DISCLAIMER AND WAIVER OF LIABILITY

Whilst every effort has been made by the Quality in Practice Committee to ensure the accuracy of the information and material contained in this document, errors or omissions may occur in the content. This guidance represents the view of the ICGP which was arrived at after careful consideration of the evidence available at time of publication.

This quality of care may be dependent on the appropriate allocation of resources to practices involved in its delivery. Resource allocation by the state is variable depending on geographical location and individual practice circumstances. There are constraints in following the guidelines where the resources are not available to action certain aspects of the guidelines. Therefore individual healthcare professionals will have to decide whether the standard is achievable within their resources particularly for vulnerable patient groups.

The guide does not however override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of individual patients in consultation with the patient and/or guardian or carer.

Guidelines are not policy documents. Feedback from local faculty and individual members on ease of implementation of these guidelines is welcomed.

ICGP QUALITY IN PRACTICE COMMITTEE 2015

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TABLE OF CONTENTS

Introduction ................................................. 1
Glossary of terms ........................................... 2
Athletes and drugs ......................................... 5
How GPs can be affected ................................. 8
How drug testing is performed ......................... 10
SIMON/ADAMS ............................................ 12
Gene doping ............................................... 13
Summary of changes to the new World Anti-Doping Code 2015 ................................. 14
References ............................................... 16
Appendices
  Appendix 1 - List of Contacts for Further information ................................. 17
Introduction

The Fourth Edition of these Guidelines for General Practitioners is a much slimmer document. All of the up-to-date and ever-changing information is available on-line and this is now considered the most appropriate approach to source information that is current and not risk referring to Guidelines that could be obsolete within a year.

Website addresses for reference are given throughout this document.

Some general background information on the development of anti-doping has been included.

Many thanks to the Irish Sports Council (Anti-Doping Unit) for their help in the updating of these guidelines.
### Glossary of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>ADAMS</td>
<td>Anti-Doping Administration &amp; Management System is a web-based database management system which securely collects data such as an athlete’s whereabouts information, anti-doping tests, laboratory results, etc. See SIMON below.</td>
</tr>
<tr>
<td>Adverse Analytical Finding</td>
<td>A report from a WADA laboratory or other entity identifying a prohibited substance or metabolite in an athlete’s sample.</td>
</tr>
<tr>
<td>Atypical Finding</td>
<td>A report from a WADA laboratory or other entity that requires further investigation.</td>
</tr>
<tr>
<td>Biological passport</td>
<td>An amalgamation of results of anti-doping tests carried out on an athlete. The athletes’ biological passport contains the following information:</td>
</tr>
<tr>
<td></td>
<td>1. Test results (urine and blood)</td>
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<td></td>
<td>2. The athlete’s haematological profile over time (based on blood testing)</td>
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<tr>
<td></td>
<td>Its purpose is to detect abnormal variations of determined biological variables in order to better target testing and/or sanction those found with abnormal variations.</td>
</tr>
<tr>
<td>Declaration of Use</td>
<td>At the time of a drug test, the athlete must declare the use of all medications taken in the past 14 days on the Doping Control Form.</td>
</tr>
<tr>
<td>Doping Control Form</td>
<td>The form an athlete completes at the time of a drug test.</td>
</tr>
<tr>
<td>Filing Failure</td>
<td>Failure to comply with the whereabouts regulations.</td>
</tr>
<tr>
<td>Gene Doping</td>
<td>The non-therapeutic use of cells, genes, genetic elements, or of the modulation of gene expression, having the capacity to improve athletic performance.</td>
</tr>
<tr>
<td>International Federation</td>
<td>Administers its sport at a world level, most often crafting rules and promoting the sport (e.g. FIFA, IRB, ITF).</td>
</tr>
<tr>
<td>International Olympic Committee (IOC)</td>
<td>The supreme authority of the Olympic Movement</td>
</tr>
<tr>
<td>Missed Test</td>
<td>Failure by an athlete to be available for testing at the time and place specified on their whereabouts form (60 minute time slot).</td>
</tr>
<tr>
<td>National Governing Body (NGB)</td>
<td>Governing body of each particular sport within a region. Examples include GAA, IRFU, FAI, Athletics Ireland, Turf Club, Swim Ireland, OCI.</td>
</tr>
<tr>
<td>Prohibited Method</td>
<td>A method from the WADA list of prohibited method (M1-M3).</td>
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</tbody>
</table>
### Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td><strong>Prohibited Substance</strong></td>
<td>A substance from the WADA list of prohibited substances (S1-S9) (P1-P2)</td>
</tr>
<tr>
<td><strong>Registered Testing Pool</strong></td>
<td>A pool of top level athletes who are subject to in and out of competition testing and are obliged to adhere to Whereabouts and TUE requirements</td>
</tr>
<tr>
<td><strong>Sanction</strong></td>
<td>Penalty imposed on an athlete by the relevant body as a result of a positive doping test</td>
</tr>
<tr>
<td><strong>SIMON</strong></td>
<td>A customised anti-doping management system used in Ireland (see ADAMS, page 12)</td>
</tr>
<tr>
<td><strong>Specified substance</strong></td>
<td>A substance defined as such in the WADA Prohibited List. These are substances more prone to unintentional doping and an athlete is likely to receive a sanction ranging from a warning to a two-year ban</td>
</tr>
<tr>
<td><strong>Strict Liability</strong></td>
<td>Refers to the responsibility the athlete has for whatever substance is found in his or her test sample</td>
</tr>
<tr>
<td><strong>Tampering</strong></td>
<td>Altering or interfering with an athlete's sample or testing procedure or providing fraudulent information</td>
</tr>
<tr>
<td><strong>Therapeutic Use Exemption (TUE)</strong></td>
<td>Procedure whereby an athlete applies to use a prohibited substance for legitimate therapeutic purposes</td>
</tr>
<tr>
<td><strong>Whereabouts Information</strong></td>
<td>A quarterly report of an athlete's whereabouts (time and place) sent in advance to the relevant anti-doping agency</td>
</tr>
<tr>
<td><strong>World Anti-Doping Agency (WADA)</strong></td>
<td>Promotes, coordinates and monitors the fight against doping in sport in all its forms</td>
</tr>
<tr>
<td><strong>World Anti-Doping Code</strong></td>
<td>The fundamental and universal document upon which the WADA programme is based</td>
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</table>

