Drugs and Doping in Sport - Guidelines for General Practitioners

Irish Sports Council
Irish College of General Practitioners

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The edition of these Guidelines is valid for 2010. Changes may be introduced from 2011 onwards. Always make reference to the most up-to-date information and check the status of any product within a particular sport with a reliable source.

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GLOSSARY OF TERMS

Term	Definition
Adverse Analytical Finding	A report from a WADA laboratory or other entity identifying a prohibited substance or metabolite in an athlete's sample
Atypical Finding	A report from a WADA laboratory or other entity that requires further investigation
Declaration of Use	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
Doping Control Form	The form an athlete completes at the time of a drug test
Filing Failure	Failure to comply with the whereabouts regulations
International Olympic Committee (IOC)	The supreme authority of the Olympic Movement
Missed Test	Failure by an athlete to be available for testing at the time and place specified on their whereabouts form (60 minute time slot)
National Governing Body (NGB)	Governing body of each particular sport within a region. Examples include GAA, IRFU, FAI, Athletics Ireland, Turf Club, Swim Ireland, OCI
Prohibited Method	A method from the WADA list of prohibited method (M1-M3)
Prohibited Substance	A substance from the WADA list of prohibited substances (S1-S9) (P1-P2)
Registered Testing Pool	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
Sanction	Penalty imposed on an athlete by the relevant body as a result of a positive doping test (substance or method)
Specified substance	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
Strict Liability	Refers to the responsibility the athlete has for whatever substance is found in his or her test sample
Tampering	Altering or interfering with an athlete's sample or testing procedure or providing fraudulent information
Therapeutic Use Exemption (TUE)	Procedure whereby an athlete applies to use a prohibited substance for legitimate therapeutic purposes
Whereabouts Information	A quarterly report of an athlete's whereabouts (time and place) sent in advance to the relevant anti-doping agency
World Anti-Doping Agency (WADA)	Promotes, coordinates and monitors the fight against doping in sport in all its forms
World Anti-Doping Code	The fundamental and universal document upon which the WADA programme is based

INTRODUCTION

Doping is contrary to the spirit of sport. It undermines the virtues of honesty and fair play. It goes against the health-promoting aspects of sport. Ultimately, it is cheating.

Doping threatens to damage sport as a social institution, undermining the values of fair play, team spirit and the concept of a level playing-field.

The endangerment of the health of the athlete is of major concern, especially as the athlete is pushed towards ever-higher levels of achievement. Many documented and other anecdotal cases of death due to performance-enhancing drugs are found.

Doping touches on the area of medical ethics as sports doctors are called upon to help enhance sport performance and monitor an athlete's health when using banned agents.

Doping is dangerous for any athlete but especially in the case of young and more vulnerable sports people. Their health can be damaged and a psychological dependence can be created.

A small number of people have controversially argued in favour of doping, provided it is under medical supervision and does not harm the athlete. Their argument is that the practice is so widespread, so difficult and expensive to control, that it should be opened up and players allowed to find their own level.

Legitimate practices are used to enhance performance in sport: endurance training, dietary manipulation, altitude training, aerodynamic equipment, use of permitted substances e.g. anti-inflammatory medication, being among them.

Obviously there are inequalities world-wide in access to medical expertise, financial sponsorship and sports facilities.

At EU level, some countries have specific laws on doping use in sport[1]. Other countries apply more general drug laws to the issue[2]. Some drugs, like cannabinoids and cocaine, which are banned in sport, are also classified as illegal drugs in many countries.

WORLD ANTI-DOPING AGENCY

In 1999, the **World Anti-Doping Agency (WADA)** was established to coordinate the international anti-doping effort. Within countries, national anti-doping agencies maintain their own system. In Ireland, this is carried out through the Anti-Doping Unit of the Irish Sports Council. It works in conjunction with the National Governing Bodies (NGB's) of the various sports within the country, who have their own regulations and constitutions.

In 2003, the first **World Anti-Doping Code** was launched. A new version of the code came into effect on January 1st 2009. It contained many amendments to the 2003 code. These are referred to later.

The Code has created a universal standard for doping issues, doping control, sanctions, laboratory testing and research.

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1 Austria, Belgium, France, Denmark, Greece, Italy, Portugal, Spain, Sweden

2 UK, Germany, Ireland, Holland

WADA is financed internationally by world governments and the International Olympic Committee (IOC).

The final dispute-resolution mechanism for all doping-related matters is the Court of Arbitration for Sport (CAS), whose headquarters is in Geneva.

The Irish Sports Council launched **The Irish Anti-Doping Rules** (2009 version) in November 2008. These rules are based on the new version of the Code and apply to all sports in Ireland.

*The **Code** is the fundamental and universal document upon which the World Anti-Doping Program in sport is based. The purpose of the Code is to advance the anti-doping effort through universal harmonization of core anti-doping elements. It is intended to be specific enough to achieve complete harmonization on issues where uniformity is required, yet general enough in other areas to permit flexibility on how agreed-upon anti-doping principles are implemented[3].*

[3] World Anti-Doping Code, 2009

DEFINITION OF DOPING
(WORLD ANTI-DOPING CODE 2009)

Doping is defined as the occurrence of one or more of the anti-doping rule violations set forth in Article 2.1 through Article 2.8 of the Code.

Article 2 DOPING RULE VIOLATIONS

Athletes or other Persons shall be responsible for knowing what constitutes an anti-doping rule violation and the substances and methods which have been included on the Prohibited List. The following constitute anti-doping rule violations:

2.1 Presence of a Prohibited Substance or its Metabolites or Markers in an Athlete's Sample

2.1.1 It is each Athlete's personal duty to ensure that no Prohibited Substance enters his or her body. Athletes are responsible for any Prohibited Substance or its Metabolites or Markers found to be present in their Samples. Accordingly, it is not necessary that intent, fault, negligence or knowing Use on the Athlete's part be demonstrated in order to establish an anti-doping violation under Article 2.1.

2.1.2 Sufficient proof of an anti-doping rule violation under Article 2.1 is established by either of the following: presence of a Prohibited Substance or its Metabolites or Markers in the Athlete's A Sample where the Athlete waives analysis of the B Sample and the B Sample is not analyzed; or, where the Athlete's B Sample is analyzed and the analysis of the Athlete's B Sample confirms the presence of the Prohibited Substance or its Metabolites or Markers found in the Athlete's A Sample.

2.1.3 Excepting those substances for which a quantitative threshold is specifically identified in the Prohibited List, the presence of any quantity of a Prohibited Substance or its Metabolites or Markers in an Athlete's Sample shall constitute an anti-doping rule violation.

2.1.4 As an exception to the general rule of Article2.1, the Prohibited List or International Standards may establish special criteria for the evaluation of Prohibited Substances that can also be produced endogenously.

2.2 Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method

2.2.1 It is each Athlete's personal duty to ensure that no Prohibited Substance enters his or her body. Accordingly, it is not necessary that intent, fault, negligence or knowing Use on the Athlete's part be demonstrated in order to establish an anti-doping rule violation for Use of a Prohibited Substance or a Prohibited Method.

