



Doping in Sport

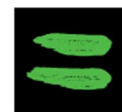
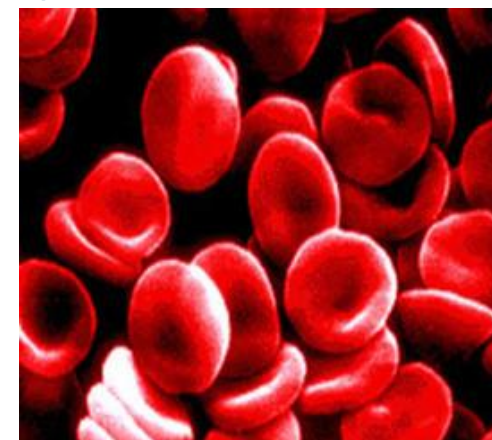
-Basic knowledge

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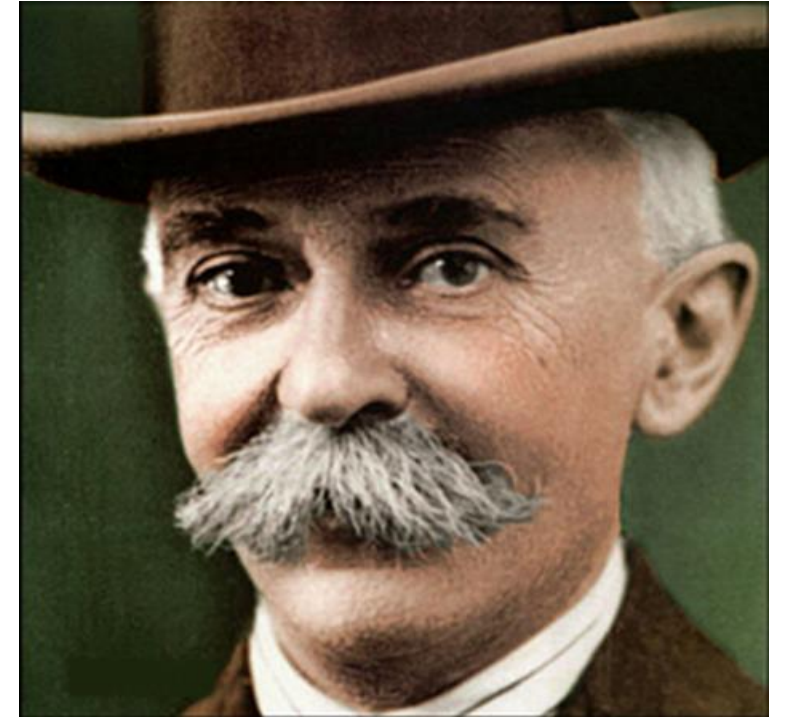
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WORLD
ANTI-DOPING
AGENCY
play true

PIERRE DE COUBERTAIN, founder of the modern Olympic Games, was one of the first to point out “the need to protect sport” from the dangers it is exposed to as an institution.

In 1923, in a speech in Rome, he condemned“ the intrusion of politics into sports, the growing corruption in championships, the excessive admiration for sports, which leads to the belief in false values, chauvinism, brutality, overtraining and doping".



HISTORICAL OVERVIEW

DOPING HAS BEEN FOLLOWING THE SPORT SINCE ITS EXISTENCE

ANCIENT GREECE-THE EARLY OLIMPIC GAMES AND USE OF MASHROOM EXTRACT FOR DOPING

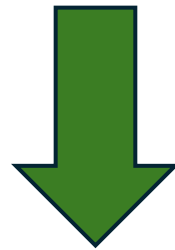
ANCIENT ROME AND THE DOPING OF GLADIATORS WITH VARIOUS ALCOHOLIC COCTAILS

THE TWO WORLD WARS-A PERIOD OF FLOURISHING OF NEW DOPING SUPSTANCES USED TO REDUCE SOLIDERS' FEAR AND INCREASE ANGRESSION





In 1999, the IOC organized the World Conference on Doping in Sport in response to the shocking discovery of a huge amount of drugs and performance-enhancing substances by French police at the 1998 Tour de France.

