidsrisico's illegale doping via internet*. Dopingautoriteit, Capelle a/d IJssel.
- Yang, C. F., Gray, P. & Pope Jr., H. G. (2005). *Male body image in Taiwan versus the West: Yanggang Zhiqi meets the Adonis com- plex*. *The American Journal Of Psychiatry*, 162(2), 263-269.

The grant beneficiary for the Strategy for Stopping Steroids project is:

Anti Doping Danmark/Anti Doping Denmark
Idrættens Hus, Brøndby Stadion 20
2605 Brøndby
Denmark
Website: www.antidoping.dk, E-mail: info@antidoping.dk

The project partners are:

Dopingautoriteit/Anti-Doping Authority the Netherlands
Cypresbaan 21
2908 LT Capelle a/d IJssel
The Netherlands
Website: www.dopingautoriteit.nl, E-mail: info@dopingautoriteit.nl

STAD/Stockholm Prevents Alcohol and Drug Problems
Teknologgatan 8E
113 60 Stockholm
Sweden
Website: www.stad.org, E-mail: stad.sls@sl.se

Instytut Sportu/Polish Institute of Sport (represented by Polish Commission Against Doping in Sport)
Komisjo do Zwalczenia Doping w Sporcie
Lazienkowska 6a
00-449 Warsaw
Poland
Website: www.antydoping.pl, E-mail: biuro@antydoping.pl

CyADA/Cyprus Anti-Doping Authority
Lefkotheo Indoor Hall, Makarion Athletic Centre Avenue, Engomi
2400 Nicosia
Cyprus
Website: www.cyada.org.cy, E-mail: info@cyada.org.cy



Use of Anabolic Androgenic Steroids and other similar doping substances is a substantial problem in Europe – primarily among young men – which until recently has not been given much attention.

Steroids and similar doping substances can have serious physical, psychological and social side-effects for the individual user, and the substances also constitute a societal problem due to the user's health problems and behaviour.

In the White Paper on Sport launched in 2007, the European Commission points out that doping constitutes a threat to sport and a serious threat to the health of the individual using doping. The Commission also states that one must focus upon the fight against doping both in law enforcement initiatives as well as in health and prevention, and do so at a European level. Finally, the Commission recommends that trade in illicit doping substances be treated in the same manner as trade in illicit drugs throughout the EU.

This report illustrates the current situation and the work performed in relation to all aspects of fitness doping – from production and trafficking to young men's focus on the muscular body and prevention to health risks and treatment of users.

It is the aim that the report should represent “good practice” and serve as inspiration for other countries in the EU keen on working with doping in the fitness sector.

The report is a result of the collaboration between:

- Anti Doping Danmark – Anti Doping Denmark
- Dopingautoriteit – Anti-Doping Authority, the Netherlands
- STAD – Stockholm Prevents Alcohol and Drug Problems, Sweden
- Instytut Sportu – Polish Institute of Sport, represented by Polish Commission Against Doping in Sport
- CyADA – Cyprus Anti-Doping Authority.