### WADA

The World Anti-Doping Agency’s mission is to lead a collaborative worldwide campaign for doping-free sport.

The World Anti-Doping Agency was established in 1999 as an international independent agency composed and funded equally by the sport movement and governments of the world. Its key activities include scientific research, education, development of anti-doping capacities, and monitoring of the World Anti-Doping Code.

WADA works towards a vision of a world where all athletes compete in a doping-free sporting environment.

### The Irish Sports Council

The Irish Sports Council’s National Anti-Doping Programme acts to protect Ireland’s sporting integrity against the threat of doping.
**The Anti-Doping Code**

The World Anti-Doping Code (Code) is the core document that harmonises anti-doping policies, rules and regulations within sport organisations and among public authorities around the world.

A new code came into force on the 1st of January 2015.

**The Prohibited List**

Since 2004, and as mandated by World Anti-Doping Code, WADA has published an annual List of Prohibited Substances and Methods (List). The List identifies the substances and methods prohibited in- and out-of-competition, and in particular sports. The substances and methods on the List are classified by different categories (e.g., steroids, stimulants, gene doping).

An updated list comes into effect on the 1st of January each year.
Athletes and drugs

Most information that athletes obtain about drugs, supplements, vitamins, ergogenic substances and more are from

- Peers, fellow athletes
- Friends and family
- Internet sites of varying levels of reliability
- Personal research: magazines, books, blogs
- Gyms
- Coaches
- Doctors

According to the WHO 2011 report, Safety and Security on the Internet, nearly every major category of prescription drug is available online without a prescription.

As it is easy to obtain performance-enhancing drugs online it is risky both to health and the future career of an athlete. Apart from the potential toxic nature of some of these substances, the quality of the product cannot be guaranteed. It is a criminal offence to import, even if is for personal use, prescription-only drugs into Ireland. It is an offence to be in possession of prescription-only drugs without a prescription.

Some obtain these substances for bodybuilding purposes and not to perform competitively.

The Irish Customs and Excise have the authority to open and inspect any package they are suspicious of. There are about 23 drugs seizures annually involving performance-enhancing drugs, with EPO and testosterone being the most popular imports. New legislation for the illegal importation of drugs can mean a punishment of a one year’s jail sentence or a fine of up to €120,000.