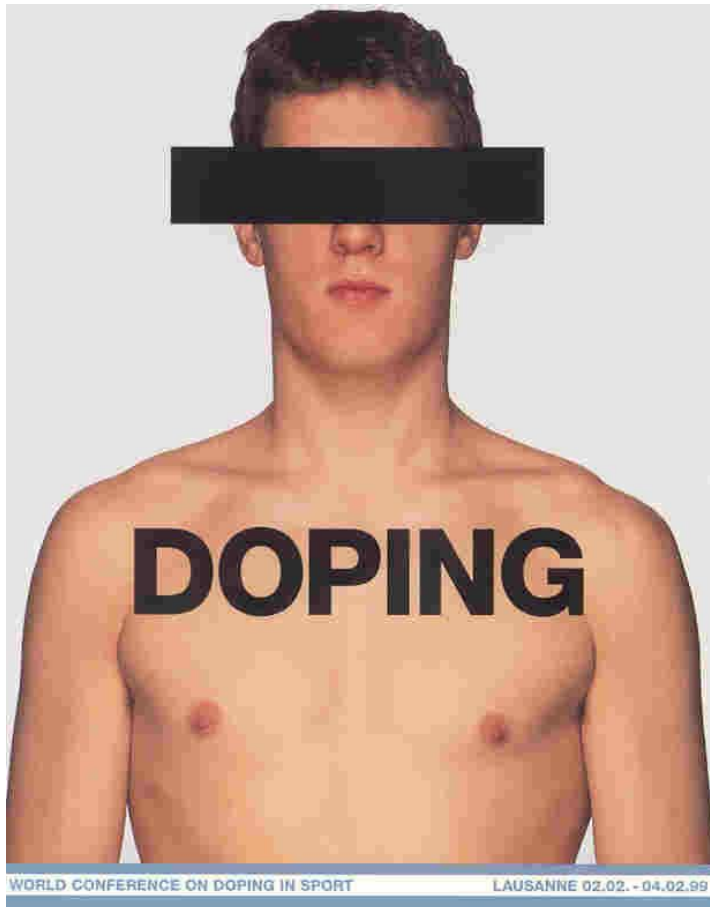


An independent global agency, the World Anti-Doping Agency (WADA), was founded.

INTERNATIONAL OLYMPIC COMMITTEE

-ANTIDOPING CODE-

SPIRIT OF SPORT- basic principles



- **Protection of athlete's health**
- **Defense of medical and sport ethic**
- **Equal chance of each participant in competition**

1999- WADA

- ☐ 2003-THE WORLD AD CODE ADOPTED
- ☐ 2004 –THE CODE COMES INTO FORCE
- ☐ 2004 –THE UNESCO DECLARATION ON THE FIGHT AGAINST DOPING SIGNED BY 180 COUNTRIES



**WORLD
ANTI-DOPING
AGENCY**

World Anti Doping Code- Prohibited list -

4.3.1 A substance or method shall be considered for inclusion on the Prohibited List if WADA determines that the substance or method meets *any two of the following three criteria*:

4.3.1.1 Medical or other scientific evidence, pharmacological effect or experience that the substance or method has *the potential to enhance or enhances sport performance*.

4.3.1.2 Medical or other scientific evidence, pharmacological effect, or experience that the Use of the substance or method represents *an actual or potential health risk to the Athlete*.

4.3.1.3 WADA's determination that the Use of the substance or method *violates the spirit of sport* described in the Introduction to the Code.

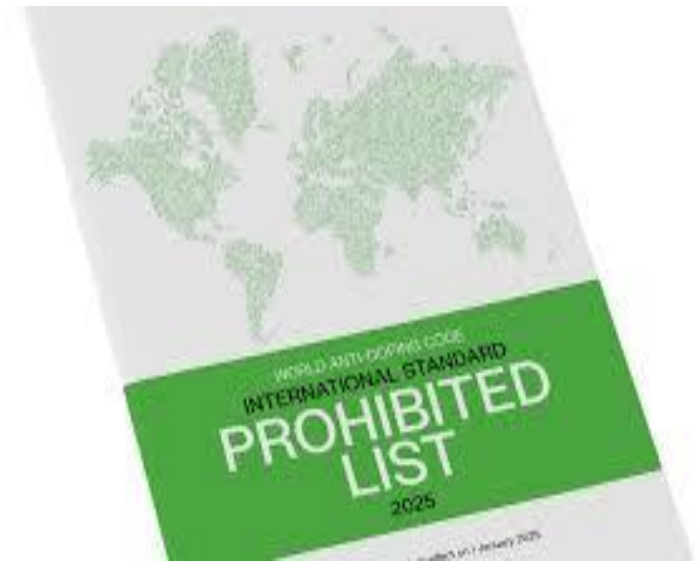
4.3.2 A substance or method shall also be included on the Prohibited List if WADA determines there is medical or other scientific evidence, pharmacological effect or experience that the substance or method has the *potential to mask* the Use of other Prohibited Substances and Prohibited Methods.