2.2.2 The success or failure of the Use or Attempted Use of a Prohibited Substance or Prohibited Method is not material. It is sufficient that the Prohibited Substance or Prohibited Method was used or attempted to be used for an anti-doping rule violation to be committed.

2.3 Refusing or failing without compelling justification to submit to Sample collection after notification as authorized in applicable anti-doping rules, or otherwise evading Sample collection

2.4 Violation of applicable requirements regarding Athlete availability for Out-of-Competition Testing, including failure to file required whereabouts information and missed tests which are declared based

on rules which comply with the International Standard for Testing. Any combination of three missed tests and/or filing failures within an eighteen-month period as determined by Anti-Doping Organizations with jurisdiction over the Athlete shall constitute an anti-doping rule violation

2.5 Tampering or Attempted Tampering with any part of Doping Control

2.6 Possession of Prohibited Substances and Prohibited Methods

2.6.1 Possession by an Athlete In-Competition of any Prohibited Method or any Prohibited Substance, or Possession by an Athlete Out-of-Competition of any Prohibited Method or any Prohibited Substance which is prohibited Out-of-Competition unless the Athlete establishes that the Possession is pursuant to a therapeutic use exemption granted in accordance with Article 4.4 (Therapeutic Use) or other acceptable justification.

2.6.2 Possession by an Athlete Support Personnel In-Competition of any Prohibited Method or any Prohibited Substance, or Possession by an Athlete Support Personnel Out-of-Competition of any Prohibited Method or any Prohibited Substance which is prohibited Out-of-Competition in connection with an Athlete, Competition or training, unless the Athlete Support Personnel establishes that the Possession is pursuant to a therapeutic use exemption granted to an Athlete in accordance with Article 4.4 (Therapeutic Use) or other acceptable justification.

2.7 Trafficking or Attempted Trafficking in any Prohibited Substance or Prohibited Method

2.8 Administration or Attempted administration to any Athlete In-Competition of any Prohibited Method or Prohibited Substance, or administration or Attempted administration to any Athlete Out-of-Competition of any Prohibited Method or any Prohibited Substance that is prohibited Out-of-Competition, or assisting, encouraging, aiding, abetting, covering up or any other type of complicity involving an anti-doping rule violation or any Attempted anti-doping rule violation.

HOW GENERAL PRACTITIONERS CAN BE INVOLVED

GP's can be affected by doping in sport in various ways including:

1. As a medical officer to a team or club. Educating players on their responsibilities with respect to drug use.
2. Completing Therapeutic Use Exemption (TUE) forms on behalf of an athlete.
3. Assisting the athlete to complete the medications section on the Doping Control Form at the time of a drug test.
4. As a medical officer or advisor to a sport's National Governing Body.
5. When attending any athlete who may be subject to drug testing, including emergency and on-call situations.
6. Attending a carded athlete under the high performance athlete scheme.
7. As a GP to an individual athlete or team member who is subject to drug testing, whether amateur or professional.
8. Prescribing medication to any athlete.
9. Giving nutritional/dietary advice to an athlete especially advising on the use of nutritional supplements.
10. Managing a chronic condition in an athlete e.g. asthma, Crohn's disease, diabetes.
11. Travelling abroad with a team which could be subject to doping control.
12. Providing medical cover for a sports event which may be subject to drug testing.
13. Deciding on the need to use a *prohibited substance* in emergency situations during competition e.g. use of oral steroids for an asthmatic attack and ensuring proper notification forms (TUE) are completed.

WHAT DO WE NEED TO KNOW?

A GP should know which patients are athletes who are subject to drug testing.

GP's should have a general awareness of what drugs are banned and restricted. They should have ready access to information that the athlete may require. In recent years, this has been made easier through the system of coding prescribed drugs in MIMS. GP's should also make themselves familiar with Therapeutic Use Exemption (TUE) requirements.

Many athletes use the internet to inform themselves. Doctors can access reliable websites, some of which are given at the end of this document. Time constraints in the normal GP surgery setting mean that such information must be easily and quickly accessible.

Over-the-counter (OTC) substances, without a PA number, herbal products, as well as nutritional supplements pose additional problems. It can be difficult to determine the active ingredients in these products, many of which are not subject to regulation.

A joint ISC/ICGP study in 2009[4] of GP's knowledge in relation to doping in sport found that knowledge of the issues involved were poor overall, even though more than one in four doctors had been consulted for advice. There was overwhelming support for more training among GP's though the best way to provide this training is more complex.

Doctors should be able to offer advice to athletes who need to take medication for clinical reasons but who also want to take part in competitive sports. However, doctors must not assist in the provision of drugs, knowing they are not medically indicated and are likely to be used to enhance performance. To do so risks severe sanctions, including removal from the professional register[5].

The Medical Council's statement[6] on professional misconduct asserts that:

1. Professional misconduct is:
(a) Conduct which doctors of experience, competence and good repute consider disgraceful or dishonourable; and / or
(b) Conduct connected with his or her profession in which the doctor concerned has seriously fallen short by omission or commission of the standards of conduct expected among doctors.
2. Poor professional performance, in relation to a medical practitioner, means a failure by the practitioner to meet the standards of competence (whether in knowledge and skill or the application of knowledge and skill or both) that can reasonably be expected of medical practitioners practising medicine of the kind practised by the practitioner.

Sometimes a phone call to the Irish Sports Council (01-860 8800) is the quickest and most effective way to get the required information speedily.

If an athlete acts in good faith on the advice of a doctor, and as a result tests positive for a banned substance, it is the athlete that will suffer the consequences, e.g. a ban from competition.

[4] *Irish Medical J* 2009, 102, 1 8-10
[5] *Drugs and Therapeutic Bulletin* January 2004 Vol 42, 1

[6] Guide to Professional Conduct and Ethics for Registered Medical Practitioners, Medical Council, 7th edition, 2009

FUNCTIONS OF THE TEAM DOCTOR IN RELATION TO ANTI-DOPING ISSUES

GP's are often asked to look after teams in terms of the medical welfare of players, managing injuries and providing general preventative and nutritional advice. Where players may be subject to drug testing, it is essential that the team doctor be pro-active in ensuring that all the necessary information is given and the proper paperwork is complete.

The best time to start is in the pre-season so that all the issues in relation to medications are completed in time. TUE applications should be made at least 30 days before the start of the competitive season.

The team doctor's responsibilities can include:

1. Getting all players to complete a medical screening questionnaire, to include medical history, current and past, and any medications he/she is currently using. It may be necessary to give examples of the medications, e.g. inhalers.

2. Ask also about any non-prescription medications, supplements, health-food products, etc.

3. PRE-TEST TUE POLICY

   From 2010 the following athletes must apply for a TUE prior to using a Prohibited Substance or Prohibited Method;

   a) All Athletes in the Irish Sports Council's Registered Testing Pool (ISC RTP)
   b) Athletes who are part of an International Federation's (IF) Registered Testing Pool and those competing in International Events, as defined by the IF.

4. POST-TEST TUE POLICY:

   All other Athletes can apply for a TUE retroactively, i.e. if an athlete is tested and the lab reports an Adverse Analytical Finding (AAF), the Irish Sports Council Anti Doping Unit will contact the athlete and request the athlete to submit his/her medical file to the TUE Committee along with a TUE application. All athletes are urged to ensure that their doctor keeps their medical records up to date at all times.