In early 2014, an operation involving 200 law-enforcement agencies across the world, resulted in the seizure of over 100,000 tablets in this country; they included anabolic steroids. The main countries of origin were China, Pakistan and India.
Why athletes take drugs

There is no simple answer as to why athletes take drugs. In general, athletes are aware that drug taking is a risk to health and life and could result in them being banned from competition. However, as in many other areas of life, people are willing to take the risk if the rewards are great. In top level professional sport, the stakes can be very high indeed.

Historically, in the modern era, there are records of athletes taking performing enhancing substances for more than 100 years.
Some of the reasons why a sportsperson would take drugs to enhance his or her performance include:

- The dominant culture that it’s all about winning and being ‘number one’
- The rewards for victory are great: prestige, fame, money, status, future career
- An awareness that others are doing it (or might be) and the need to compete on the same level
- “If I don’t use them other athletes will have the edge on me”
- Pressure from peers, managers, coaches, even doctors
- The chances of getting caught are relatively small
- May help to cope with anxiety and stress
- May help to get over injuries more quickly
- May help to train harder, recover better
- Lack of knowledge about drugs, side effects
- If there is a fall-off in performance it can be seen as the best way to ‘catch up’
- The value systems of some athletes may not see any ethical problem in using these agents
- Athletes from less well-off backgrounds with fewer resources, may see it as a way to ‘even the playing field’ with others who have top class training facilities, financial backing and scientific support.
How GPs can be affected

All of us have patients who are involved in sport. Some deal with elite athletes on a regular basis. We may have formal or casual arrangements as team doctors. The use of performance enhancing substances is not something we deal with day-to-day, but all athletes can get ill and may require prescription medicines from us. It behooves us to have some knowledge of the area of drugs and doping or at least how to source the information on-line or refer to a colleague who is more expert.

Remember a 15 year-old swimmer or gymnast can be competing internationally, representing their countries at a very high level, and may be subject to drug testing.

Some GPs will

- Be team doctors
- Travel with players either at home or abroad
- Have elite athletes as patients
- Have athletes with chronic illness e.g. diabetics
- Be on a sports’ governing body
- Give advice on nutrition and supplement use

We need to know the anti-doping regulations specific to the sports we or the athlete are involved in. This would include what athletes are subject to drug testing (age, competitive level, specific tournament, etc.).

There can be differences competing in this country and competing abroad and, in general, the higher the level of sport involvement, the more likely there will be drug testing.

The completion of forms, specifically therapeutic use exemption (TUE) forms has thankfully been simplified in recent years. However, the doctor’s involvement is still important, to ensure these forms are completed accurately and punctually. The doctor needs to know what authorising body to send the TUE application to.

Sometimes direct contact between the athlete’s GP and the athlete’s sporting doctor is necessary to ensure information that is beneficial to the athlete’s well-being is communicated and the necessary anti-doping paperwork is completed fully.

*MIMS* provides symbolic guides to drugs and their status in sport. However, non prescription substances are not always included and these are the ones often involved in inadvertent positive test results (e.g. pseudoephedrine). The *Irish Medicines Formulary* and the *British National Formulary* can also be referred to.

If in doubt, it is best to seek confirmation and advice. The anti-doping unit of the Irish Sports Council (Tel 01-860 8800) is always at hand to provide helpful information.
List of prohibited substances and methods for 2015 and subsequent years
www.wada-ama.org Follow link to current prohibited list.

Therapeutic use exemption forms
www.irishsportscouncil.ie/tue Gives full information and explanation of the TUE application process as well as a facility to download actual forms (for tests performed in Ireland).

TUE’s may also have to be submitted to the International Federation (IF) for higher levels of competition. Check the IF’s website or anti-doping officer for details.

Supplements
Athletes commonly use nutritional supplements. Many of these supplements claim to promote recovery and enhance athletic performance. These products are often purchased based on advertising and peer or coach recommendation but without professional medical advice or an evidence base to support their usage. In an attempt to educate athletes, coaches and parents the Irish Sports Council commissioned the development of 20 factsheets, for athletes over 16 years of age, which look at a range of sports supplements and outlines the potential benefits and risks of these products.