PROHIBITED LIST

UPDATED AT LEAST ANNUALLY

Includes substances and methods that are prohibited in sport and when:

- **Prohibited at all times** (Anabolic agents, Peptide hormones, growth factors, related substances, and mimetics, Beta-2 agonists, Hormone and metabolic modulators, Diuretics and masking agents, Prohibited Methods);
- **Prohibited only during In-Competition** (Stimulants, Narcotics, Cannabinoids, Glucocorticoids);
- **Prohibited only in particular sports** (Beta-blockers –in and out of competition)



Substances can be found in some medications, supplements and recreational drugs.

PROHIBITED LIST-MODIFICATIONS

Example: Glucocorticoids

As of the 2022 Prohibited List, GCs are prohibited in-competition when **administered by all injectable, oral, or rectal routes**.

Examples of injectable routes of administration include intravenous, intramuscular, periarticular, intraarticular, peritendinous, intratendinous, epidural, intrathecal, intrabursal, intralesional (e.g., intrakeloid), intradermal, and subcutaneous. It should be noted that all oral routes of administration of GCs remain prohibited including oromucosal, buccal, gingival, and sublingual routes.

* All other routes of administration including inhalation, intranasal spray, ophthalmological drops, perianal, dermal, dental intracanal application and topical applications are permitted at all times and do not require a TUE.

Figure 1: GC Washout Table

Route	Glucocorticoid	Washout period
Oral*	All glucocorticoids;	3 days
	Except: triamcinolone; triamcinolone acetonide	10 days
Intramuscular	Betamethasone; dexamethasone; methylprednisolone	5 days
	Prednisolone; prednisone	10 days
	Triamcinolone acetonide	60 days
Local injections (including periarticular, intra-articular, peritendinous and intratendinous)	All glucocorticoids;	3 days
	Except: prednisolone; prednisone; triamcinolone acetonide; triamcinolone hexacetonide	10 days
Rectal	All glucocorticoids	3 days
	Except: triamcinolone diacetate; triamcinolone acetonide	10 days

*Oral routes also include e.g. oromucosal, buccal, gingival and sublingual.

WADA CODE

DEFINITION OF DOPING

ARTICLE 1

“Doping is defined as the occurrence of one or more of the antidoping rule violations set forth in Article 2.1 through Article 2.11 of the Code”



11. Acts by an athlete or other person to **discourage or retaliate** against reporting to authorities.

10. **Prohibited association** by an athlete or other person.

9. **Complicity or attempted complicity** in an ADRV.

8. **Administration or attempted administration** of a prohibited substance or method.

7. **Trafficking or attempted trafficking** in any prohibited substance or method.

6. **Possession** of a prohibited substance or method.

1. **Presence** of a prohibited substance in athlete's sample

2. **Use or attempted use** of a prohibited substance or method.

3. **Evading, refusing or failing** to submit to sample collection.

4. **Whereabouts Failures** by an athlete in a Registered Testing Pool.

5. **Tampering or attempted tampering** with any part of doping control.

**11
ADRVs**

Anti-Doping Rule Violations (ADRV)	What does it mean	Who can do ADRV		Sanctions
		Athletes	Doctors, coaches and others	
1. Presence of a Prohibited Substance or its Metabolites or Markers in an Athlete’s Sample	Doping substance found in sample			up to 4 years
2. Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method	Attempt to dope (even if unsuccessful)			4-2 years
3. Evading, Refusing or Failing to Submit to Sample Collection by an Athlete	Avoiding being informed, Obstructing the DCO, Failing to appear for doping control as informed; or refusing to be tested			4-2 years
4. Whereabouts Failures by an Athlete	Violation of all accessibility information rules			1-2 years *possible sanctions for the club/association
5. Tampering or Attempted Tampering with any Part of Doping Control by an Athlete or Other Person	Behavior that disrupts the DC process but is not covered by prohibited methods (e.g. cheating, obstructing the official)			4-2 years