5. A sample TUE application form can be found in Appendix 1. Forms can be downloaded from the Irish Sports Council website (see end of document).

6. The medical information is normally completed by the prescribing doctor. This is usually the players GP. However, any registered doctor can complete it, ensuring the information is accurate and complete. Supportive evidence for a diagnosis is required. Incomplete TUE applications are returned and delays can result.

7. It is always advisable for the doctor to keep a copy of any TUE application forwarded for approval. Likewise, a copy of the TUE approval should be kept.

8. Players should be advised not to take any medications, including OTC non-prescription items, without checking with the team doctor. This is now particularly important in relation to pseudoephedrine-containing medications which are prohibited in 2010.

9. The doctor has an ongoing function in advising players in relation to the use of supplements and similar products and the risks attached. See section on supplements, page 28.

10. Doctors involved with teams playing in international competitions in certain sports may have to apply to the International Federation for a TUE, even though they already have one from the Irish Sports Council.

11. If the team doctor provides urgent treatment for a player that involves a prohibited medication (e.g. oral steroids for an asthmatic attack), a TUE needs to be applied for on an urgent basis.

12. Doctors who provide e.g. local steroid injections (not systemic) to players need to ensure that this medication is included on the Doping Control Form at the time of a test.

DRUG REFERENCE GUIDES

MIMS contains symbols for each medical product relating to its classification for use in sport. The information is updated monthly and compiled by Eirpharm.com on behalf of the Irish Sports Council for *MIMS Ireland*. Doctors are always encouraged to access the latest version of *MIMS* available.

The *Irish Medicines Formulary* is a non-commercial publication with information on all medications available in Ireland. It has individual drug references in relation to their use in sport. Drugs are classified as permitted, restricted or prohibited. It states that its guidelines “are not a substitute for consultation of the full Anti-doping Code and expert professional opinion”. It is published twice yearly.

The *British National Formulary (BNF)* has a useful section in its introduction covering issues of drugs in sport. It does not classify each drug in the formulary separately. It is produced biannually, jointly by the British Medical Association and the Royal Pharmaceutical Society of Great Britain.

PROHIBITED SUBSTANCES AND METHODS

What follows refers to the 2010 list of prohibited substances and methods. It is important to know that this list can change and is updated at least annually, on the 1st of January each year. Changes can be introduced during the year as new information comes to light. Therefore, it is essential that up-to-date information is sourced (see end of document).

SUBSTANCES PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)

S1. ANABOLIC AGENTS

WHAT ARE THEY?

a) Anabolic Androgenic Steroids (AAS) are synthetic versions of the hormone testosterone. Testosterone is a male sex hormone found in large quantities in most males and in some females. Anabolic Androgenic Steroids fall into one of two categories: i) exogenous steroids are those substances that are not capable of being produced by the body naturally, and ii) endogenous steroids are those substances that are capable of being produced by the body naturally.

b) Other Anabolic Agents

EXAMPLES:

Exogenous steroids: drostanolone, metenolone and oxandrolone, endogenous steroids androstenediol (andro), dehydroepiandrosterone (DHEA) and testosterone.
Other anabolic agents: including but not limited to: Clenbuterol, selective androgen receptor modulators (SARMs), tibolone.

WHY THEY ARE BANNED

Anabolic agents are prescribed for medical use only. Use of anabolic agents may enhance an athlete's performance, giving them an unfair advantage. Another possibility is serious medical side effects for the user.

WHY ATHLETES USE THEM

To increase muscle size and strength, reduce the amount of time required to recover after exercise, and to train harder and for a longer period of time.

TYPE OF PROHIBITION

In- and out-of-competition

EXCEPTIONS

When an athlete tests positive for an endogenous substance, his/her sample is ruled to contain a prohibited substance where the concentration of the substance in the sample is greater than the amount normally found in humans, or there is a relative concentration of the substance, e.g. the ratio of testosterone to epitestosterone. A sample will be ruled to not contain a prohibited substance when the athlete proves with evidence that the excess concentration of the endogenous substance in the sample is attributable to a pathological or physiological condition. Both exogenous and endogenous

steroids, as well as their analogues (any substance derived from modifying the chemical structure of another substance while retaining a similar pharmacological effect) are prohibited.

S2. PEPTIDE HORMONES, GROWTH FACTORS AND RELATED SUBSTANCES

WHAT ARE THEY?

Peptide hormones are substances that are produced by glands in the body and that, after circulating through blood can affect other organs and tissues to change bodily functions.

EXAMPLES

The following substances and their releasing factors are prohibited:

1. Erythropoiesis-Stimulating Agents [e.g. **erythropoietin (EPO), darbepoetin (dEPO), methoxy polyethylene glycol-epoetin beta(CERA), hematide];**

2. Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH) in males;

3. Insulins

4. Corticotrophins;

5. Growth Hormone (GH), Insulin-like Growth Factor-1 (IGF-1),Mechano Growth Factors (MGFs), Platelet-Derived Growth Factor(PDGF), Fibroblast Growth Factors (FGFs), Vascular-Endothelial Growth Factor (VEGF) and Hepatocyte Growth Factor (HGF) as well as any other growth factor affecting muscle, tendon or ligament protein synthesis/degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching;

6. Platelet- Derived Preparations (e.g. Platelet Rich Plasma, "blood spinning")
Administered by intramuscular route. Other routes of administration require a declaration of use on the Doping Control Form in accordance with the International Standard for Therapeutic Use Exemptions.
Other substances with similar chemical structure or similar biological effect(s)

WHY THEY ARE BANNED

Peptide hormones serve as messengers between different organs that stimulate various bodily functions such as growth, behaviour and sensitivity to pain.

WHY ATHLETES USE THEM

To stimulate the production of naturally occurring hormones, increase muscle growth and strength, and increase the production of red blood cells to improve the blood's ability to carry oxygen.

TYPE OF PROHIBITION

In- and out-of-competition

EXCEPTIONS

Unless an athlete can demonstrate that the excess concentration of the substance was due to a physiological or pathological condition, his or her sample is ruled to contain a peptide hormone where the concentration exceeds the amount normally found in humans.

S3. BETA-2 AGONISTS

WHAT ARE THEY?

Beta-2 agonists are drugs commonly used to treat asthma by relaxing the muscles that surround the airway and opening up the air passages.

EXAMPLES

All beta-2 agonists are prohibited except salbutamol by inhalation (maximum 1600 mcg over 24 hours) and salmeterol by inhalation which must be declared by the athlete on the Doping Control Form at the time of a drug test. Bambuterol hydrochloride, reproterol hydrochloride, tulobuterol hydrochloride, terbutaline and formoterol are prohibited. Their use requires a TUE.

WHY THEY ARE BANNED

They can provide the same advantages of a stimulant or, if administered into the bloodstream, have anabolic effects.

WHY ATHLETES USE THEM

To increase their muscle size and reduce body fat. When taken orally or by injection, Beta-2 agonists can have powerful stimulatory effects.