See more at: www.irishsportscouncil.ie/
Search <supplements>
How drug testing is performed

Urine testing
www.irishsportscouncil.ie/Anti-Doping/
search <drug test>

Blood testing
www.irishsportscouncil.ie/Anti-Doping/
search <blood test>

The athletes’ biological passport
The athletes’ biological passport is an amalgamation of results of anti-doping tests carried out on an athlete. The passport contains the following information:

1. Test results (urine and blood)
2. The athlete’s haematological profile over time (based on blood testing)

Blood samples are taken over time. The athlete’s haematological parameters are analysed and their haematological profile is drawn up. The profiles are interpreted using a computer program that takes into account factors that may affect the blood parameters and provides an indication of whether there is normal variation or the variation may be as a result of blood doping.

www.irishsportscouncil.ie/Anti-Doping/
search <biological passport>

Asthma guidelines for TUE application
Asthma, being such a common medical condition, is the one most likely to create problems for sports doctors. Fortunately most of commonly used inhaled medication is now permitted, or at least permitted to a certain serum level. The exceptions - for which a TUE is required - are:

- Terbutaline (Bricanyl)
- The newer long-term beta agonists e.g. vilanterol

More detailed information can be found at:

www.irishsportscouncil.ie
Search <TUE> and <asthma>

Systemic corticosteroids in the form of intravenous hydrocortisone and oral prednisolone for acute asthma require the completion and submission of a TUE form.

Creatine
Creatine is a naturally occurring compound, mostly found in muscle. It is not a prohibited substance. Creatine phosphate functions to regenerate ATP, the primary energy source for muscle. Theoretically, an increased concentration
during high intensity exercise may improve the ability to maintain maximal power output for a longer period and reduce lactate production. Therefore, power athletes and sprinters rather than endurance ones are likely to benefit.

Oral supplementation is taken as a loading dose of about 20g daily for five days followed by a maintenance dose of 2g daily. 20g of creatine is equivalent to 5.5kg of raw meat in terms of creatine content. It is widely promoted in health and fitness magazines.

Effects include weight increase and increased water retention. No major adverse side effects are reported though the long-term effects are uncertain. Some concern has been expressed about its possible long-term effect on renal function.

Creatine usage is thought to be widespread. The same reservations apply to it as applies to the use of nutritional supplements above.
SIMON / ADAMS

SIMON is a Web-based database management system that simplifies the daily activities of all stakeholders and athletes involved in the anti-doping system – from athletes providing whereabouts information, to anti-doping organisations ordering tests, to laboratories reporting results, to anti-doping organisations managing results. It is easy to use, available in a number of languages, and free to WADA's stakeholders. It helps increase the efficiency and strengthen the effectiveness of the fight against doping in sport.

By October 2009, ADAMS was used by approximately 23,000 elite athletes around the world.

Some countries use ADAMS (Anti-Doping Administration & Management System).

ADAMS has four main functions addressing key activities of anti-doping operations:

(Source: www.wada-ama.org)

1. **Athlete Whereabouts**
   Athletes enter information about their location from anywhere in the world; and those without Web access can designate a representative such as their ADO to enter the information for them. This function also helps stakeholders share whereabouts information, crucial for maximising the surprise effect and the efficiency of unannounced out-of-competition testing. Athletes can also modify their whereabouts by sending SMS (text) messages.

2. **Information Clearinghouse**
   The clearinghouse is where data including laboratory results, Therapeutic Use Exemption (TUE) authorisations and anti-doping rule violations is stored. It enables sharing of information among the relevant organisations.

3. **Doping Control Platform**
   The ADAMS doping control database provided to ADOs is an excellent tool for managing a doping control program, both in- and out-of-competition. Stakeholders can use ADAMS to plan, coordinate, and order tests, and also to manage test results. Coordination of doping control programs in the ADAMS system helps to avoid duplication in doping controls.

4. **TUE Management**
   ADAMS allows for online management of TUE requests and also online notification of those involved in the process.
Gene doping

Gene doping is defined by the WADA as “the non-therapeutic use of cells, genes, genetic elements, or of the modulation of gene expression, having the capacity to improve athletic performance”.

It is classified under M3 on the Prohibited List\(^1\). It prohibits

1. The transfer of polymers of nucleic acids or nucleic acid analogues;
2. The use of normal or genetically modified cells

New research in genetics and genomics will be used not only to diagnose and treat disease, but also to attempt to enhance human performance. Gene therapies can produce for example erythropoietin (EPO), insulin-like growth factor 1 and vascular endothelial growth factor, all with doping potential. Many other genes with similar potential will be discovered\(^2\).

WADA research is working on ways to enhance detection, even developing new genetic approaches, such as imaging and molecular methods. In 2004, it set up an Expert Group on gene doping, to study the latest advances in gene therapy, methods for detecting doping and funded research projects.