Anti-Doping Rule Violations (ADRV)	What does it mean	Who can do ADRV		Sanctions
		Athletes	Doctors, coaches and others	
6. Possession of a Prohibited Substance or a Prohibited Method by an Athlete or Athlete Support Person	Possession of prohibited substances. A doctor may possess a prohibited substance for the treatment of emergency situations.	☹️	☹️	4-2 years
7. Trafficking or Attempted Trafficking in any Prohibited Substance or Prohibited Method by an Athlete or Other Person	Dealing, selling, transporting (or possessing for such purpose) prohibited substances/methods.	☹️	☹️	4 years –for life
8. Administration or Attempted Administration by an Athlete or Other Person	Administering a prohibited substance or method to an athlete without a valid TUE authorization	☹️	☹️	4 years –for life
9. Complicity or Attempted Complicity by an Athlete or Other Person	Assisting, encouraging, aiding, abetting, conspiring, covering up or any other type of intentional complicity or Attempted complicity involving an anti-doping rule violation	☹️	☹️	2-4 years
10. Prohibited Association by an Athlete or Other Person	Association by an Athlete or other Person subject to the authority of an Anti-Doping Organization in a professional or sport-related capacity with any Athlete Support Person	☹️	☹️	2-1 years
11. Acts by an Athlete or Other Person to Discourage or Retaliate Against Reporting to Anti-Doping Organization		☹️	☹️	

THE DOPING PROBLEM-TRIPLE THREAT

➤ **ATHLETES' HEALTH**

➤ **SPORTS INTEGRITY**

➤ **PUBLIC HEALTH**



ATHLETES' HEALTH

1. An example is sprinter Kelli White, involved in the in famous BALCO scandal. Balco owner Victor Conte administered her a designer steroid known as "the clear" and a testosterone/epitestosterone cream "!

She confirms that within a few weeks of starting the therapy:

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2. Self-
Joe Pa

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- after running the race, he was slightly injured, but after a few hours the internal bleeding that occurred caused a large hematoma that paralyzed his left leg.
- doctors confirmed that since he had not used anticoagulants and running would not have been problematic at all.
- In the end he had to be hospitalized and operated on.
- the amount of blood that was bled was very large, a quarter of the blood volume. *Under normal circumstances it would have been just a small bruise.*

3. Long-term effects-external changes and systemic changes that are much more serious, such as heart attack, stroke, kidney and liver problems, and there are even fatal cases.

All prohibited substances are medications that are used in everyday practice to treat diseases. Given in strictly defined doses and times, they are medicines, but abuse with uncontrolled doses and durations disrupts health.

Cyclist

therapy as

SPORTS INTEGRITY

- The core value of sport is the “**spirit of sport**” characterized by ethics, honesty, perfection, respect for the rules, respect towards yourself and the others.
- When sport is without these values, it is no longer sport.
- A defining element of sport is that it is based on respect for the rules (technical, preventive, health, anti-doping)
- Essentially, the rules provide equal conditions for all participants in the competition.
- The moment participants seek an unfair advantage by going beyond the rules, the competition is ruined for everyone
- Doping is an even more slippery slope, for an athlete to equalize with others who cheat, he must cheat himself.
- We come to the beginning; **the athletes are responsible of their health disorders due to doping!**

PUBLIC HEALTH

DOPING AMONG THE REST OF THE POPULATION!

- The claws of doping extend beyond athletes who strive for top results.
- An example is recent reports in England and America about the increase in the use of anabolic steroids by young teenagers as young as 12 years old.
- The use of anabolics is taking on worrying dimensions, especially in fitness and bodybuilding clubs.
- The problem is considered more dangerous even than the use of heroin.
- THE INTERNET AND DOPING

THE ATHLETE MUST APPLY FOR A TUE IF HE NEEDS TO USE A SUBSTANCE OR METHOD ON THE PROHIBITED LIST



Athletes may have a condition, illness or injury that requires a particular substance or method. If this substance or method appears on the Prohibited List, they may be granted a

Therapeutic Use Exemption (TUE)

If strict conditions are met which gives them permission to use it within the context of sports regulations.

The TUE process avoids the risk of sanctions due to a positive test.