TYPE OF PROHIBITION

In- and out-of-competition

EXCEPTIONS

The presence of salbutamol in urine in excess of 1000 ng/ml is presumed not to be an intended therapeutic use of the substance and will be considered as an *Adverse Analytical Finding* unless the *Athlete* proves, through a controlled pharmacokinetic study, that the abnormal result was the consequence of the use of a therapeutic dose (maximum 1600 mcg over 24 hours) of inhaled salbutamol.

Note: *Each dose of most salbutamol inhalers is 100mcg; maximum dose amounts to 16 inhalations daily. (Ventolin Diskus inhaler comes in a 200mcg dose format).*

S4. HORMONE ANTAGONISTS AND MODULATORS

WHAT ARE THEY?

These drugs impair the oestrogen effect/uptake at tissue level. They also oppose the negative feedback to the hypothalamus of oestrogens, increasing the release of GnRH.

EXAMPLES

Include aromatase inhibitors, clomiphene and cyclofenil.
SERMS including raloxoifine [*Evista*], tamoxifen [*Nolvadex* et al] and toremifene [*Fareston*] are prohibited. Agents modifying myostatin function(s) including myostatin inhibitors are prohibited.

WHY THEY ARE BANNED

Used as masking agents. These substances are banned in males and females.

WHY ATHLETES USE THEM

To lessen the side effects of anabolic steroids (e.g. gynaecomastia) and increase the endogenous production of testosterone.

TYPE OF PROHIBITION

In- and out-of-competition

EXCEPTIONS

None

S5. DIURETICS AND OTHER MASKING AGENTS

WHAT ARE THEY?

Masking agents are products that can potentially conceal the presence of a prohibited substance in urine or other samples.

EXAMPLES

All diuretics; probenecid; plasma expanders; iv albumin, dextran, mannitol

WHY THEY ARE BANNED

Masking agents hide the presence of a banned substance in an athlete's urine or other sample, allowing them to cover up their use and gain an unfair competitive edge.

WHY ATHLETES USE THEM

To conceal their use of a prohibited substance in the testing process.

TYPE OF PROHIBITION

In- and out-of-competition

EXCEPTIONS

None.

METHODS PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)

M1. ENHANCEMENT OF OXYGEN TRANSFER

The following are prohibited:

1. Blood doping, including the use of autologous, homologous or heterologous blood or red blood cell products of any origin.

2. Artificially enhancing the uptake, transport or delivery of oxygen, including but not limited to perfluorochemicals, efaproxiral (RSR13) and modified haemoglobin products (e.g. haemoglobin-based blood substitutes, microencapsulated haemoglobin products), excluding supplemental oxygen.

WHY THEY ARE BANNED

They give athletes an unfair advantage by artificially enhancing blood oxygenation. There are also health risks involved with blood hyperviscosity and the invasive techniques in transfusion.

WHY ATHLETES USE THEM

To improve performance in endurance events in particular by increasing the oxygen-carrying capacity of the blood

TYPE OF PROHIBITION

In and out of competition

EXCEPTIONS

Blood transfusion in an emergency situation which require a TUE (usually granted retroactively in emergencies)

M2. CHEMICAL AND PHYSICAL MANIPULATION

1. *Tampering,* or attempting to tamper, in order to alter the integrity and validity of *Samples* collected during *Doping Controls* is prohibited. These include but are not limited to catheterisation, urine substitution and/or adulteration (e.g. proteases).

2. Intravenous infusions are prohibited except for those legitimately received in the course of hospital admissions or clinical investigations.

M3. GENE DOPING

The following, with the potential to enhance athletic performance, are prohibited:

1- The transfer of cells or genetic elements (e.g. DNA, RNA);

2- The use of pharmacological or biological agents that alter gene expression.

Peroxisome Proliferator Activated Receptor δ (PPARδ) agonists (e.g. GW 1516) and PPARδ-AMP-activated protein kinase (AMPK) axis agonists (e.g. AICAR) are prohibited.

WHY THEY ARE BANNED

The non-therapeutic use of cells, genes, genetic elements, or of the modulation of gene expression, having the capacity to improve athletic performance has been defined by WADA as doping

WHY ATHLETES USE THEM

Still only at an experimental stage, they have the potential to alter a person's body structure (e.g. blood, muscle) and so enhance performance

TYPE OF PROHIBITION

In and out of competition

EXCEPTIONS

None

SUBSTANCES BANNED IN COMPETITION ONLY

S6. STIMULANTS

WHAT ARE THEY?

Stimulants refer to a group of drugs that boost alertness and physical activity by increasing heart and breathing rates and brain functions. By acting on the central nervous system, stimulants can stimulate the body both mentally and physically.

EXAMPLES

A: Non-Specified Stimulants:

Adrafinil; amfepramone; amiphenazole; amphetamine; amphetaminil; benfluorex; benzphetamine; benzylpiperazine; bromantan; clobenzorex; cocaine; cropropamide; crotetamide; dimethylamphetamine;etilamphetamine; famprofazone; fencamine; fenetylline; fenfluramine;fenproporex; furfenorex; mefenorex; mephentermine; mesocarb;methamphetamine(*d*-); p-methylamphetamine; methylenedioxyamphetamine; methylenedioxymethamphetamine;methylhexaneamine (dimethylpentylamine); modafinil; norfenfluramine; phendimetrazine; phenmetrazine; phentermine; 4-phenylpiracetam (carphedon); prenylamine; prolintane.

A stimulant not expressly listed in this section is a Specified Substance.

B: Specified Stimulants (examples):

Adrenaline**; cathine***; ephedrine****; etamivan; etilefrine; fenbutrazate; fencamfamin; heptaminol; isometheptene; levmetamphetamine; meclofenoxate; methylephedrine****; methylphenidate; nikethamide;norfenefrine; octopamine; oxilofrine; parahydroxyamphetamine; pemoline; pentetrazol; phenpromethamine; propylhexedrine; pseudoephedrine*****; selegiline; sibutramine; strychnine; tuaminoheptane and other substances with a similar chemical structure or similar biological effect(s).

WHY STIMULANTS ARE BANNED

They may artificially stimulate the mind or body, thereby improving an athlete's performance and giving them an unfair advantage.

WHY ATHLETES USE THEM

To increase their ability to exercise at an optimal level, combat tiredness, suppress appetite.

TYPE OF PROHIBITION

In-competition

EXCEPTIONS

The following substances included in the 2010 Monitoring Program bupropion,caffeine, phenylephrine, phenylpropanolamine, pipradol, synephrine are not considered as *Prohibited Substances*.
** Adrenaline associated with local anaesthetic agents or by local administration (e.g. nasal, ophthalmologic) is not prohibited.
*** Cathine is prohibited when its concentration in urine is greater than 5 mcg/ml
**** Each of ephedrine and methylephedrine is prohibited when its concentration in urine is greater than 10 mcg/ml
***** Pseudoephedrine is prohibited when its concentration in urine is greater than 150 mcg/ml

S7. NARCOTIC ANALGESICS

WHAT ARE THEY?

Narcotic analgesics usually take the form of painkillers that act on the brain and spinal cord to treat pain associated with painful stimuli.

EXAMPLES

Buprenorphine, dextromoramide, diamorphine (heroin), fentanyl and its derivatives, hydromorphone, methadone, morphine, oxycodone, oxymorphone, pentazocine, pethidine.