Scherling (2001)\(^3\), from the Copenhagen Muscle Research Centre in Denmark, has expressed that gene doping is the biggest threat in athletics. A similar reaction was voiced by a BBC News report in 2014, reporting on Dr Phillipe Moullier’s research in France\(^4\).

An artificial gene could be introduced by:

- Direct injection of DNA into a muscle
- Insertion of genetically modified cells
- The utilisation of a virus

It could also include indirect genetic technologies, such as biosynthetic drugs (e.g. drugs for increasing oxygen)\(^5\).

The biggest problem in gene therapy today is the lack of control over the expression of the artificial gene. It may be employed for treatment or to enhance performance but it is unclear whether it will have other effects, even life-threatening ones. There may be problems in ‘switching off’ the effect of a newly inserted gene, disproportionate effects on some body parts, toxicity and malignancy risks.

The Irish Sports Council has a Fact Sheet on its website: [www.irishsportscouncil.ie](http://www.irishsportscouncil.ie)

Search <gene doping>

There is a list of papers and studies on the WADA website on the topic of gene doping. [www.wada-ama.org](http://www.wada-ama.org)
Summary of changes to the new World Anti-Doping Code 2015

(Source: www.wada-ama.org)

The New World Anti-Doping Code came into effect on the 1st of January 2015. From this date the Irish Sports Council and those who have adopted the Irish sports Council anti-doping rules must comply with their responsibilities under the new code.

Two new Anti-Doping Rule Violations (ADRVs)

**Complicity**
- Involvement in an ADRV committed by another person, such as helping to cover up that ADRV or avoid detection, will be sanctioned in the same way as that violation.

**Prohibited Association**
- Associating with a person such as a coach, doctor or physiotherapist who has been found guilty of an ADRV or equivalent offence to a doping violation will be sanctioned with a ban of up to 2 years.

Other changes of significance

**Change to Whereabouts**
- The time period for whereabouts violations will be reduced to 12 months.

**Sanctions**
- The use of serious doping substances for example steroids, growth hormone, EPO and various calculated doping methods for example blood transfusions will be sanctioned with 4-year bans.
- Refusing to provide or evading sample collection will now be sanctioned with bans up to four years.
- Substantial assistance has been further incentivised.
- The statute of limitations has increased from 8 to 10 years.

**Responsibilities of Signatories**
- International Federations must ensure that their member organisations share anti-doping information with their National Anti–Doping Organisation.
- NADOs and IF’s must investigate Athlete Support Personnel if multiple athletes or a minor has committed an ADRV.

**Education**
- All NGBs are required to plan, implement, evaluate and monitor information and education programmes for their athletes and Athlete Support Personnel.
- There is now a separation of information and education.
- Education programmes should focus on prevention.
Testing and Investigations
- The International Standard for Testing is renamed as the International Standard for Testing and Investigations
- A risk-based approach to testing must be adopted by NADOs including the development of a Test Distribution Plan (TDP) which determines the amount, frequency and location of testing. This plan must be shared with WADA.
- Resources must be in place to collect and use anti-doping intelligence to assist in the development of the TDP.
- The most up to date detection techniques should be utilised, for example an Athlete Biological Passport.
- All ADRVs under the new code must be fully investigated.

Contaminated Products
- The issue of contaminated supplements has been acknowledged. The athlete must establish “no significant fault or negligence” then the sanction can range from a reprimand to a maximum of 2 years.
References

Appendix 1 – List of contacts for further information

Irish Sports Council
Top Floor, Block A, West End Office Park, Blanchardstown Dublin 15
Tel: 01-860 8800
Fax: 01-860 8860
Email: antidoping@irishsportscouncil.ie
Web: www.irishsportscouncil.ie

World Anti Doping Agency
Web: www.wada-ama.org
Email: info@wada-ama.org

Eirpharm®
(endorsed by Irish Sports Council)
Web: www.eirpharm.com
Email: pharmacy@eirpharm.com

The Eirpharm website contains a drug database on prescription and OTC drugs. Eirpharm provides the symbol references to drugs listed in MIMS. It related to products licensed in the Republic of Ireland only.

UK Sport
(applicable to Northern Ireland and the UK)
Web: www.globaldro.com

The UK anti-doping webpage provides a drug search facility with a classification of the status of each drug in relation to sport.