STRATEGIES

Prevent

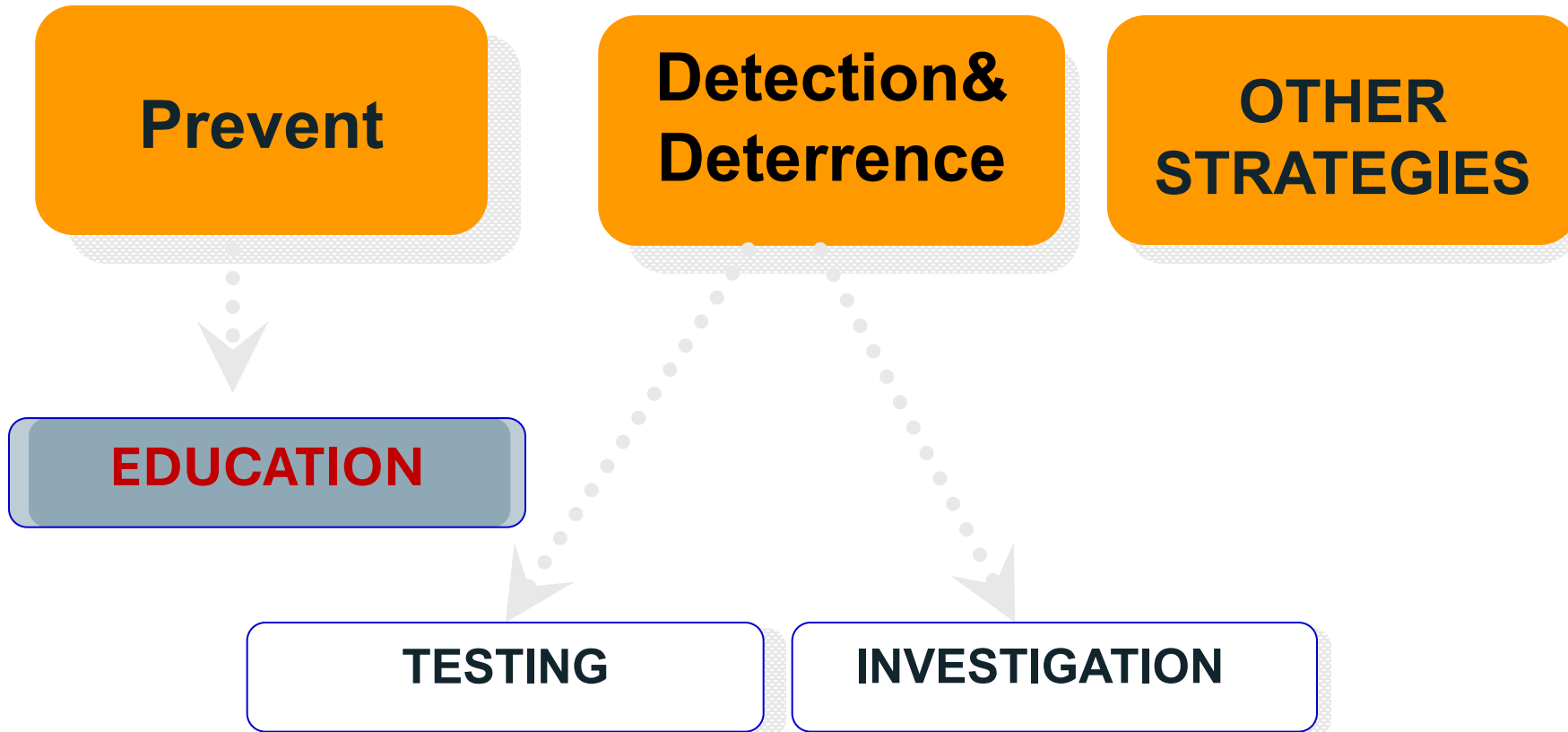
**Detection &
Deterrence**

**OTHER
STRATEGIES**

EDUCATION

TESTING

INVESTIGATION



RISKS OF TAKING SUPPLEMENTS

- **MISLABELING**-Absence or low levels of stated ingredients.
- **CONTAMINATION**-Inadvertent ingestion of substances that are prohibited under WADAs Prohibited List.
- **HEALTH RISKS** - Ingestion of toxic substances that are harmful to health



Remember, no supplement is 100% risk-free and may lead to an Anti-Doping Rule Violation!



**Analysis of Non-Hormonal Nutritional Supplements for
Anabolic-Androgenic Steroids
- An International Study -**

An investigation of the IOC accredited doping laboratory Cologne, Germany.