WHY THEY ARE BANNED

Narcotic analgesics could be used to reduce or eliminate the pain felt from an injury or illness. They could also be used to help an athlete train harder and for a longer period of time. The danger in this is that the drug could merely be masking the pain. As a result, athletes may have a false sense of security, and by continuing to train and compete, risk further health problems.

WHY ATHLETES USE THEM

To help reduce or eliminate the pain from a nagging injury, allowing them to continue in their training. Narcotic analgesics may also reduce anxiety, which may artificially enhance an athlete's performance.

TYPE OF PROHIBITION

In-competition

EXCEPTIONS

codeine, dextromethorphan, dextropropoxyphene, dihydrocodeine, diphenoxylate, ethylmorphine, pholcodine, propoxyphene, and tramadol are not prohibited

S8. CANNABINOIDS

WHAT ARE THEY?

Cannabinoids are psychoactive chemicals derived from the cannabis plant that cause a feeling of relaxation.

EXAMPLES

Hashish, hashish oil, marijuana

WHY THEY ARE BANNED

Marijuana is generally not considered performance enhancing, but is banned because its use is damaging to the image of sport. There are also safety factors involved as the use of marijuana could weaken the athlete's ability to perform, thereby compromising the safety of the athlete and other competitors.

WHY ATHLETES USE THEM
To decrease their recovery time after exercise, increase their heart rate, reduce their inhibitions and to release tension.

TYPE OF PROHIBITION

In-competition

EXCEPTIONS

None

S9. GLUCOCORTICOSTEROIDS

WHAT ARE THEY?

In conventional medicine, glucocorticosteroids are used mainly as anti-inflammatory drugs and to relieve pain. They are commonly used to treat asthma, hay fever, tissue inflammation and rheumatoid arthritis.

EXAMPLES

Dexamethasone, fluticasone, prednisone, triamcinolone acetonide and rofleponide when administered by the oral, intravenous, intramuscular or rectal routes.

WHY THEY ARE BANNED

When administered systemically (into the blood) glucocorticosteroids can produce a feeling of euphoria, potentially giving athletes an unfair advantage.

WHY ATHLETES USE THEM

To mask pain felt from injury and illness.

TYPE OF PROHIBITION

In-competition

EXCEPTIONS

In accordance with the International Standard for Therapeutic Use Exemptions, a declaration of use on the Doping Control Form must be completed by the *Athlete* at the time of a drug test for glucocorticosteroids administered by intraarticular, periarticular, peritendinous, epidural, intradermal and inhalation routes, except as noted below.
Topical preparations when used for auricular, buccal, dermatological (including iontophoresis/phonophoresis), gingival, nasal, ophthalmic and perianal disorders are not prohibited and require neither a Therapeutic Use Exemption nor a Declaration of use.

SUBSTANCES PROHIBITED IN PARTICULAR SPORTS

P1. ALCOHOL

Alcohol (ethanol) is prohibited *In-Competition* only, in the following sports.

- Detection will be conducted by analysis of breath, urine and/or blood.
- Aeronautic
- Archery
- Automobile
- Karate
- Modern Pentathlon for disciplines involving shooting
- Motorcycling
- Ninepin and Tenpin Bowling
- Powerboating

WHY IS IT BANNED?

Alcohol intoxication puts an athlete and others at risk especially if travelling at high speeds

WHY ATHLTES USE IT?

To reduce stress prior to competition, reduce anxiety or reduce hand tremor

TYPE OF PROHIBITION

In competition

EXCEPTIONS

Threshold in blood is 0.10g/l

P2. BETA-BLOCKERS

Unless otherwise specified, beta-blockers are prohibited *In-Competition* only, in the following sports.

Aeronautic	Motorcycling
Archery §	Modern Pentathlon
Automobile	Ninepin & Tenpin Bowling
Billiards & Snooker	Powerboating
Bobsleigh	Sailing
Boules	Shooting §
Bridge	Skiing
Curling	Snowboarding
Golf	Wrestling
Gymnastics	

§ also prohibited out-of-competition

Beta-blockers include, but are not limited to, the following:

Acebutolol, alprenolol, atenolol, betaxolol, bisoprolol, bunolol, carteolol,carvedilol, celiprolol, esmolol, labetalol, levobunolol, metipranolol, metoprolol, nadolol, oxprenolol, pindolol, propranolol, sotalol, timolol

WHY ARE THEY BANNED

Potential toxic effects include aggravation of pre-existing asthma and in athletes with impaired cardiac function. They also give athletes an unfair advantage in precision events.

WHY ATHLTES USE THEM

To reduce anxiety and its manifestations or reduce hand tremor

TYPE OF PROHIBITION

In competition

EXCEPTIONS

None

HAZARDS OF PERFORMANCE ENHANCING DRUG USE

Most of the drugs and hormones that athletes use to enhance performance have the potential to cause severe, sometimes lethal, adverse effects when taken for non-therapeutic reasons. Some preparations are injected and so carry the risks associated with misuse of injected drugs.

Drugs are frequently obtained via underground networks and may or may not be manufactured to the standards required for licensed products. They may have been produced in unlicensed laboratories and may be impure, unsterile or counterfeit. They may have no active ingredients and may contain undeclared substances (e.g. anabolic steroids). This is also the case with so-called nutritional aids or supplements. In one study[7], 15% of nutritional supplements were found to be contaminated with anabolic steroids.

A wide range of products is readily available over the internet but the origin of many of these drugs is highly suspicious, and their claims to success unsubstantiated.

Doctors may find themselves in the position of advising athletes regarding the use of nutritional supplements. While balance has to be maintained, the Irish Sports Council does not recommend their use because of the risk of an inadvertent positive drug test.

If an athlete presents to a doctor with a request to monitor his usage of performing enhancing substances (e.g. anabolic steroid use by a bodybuilder), this poses a real ethical dilemma. Does the doctor accede to the request, thereby tacitly backing the use of illegal substances or does he refuse and allow the athlete to run a significant health risk? Information about (i) diet and training and (ii) non-judgemental advice about the potential risks and (iii) minimal - and mostly unproven - benefits of performance enhancing drugs, may help to persuade patients not to use the drugs[8].

A 1997 study[9] of GP's in the UK found that only 35% were aware that guidelines on drugs in sport are to found in the BNF and 12% believed that medical practitioners are allowed to prescribe anabolic steroids for non-medical reasons. In a study in France[10] in the same year, a third of GP's had encountered doping in sport in the previous 12 months. In the same study, 61% of drug-using sports people questioned cited their GP as the source of the drugs. In a study of GP's and paediatricians in Texas[11], over half reported having been asked about steroids or seeing possible steroid users in their practices in the previous five years.

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[7] Geyer H et al, High doses of anabolic steroid metandienone found in dietary supplements *Eur J Sport Sci* 2003; 3: 1-5

[8] Lenehan P et al. A study of anabolic use in the north West of England *J Performance Enhancing Drugs* 1996; 1:57-70

[9] Greenway P et al, General Practitioner knowledge of prohibited substances in sport *Br J Sports Med* 1997; 31; 129-31

[10] Laure P Doping in Sport: Doctors are providing drugs *Br J Sports Med* 1997; 31: 258-9

[11] Salva PS et al Anabolic steroids: Interest among parents and non athletes *South Med J* 1991; 5552-6

TESTING

Drug testing can be carried out during competition or out-of-competition. Under the carding scheme for high performance athletes, these Irish athletes are subject to in and out-of-competition testing. In addition to these are players/athletes who may be of a high national or international standard in both individual and team sports. These players/athletes make up the Irish Sports Council's Registered Testing Pool. This also applies to all athletes who make the qualification standard for the Olympics and other major international events.

Testing during competition is based on different criteria including finishing position or random selection or both. For example, all winners and runners up. It could also include players selected randomly by number, e.g. players numbered 5, 11 and 16. Nominated substitutes are included even if they do not play as well as injured players.

An athlete is chaperoned from the time of notification by the Irish Sports Council's Sample Collection Personnel (Chaperone) until the completion of the test. The athlete is witnessed by the Chaperone while providing the sample. The athlete is permitted to have another person of their choice accompanying them during the test. This may be a coach or team doctor. Those under 18 years, can also have an accompanying person present during the sample collection process. This person will not actually witness directly the passing of the sample.

If unable to provide a sample immediately, the athlete will be given adequate time to do so, and will be provided with fluids (sealed fluid bottles made available) to help re-hydration.

The doctor can help in filling out the relevant sections of the documentation, e.g. what medicines the athlete is taking, ensure containers are properly sealed, etc.
The doctor can assist the athlete to declare the use of, for example, inhaled salbutamol or salmeterol, inhaled corticosteroids or local administered glucocorticoids.

A refusal to provide a sample or co-operate with the drug test may be equated with a positive result and the appropriate sanctions applied.

THERAPEUTIC USE EXEMPTIONS

Therapeutic Use Exemption (TUE) allows athletes who need to use medications for medical reasons, use them in or out of competition. It applies for example to diabetics who need insulin or athletes who need to use oral or rectal corticosteroids. TUE must be granted in advance and there must be a legitimate medical reason for using the prohibited substance or method.

The use of Abbreviated TUE Forms and Declaration of Use Forms is no longer in force. Currently there is just one TUE form. All medications taken in the past 14 days must be declared by the athlete on the Doping Control form at the time of a drug test.

The criteria for granting a TUE are:

a) The athlete would experience significant health problems without taking the prohibited substance or method.
b) The therapeutic use of the substance would not produce significant enhancement of performance
c) There is no reasonable therapeutic alternative to the use of the otherwise prohibited substance or method.
d) The necessity to use the substance cannot be a consequence, wholly or in part, of prior non-therapeutic use of any substance from the Prohibited List.

PRE-TEST TUE POLICY

For 2010 the following athletes must apply for a TUE prior to using a Prohibited Substance or Prohibited Method:

a) All Athletes in the Irish Sports Council's Registered Testing Pool (ISC RTP)

b) Athletes who are part of an International Federation's (IF) Registered Testing Pool and those competing in International Events, as defined by IF

Athletes who are part of the ISC RTP are informed by the ISC in writing and advised of the TUE requirements.

Athletes who are not on the ISC RTP but are on their IF RTP or are competing in international level events should check with their IF to see what the TUE requirements are. Some IFs publish these details on their websites.

POST-TEST TUE POLICY:

All other Athletes can apply for a TUE retroactively, i.e. if an athlete is tested and the lab reports an Adverse Analytical Finding (AAF), the Irish Sports Council Anti Doping Unit will contact the athlete and request the athlete to submit his/her medical file to the TUE Committee along with a TUE application. All athletes are urged to ensure that their doctor keeps their medical records up to date at all times.

If the Athlete is unable to prove that he/she was using the Prohibited Substance or Prohibited Method for a legitimate therapeutic purpose the AAF will stand and the National Governing Body will start proceedings for a Disciplinary Hearing. If the TUE Committee reviews the medical file and is happy that the athlete was using the Prohibited Substance or Method for a legitimate purpose, the AAF is not pursued and no action is taken against the athlete.

If an athlete is unsure about whether he/she should apply for a TUE in advance, he/she can contact the Irish Sports Council. Athletes to whom the Post-Test TUE Policy applies may still apply to the ISC for a TUE in advance of using the Prohibited Substance or Method.

A listing of IF contacts is available at http://www.wada-ama.org/en/Anti-Doping-Community/IFs/List-of-IFs

The Irish Sports Council has appointed a committee, the TUE Committee, to consider requests for TUEs. Once approved, a Cert of Approval is sent to the athlete.

An example on a TUE application form is given in Appendix 1

The procedures for submitting a TUE form are given in the Irish Sports Council website www.irishsportscouncil.ie/anti-doping/tues_and_medicines

Doctors can assist the Irish Sports Council by ensuring that all relevant medical records are submitted with TUE applications and providing full information on dosage, brand name, frequency of use, etc.

Athletes competing in certain international competitions may need to declare medications differently – athletes should check with their International Federation for the correct procedure.

Asthma and TUE Applications

Athletes who currently use inhaled beta-2 agonists formoterol, fenoterol and terbutaline, when making an application for a TUE, must include information from their medical file to substantiate their diagnosis.

Athletes using a dosage of salbutamol over 1600 mcg in 24 hours must also apply for a TUE, which should include their medical file information.

Athletes who require beta-2 agonists by systemic route (injection, syrup, tablet, iv infusion, etc) must apply for a TUE

The medical information required for this application is given in Appendix 2

WHEREABOUTS INFORMATION

What is the Whereabouts System?

Athletes on the Registered Testing Pool have to keep the Irish Sports Council up to date on their whereabouts. There are a number of aspects to the Whereabouts System as follows:

Quarterly Whereabouts Filing

Athletes are required to submit an athlete whereabouts filing on a quarterly basis to the Irish Sports Council, which includes details on the athlete's residence, training venues and times, competition schedule, holiday arrangements and so forth. Any player/athlete liable to supply this information will be informed of such by their NGB or by the Irish Sports Council. The filing can be done by using the Athlete Online System or by Hard Copy form

Athletes must update the Irish Sports Council with any changes/additional information to their quarterly whereabouts filing. If athlete's whereabouts details changes from those submitted in their Quarterly Whereabouts Filing to the Irish Sports Council, they need to update the details immediately using one of the following methods:

- Athletes Online Whereabouts System
- By Phone: +353 1 8608832
- By Text: +353 87 9580211
- By Email: antidoping@irishsportscouncil.ie
- By Fax: +353 1 8608860

COMMON MEDICATIONS AND THEIR STATUS IN SPORT

It is not possible to produce a comprehensive list of medications that are permitted, as the Prohibited List is updated yearly and may have changes introduced. Always refer to the up-to-date, current list. The lists below are in reference to the WADA 2010 list.