The investigation was funded by the IOC.

From October 2000 until November 2001 634 non-hormonal nutritional supplements were obtained in 13 countries from 215 different suppliers. The supplements were bought in shops in the respective countries (578 samples = 91.2 %), on the internet (52 samples = 8.2 %) and by telephone order (2 samples = 0.3 %). Two samples (0.3 %) were sent by the IOC. 289 supplements were from prohormone-selling companies and 345 supplements came from companies which do not offer prohormones. After isolation from the supplement matrix 11 different anabolic androgenic steroids, mainly prohormones of testosterone and nandrolone were analysed with gas chromatography / mass spectrometry.

Out of the 634 samples analysed 94 (14,8 %) contained prohormones not declared on the label ("positive supplements"). We could not obtain reliable data for 66 samples (10.4 %) because of matrix effects. Out of all positive supplements 23 samples (24.5 %) contained prohormones of nandrolone and testosterone, 64 samples (68.1 %) only contained prohormones of testosterone, 7 samples (7.5 %) only contained prohormones of nandrolone. None of the samples contained the prohormone of boldenone.

In relation to the total number of products purchased per country most of the positive supplements were bought in the Netherlands (25.8 %), in Austria (22.7 %) in the UK (18.8 %) and the USA (18.8 %).

country	no. of products	no. of positives	percentage of positives
Netherlands	31	8	25.8 %
Austria	22	5	22.7 %
UK	37	7	18.9 %
USA	240	45	18.8 %
Italy	35	5	14.3 %
Spain	29	4	13.8 %
Germany	129	15	11.6 %
Belgium	30	2	6.7 %
France	30	2	6.7 %
Norway	30	1	3.3 %
Switzerland	13	-	-
Sweden	6	-	-
Hungary	2	-	-
total	634	94	14.8 %

According to the label all positive supplements could be attributed to companies only located in five countries; the USA, the Netherlands, the UK, Italy and Germany.



21.1 % of the nutritional supplements from prohormone selling companies contained anabolic androgenic steroids, whereas 9.6 % of the supplements from companies not selling prohormones were positive.

The positive supplements showed anabolic androgenic steroid concentrations of 0.01 µg/g up to 190 µg/g.

Excretion studies with application of supplements containing nandrolone prohormones corresponding to a total uptake of more than 1 µg resulted in urinary concentrations of the nandrolone metabolite norandrosterone above the cut-off limit of the IOC for several hours (positive doping result).

634 ANALYZED SUPPLEMENTS

14,8% POSITIVE

IOC Cologne 2001

STRICT LIABILITY PRINCIPLE

The Athlete is solely responsible for everything they use and that is found in their body, regardless of whether there was an intention to cheat or not or if the athlete is at fault.



IT'S BETTER TO PREVENT SEVERE HEADACHES

**EDUCATION, EDUCATION,
EDUCATION....**



OBLIGATIONS OF ATHLETE SPORTS PERSONNEL, COACHES, DOCTORS, PHYSIOTHERAPISTS, MANAGERS AND OTHERS INVOLVED

- **You must know and comply with all anti-doping policies and rules that apply to you or the athletes you support!**
- **You must cooperate with the athlete testing program!**
- **You must have a significant impact on promoting clean sport!**
- **You must cooperate with anti-doping organizations in investigations of anti-doping rule violations!**
- **You must not possess any prohibited substance or method without a valid justification!**



IN SUMMARY...

- All members of the sports community are subject to the global anti-doping rules as outlined in the World Anti-Doping Code and the International Standards.
- There are 11 Anti-Doping Rule Violations (ADRVs). All 11 apply to athletes and 7 apply to athletes, athlete support personnel and other members of the sport community.
- These rules are in place to protect athletes' health and their right to clean, fair competition.
- Educate yourself and ask questions!

NORTH MACEDONIA IN THE FIGHT AGAINST DOPING



IN NORTH MACEDONIA
THE FIRST DOPING
CONTROL CARRIED
OUT BY THE ANTI-
DOPING BODY AT THE
FOOTBALL
FEDERATION OF
MACEDONIA

06.03.2005

THE NATIONAL ANTI-DOPING COMMISSION AT
2007-AGENCY OF YOUTH AND SPORTS

ESTABLISHING INDEPENDEND NADO IN PROCESS!!!

THANK YOU!