PERMITTED TREATMENT EXAMPLES

Pain

. All NSAIDs
. paracetamol
. aspirin
. mefanamic acid [*Ponstan, etc*]
. codeine
. dihydrocodeine [*DF 118*]
. tramadol [*Zydol*]

Antidiarrhoeals

. loperamide [*Imodium*]
. diphenoxylate [*Lomotil*]
. electrolyte replacement agents [*Dioralyte, Rapolyte*,etc]

Vomiting

. Metoclopromide [*Maxolon*] and fluids
.Prochlorperazine [*Stemetil*]

Antihistamines

All permitted

Antacids

All permitted

Hormonal contraceptives

All permitted

Decongestants

Many decongestants contain pseudoephedrine. Pseudoephedrine is prohibited in competition from 2010. Athletes are advised to stop taking pseudoephedrine-containing products at least 24 hours prior to competition. *Casacol* (containing methoxyphenamine) is also prohibited. OTC medications with the adage '*Plus*' may contain a prohibited stimulant.

Asthma

Permitted without restriction
. oral theophylline [*Phyllocontin, Nuelin, Uniphyllin*, *Zepholin*]
. ipratropium [*Atrovent*]
. sodium cromoglycate [*Intal, Cromagen*]
. montelukast [*Singulair]*, zafirlukast [*Accolate*]
. tiotropium [*Spiriva*]

. nedocromil [*Tilade*]
. ketotifen [*Zaditen*]

Beta-2 Agonists by inhalation only (inhaled or nebulised)

. salbutamol [*Ventolin, Salamol, Combivent,* etc] and salmeterol [*Serevent, Seretide]* – permitted but must be declared on the Doping Control Form. Salbutamol is permitted up to a dose of 1600mcg over 24 hours. Athletes requiring to use a dosage over 1600mcg in 24 hours (e.g. by nebuliser) must apply for a TUE.
. formoterol [*Foradil, Oxis, Symbicort*] – TUE form
. terbutaline [*Bricanyl*] - TUE form
-fenotorol [*Duovent*] – TUE form

Please note that all systemic beta-2 agonists require a TUE e.g. Ventolin syrup

Inhaled corticosteroids (inhaler or nebulised) – all permitted but must be declared on the Doping Control Form at the time of a drug test

. beclamethasone [*Becotide, Beclazone*]
. fluticasone [*Flixotide, Seretide*].
. budesonide [Pulmicort]

Please note that *Symbicort,* although it contains budesonide, also contains formoterol, and so requires a TUE application

Hayfever

Permitted without restriction

. antihistamines (oral and inhaled)
. Xylometazoline [*Otrivine*]
. Ipratropium [*Rinatec*]
. Sodium Cromoglycate (*Rynacrom, Vividrin* drops]

Decongestants containing pseudoephedrine are prohibited in competition. Athletes are advised to stop taking any products containing this drug 24 hours prior to competition.

Corticsteroids – all permitted

. Beclomethasone *[Beconase, Betnesol drops, Beclo-Rhino, Nasobec]*
. Fluticasone *[Flixonase]*
. Budesonide *[Rhinocort]*
. Mometasone *[Nasonex]*
. Triamcinolone *[Nasacort*]

Doctors should note that depot corticosteroids (e.g. *Kenalog, DepoMedrone*) are classified as prohibited substances. If there is no alternative to their use, a TUE must be obtained in advance.

Haemorrhoids

Local (i.e. perianal) application of steroid-containing ointments is permitted. However, rectal administration (using the applicator) would require the prior granting of a TUE. If in doubt about the athlete's correct use/understanding, it would make sense to apply for a TUE.

Prohibited examples: *Ultraproct, Scheriproct, Proctosedyl, Anugesic HC, Anusol HC*
Non-steroid containing ointments and sprays are permitted without restriction.

General notes

- Athletes travelling abroad should take a supply of their own regular medications with them, e.g. for asthma, diabetes. No more than three months supply is recommended. Athletes should also bring a supply of permitted medications for general ailments (anti-diarrhoeals, simple painkillers, etc). Use of foreign medications is at one's own risk. Athletes can contact the Irish Sports Council if they are abroad and need to check the status of a medication.

- It may be necessary when travelling to certain countries to have accompanying documentation, giving medical authorisation to take the drugs concerned and includes a list of medications a person has with him or her.

NUTRITIONAL ERGOGENIC AIDS

Surveys show that up to 90% of athletes (U.S. study) take some form of nutritional aid, ranging from vitamin and mineral supplements to high-protein diets and creatine. A recent survey of carded Irish athletes showed that 54% of senior athletes and 23% of junior athletes use supplements

A lot of controversy surrounds the use of supplements by sportspeople. There is a lack of scientific evidence to support them, yet they are widely used. Anecdotal evidence suggests an improvement in strength and endurance but these have not been borne out in clinical trials.

These substances do not come under the heading of banned substances. Although not themselves prohibited, they exist in a poorly regulated market. Several studies have shown the contamination of supplements with prohibited substances (Gmeiner et al, 2002; Geyer et al 2003; Parr et al, 2004; Geyer at al, 2006).

Supplements are widely promoted in magazines, gyms, certain internet sites and sometimes by coaches and peers. The message needs to spread that their use constitutes a significant risk to testing positive for a banned substance and they should be avoided.

Products containing a licence number (PA number) have gone through the rigours of testing and have been given approval by the Irish Medicines Board. OTC medicines and nutritional aids with a PA number can be trusted to contain what is stated on the label.

Supplements and Sports Food Policy 2009
(www.irishsportscouncil.ie/Anti-Doping/Supplements_and_Sports_Food_Policy_2009)

The Irish Sports Council recommends against the use of sports supplements for the following reasons:

- We believe that a correct dietary and nutritional regime will provide all the potential benefits of sports supplements.
- We believe that, given the World Anti-Doping Agency (WADA) rule on strict liability, elite athletes are opening up the possibility of inadvertent positive tests by taking supplements.
- We believe it is inappropriate for any junior athlete or player to be taking supplements that could have an impact on their physical development.

General Advice

Do:

- Follow a dietary plan that will allow you to adapt your eating and drinking practices to maximise your performance.
- Seek advice from a professional such as a Sports Dietician (e.g. a Member of the Irish Nutrition and Dietetic Institute MINDI, www.indi.ie) before taking any supplement.
- Make sure that the professional is familiar with the WADA Prohibited List.
- Remember that dietary alteration may replace the need for any particular supplement.
- Remember that there is a variable level of risk associated with supplements. Vitamins and minerals produced by reputable pharmaceutical companies especially those with a product authorisation (PA) number are less likely to be associated with health risks or inadvertent drug tests.
- Check if these products are listed on www.eirpharm.com (for products bought in the Republic of Ireland) or www.globaldro.com (for products bought in Northern Ireland).
- Be aware that supplements which claim to be muscle building or fat burning are more likely to be associated with contamination with anabolic steroids, stimulants and other contaminants.
- Always remember that there are no quick fixes for improving sports performance.

Do Not:

- Do not take a supplement just because a team mate or a competitor is taking it or recommends it.
- Do not take any supplements made by a company which also manufactures substances which are on the WADA Prohibited List due to the risk of cross contamination.
- Do not take any supplements that make claims that sound too good to be true. Always validate product claims through non-biased sources.
- Do not take any supplements made by a company which in the past has been associated with positive drugs tests.
- Do not buy supplements either over the internet or through magazines as they are more likely to be associated with an increased risk of inadvertent doping, adverse health effects and other associated problems.
- Do not exceed the recommended dose - Remember more is not always better. Excessive use of one vitamin or mineral can have a negative impact on the availability or absorption of another. The recommended daily allowances (RDA) for vitamins and minerals should be used as a guide in determining nutritional needs.

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.

WORK OF THE IRISH SPORTS COUNCIL IN ANTI-DOPING

"The Irish Sports Council aims to create an environment so that the individual can develop their sporting abilities and to help our leading sportsmen and women achieve world class performance by fair and ethical means"

History of Anti-Doping in Ireland

Under the Irish Sports Council Act 1999 the Irish Sports Council was given the task of combating doping in sport. Immediately the Council established the Irish Sport Anti-Doping Programme, which was launched in the Autumn of 1999. It comprises three main elements; testing, education and research. The Council is proud to have put in place a Programme that is recognised nationally and internationally as of the highest quality. It makes a contribution to the development of Irish sport through guarding the ethical standards of sport and ensuring that competitors, mentors and spectators are involved with drug free sport.

Among the main roles of the Anti-Doping Unit of the Irish Sports Council is included:

1. Establishing and implementing the WADA anti-doping rules through the incorporation of the Irish Anti-Doping Rules into the National Sports Anti-Doping Programme
2. Maintaining a testing programme in line with the International Standard for Testing and Laboratories, specifically, through sample collection by an appointed Sample Collection Personnel and sample analysis by a WADA accredited laboratory
3. Results management, including the establishment of Independent Disciplinary and Appeals Panels
4. Managing the TUE process
5. Administering whereabouts information for high-performance athletes
6. Effective test distribution planning e.g. target testing of an athlete or team
7. Wide-based educational programmes in anti-doping matters
8. Research

APPENDIX 1 Therapeutic Use Exemption Form

Anti-Doping Unit
Irish Sports Council

Application No. ISC TUE

THERAPEUTIC USE EXEMPTION APPLICATION FORM

Please PRINT clearly using BLOCK CAPITALS

1. Athlete Information

Surname: ____________________ First Name: ____________________

(tick) Male ☐ Female ☐ Date of Birth (dd/mm/yy): ____________________

Address: ____

City: ______________ Country: ______________ Post Code: ______________

Tel: *(with int. code)* ____________________ E-mail: ____________________

Sport: ____________________ Discipline/Position: ____________________

Club/Team: ____________________ National Governing Body: ____________________

If athlete with a disability, please indicate disability: ____________________

2. Medical Information (attach any additional information on a separate sheet if necessary)

Evidence confirming the diagnosis must be attached and forwarded with this application.
When filling this Form for Asthma Inhalers containing Beta-2 Agonists, please refer to the *ISC Asthma TUE Application Instructions* for further information, as published on www.irishsportscouncil.ie/Anti-Doping or contact the Anti-Doping Unit

Diagnosis of condition or injury sustained: ____

____

Supporting Medical Information: ____

____

____

The medical evidence should include a medical history and/or the results of all relevant examinations, laboratory investigations and imaging studies. Copies of the original reports or letters should be included where possible.

Evidence should be as objective as possible in the clinical circumstances and in the case of non-demonstrable conditions, independent supporting medical opinion will assist with this application.

If a permitted medication can be used to treat the medical condition, provide clinical justification for the requested use of the prohibited medication:

____

____

Each TUE Application must be accompanied by medical records, including results of any relevant tests. A brief medical history is also required, where appropriate.

If you are on your International Federation's Registered Testing Pool and/or participate at International Event, you must apply to your International Federation!

Version 1.0, January 2009

3. Medication Details

Prohibited Substances including Brand Name	Dosage **e.g. 200mcg**	Route of Admin. **e.g. Intra-muscular**	Frequency of Admin. **e.g. BD**	Date of Admin.	Intended duration of Treatment e.g. Emergency / Once only / Two weeks

4. Have you submitted any previous TUE application: Yes ☐ No ☐

For which substance?________________________________ To whom?____________________________________

When? ___________________________________ Decision: Approved ☐ Not approved ☐

5. Medical Practitioner's Declaration

Name, qualifications & medical specialty:____

(e.g. Dr AB Cook, MD FRACP, Gastroenterologist)

Address: ____

____ Email: ______________________________________

Work Tel: ______________________________ Mobile: ___________________________ Fax:_______________

I certify that I am the athlete's **prescribing** doctor. I further certify that the above-mentioned treatment is medically appropriate and that the use of alternative medication not on the prohibited list would be unsatisfactory for this condition.

Physician's signature:____ **Date:** _____/_____/_______

6. Athlete's Declaration

I certify that the information under section 1 is accurate and that I am requesting approval to use a Substance or Method from the WADA Prohibited List. I authorise the release of personal medical information to the Irish Sports Council (ISC), the ISC Therapeutic Use Exemption Committee, the World Anti-Doping Agency (WADA), the WADA Therapeutic Use Exemption Committee, the WADA Anti-Doping Administration and Management System (ADAMS) and also to other Anti-Doping Organisations under the provisions of the Code. I understand that this may require the transfer of my health information outside the European Economic Area. I understand that if I ever wish to revoke the right of any of the above listed organisations to obtain my health information on my behalf, I must notify my medical practitioner and the ISC in writing of that fact. I understand and agree that if a TUE is granted, such TUE and the related information will be stored electronically in ADAMS for a minimum period of 8 years, the period of 8 years being the period within which an action can be commenced following a violation of an anti-doping rule contained in the Code. I hereby release WADA as well as the ISC and TUE Committees from all claims, demands, liabilities, damages, costs and expenses that I may have arising in connection with the processing of my TUE related data through ADAMS.

Athlete's Signature:____ **Date:** ____/____/_________

Parent/Guardian's Signature: ______________________________________ **Date:** ____/____/_________

(If the athlete is a minor or has a disability preventing him/her from signing this form, a parent/guardian shall sign together with or on behalf of the athlete)

Please submit the completed form to the address below and keep a copy for your records.

TUE Secretariat, Irish Sports Council, Top Floor, Block A, West End Office Park, Blanchardstown, Dublin 15.

Tel: 01 8608818 Email: antidoping@irishsportscouncil.ie

Fax: 01 8608860 Web: www.irishsportscouncil.ie

INCOMPLETE APPLICATIONS WILL BE RETURNED AND WILL NEED TO BE RESUBMITTED!

APPENDIX 2

Asthma Guidelines for a TUE application

All TUE applications for asthma medications must be accompanied by a medical file meeting the minimum requirements as defined by WADA and must reflect current best medical practice.

1) A complete medical history

2) A comprehensive report of the clinical examination with specific focus on the respiratory system

3) A report of spirometry with the measure of the Forced Expiratory Volume in 1 second (FEV1)

4) If airway obstruction is present, the spirometry will be repeated after inhalation of a short acting beta -2 agonist to demonstrate the reversibility of bronchoconstriction

5) In the absence of reversible airway obstruction, a bronchial provocation test is required to establish the presence of airway hyperresponsiveness

6) Exact name, speciality, address (including telephone, e-mail, fax) of examining physician.

LIST OF CONTACTS FOR FURTHER INFORMATION

Irish Sports Council

Top Floor, Block A, West End Office Park,
Blanchardstown
Dublin 15

Tel: 01-8608800
Fax: 01-8608860
E-mail: 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

Webpage 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

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