

Course 9

Doping and sports ethics

Learning objectives of the course

Upon completion of this course, the student will be able to:

- Define doping according to the World Anti-Doping Agency (WADA).
- List the main classes of prohibited substances and their medical risks.
- Explain the legal and sporting consequences of doping.
- Identify vulnerability factors (pressure, environment, misinformation).
- Implement prevention actions within their team.
- Know their own duty to report and to protect athletes.

Introduction

Doping is not only a matter of laboratories or corrupt doctors. It often involves the entourage: the coach, the physical trainer, the physiotherapist, even the federation.

The coach can be:

- **Witness** to suspicious behaviour (purchases of substances, sudden performance variation, refusal of tests).
- **Indirect pressure** (demanding results at all costs, trivialising “supplements”).
- **Prevention actor** (education, ethical climate, psychological support).
- **Legally responsible** (failure to report, complicity, even administration in some countries).

1. Definition of doping (WADA framework)

The World Anti-Doping Agency (WADA, created in 1999) provides the following definition:

Doping is considered to be the presence of a prohibited substance or the use of a prohibited method (or an attempt) in competition or out of competition, or a violation of one of the rules of the World Anti-Doping Code.

Possible violations (non-exhaustive):

- Presence of a prohibited substance in a sample.
- Use or attempted use of a prohibited substance/method.
- Refusal or failure to submit to testing without valid justification.
- Whereabouts failure (for athletes in registered testing pools).
- Possession of prohibited substances/methods.
- Trafficking or administration to a third party.

Principle of strict liability: the athlete is responsible for what is in their body, even in the case of unintentional contamination (uncontrolled dietary supplement). However, WADA may reduce sanctions in case of no significant fault or negligence.

2. Prohibited substances – classification (2024 WADA annual list)

The list is updated every year. It includes several classes.

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

Class	Examples	Typical doping use
Anabolic steroids	Testosterone, nandrolone, stanozolol	Increase mass/strength, recovery
Peptide hormones	EPO, growth hormone (GH), insulin, growth factors	Endurance, anabolism, healing
Beta-2 agonists	Salbutamol (above therapeutic doses)	Bronchodilator, mild anabolic effect
Hormone modulators	Tamoxifen, clomifene (anti-oestrogens)	Counteract steroid side effects
Diuretics	Furosemide, hydrochlorothiazide	Masking (dilution), rapid weight loss

2.2 Substances prohibited only in competition

Class	Examples	Effect
Stimulants	Amphetamines, cocaine, ephedrine, methylphenidate	Wakefulness, aggression, ↓ fatigue
Narcotics	Morphine, codeine, fentanyl	Powerful analgesic (masks pain)
Cannabinoids (some countries)	Cannabis, THC	Relaxation, but prohibited by WADA (threshold)
Glucocorticoids	Prednisone, cortisone (by injectable routes)	Powerful anti-inflammatory

2.3 Prohibited methods

- Manipulation of blood or blood components (autotransfusion, blood doping).
- Genetic manipulation (gene editing to increase EPO, etc.).
- Intravenous infusions > 100 mL/6h (except in hospital setting).

2.4 Substances prohibited in particular sports

Beta-blockers (archery, golf, billiards, alpine skiing – reduce tremor).

3. Medical risks of doping

Many of these substances have serious, sometimes fatal, side effects.

Substance	Medical risks
Anabolic steroids	Liver toxicity (tumours), cardiomyopathy, hypertension, infertility, gynaecomastia (male), virilisation (female), psychosis, aggression, dependence
EPO	Increased blood viscosity → thrombosis, stroke, myocardial infarction
Growth hormone	Acromegaly, cardiomyopathy, diabetes, carpal tunnel syndrome
Diuretics	Severe dehydration, kidney failure, electrolyte disturbances (hypokalaemia → arrhythmias)
Stimulants	Hypertension, tachyarrhythmias, hyperthermia, stroke, myocardial infarction
Insulin (non-diabetic)	Severe hypoglycaemia, coma, death

Tragic example: several cyclists have died from heart attacks linked to EPO (notably in the late 1990s-2000s).

4. Legal and disciplinary consequences

4.1 Sporting sanctions (according to the WADA Code)

Infraction	Typical sanction (first offence)
Non-specified substance (steroids, EPO)	4 years' suspension (can be 2 years if non-intentional proven)
Specified substance (e.g., in-competition stimulant)	2 years (may be reduced)
Refusal of testing, whereabouts failure	2-4 years
Sanctions applicable to staff (coach, doctor)	Suspension from activity, coaching ban

4.2 Criminal consequences: vary by country.

Note: advising or facilitating doping is also punishable.

4.3 Professional and financial consequences

- Loss of contract (sponsors, salary).
- Ban from participating in Olympic Games, world championships.
- Striking off by the federation.
- Civil damages.

5. Doping prevention – the coach’s role

Prevention is the best antidote. The coach is a **public health actor**.

5.1 Risk factors for doping (to know in order to prevent better)

Individual factors	Environmental factors
Performance pressure	Excessively competitive climate
Low morals, anxiety	Tolerant entourage (coaches, doctors)
Erroneous beliefs (“everyone dopes”)	Availability of substances
Lack of anti-doping education	Lack of effective testing

5.2 Concrete actions for the coach

Action	Example
Educate	Organise information sessions on the WADA list, risks, sanctions.
Develop an ethical climate	Value clean performance, long-term health. Do not humiliate athletes after failure.
Monitor purchases	Ask athletes to declare all supplements taken.
Avoid trivialisation	Never say “everyone does it”, “it’s just help”.
Report	If an athlete confides they are doping, you have a duty (moral, sometimes legal) to report to a doctor or anti-doping officer.
Train athletes in whereabouts	For athletes in national/international testing pools, help them file their availability.

5.3 Prevention through values (“Play True” programme)

WADA and national agencies (e.g., AFLD in France) offer educational programmes (website, e-learning modules, role-playing games).

Encourage: pride in a clean victory, respect for the opponent, long-term vision.

6. Legal responsibility of the coach

6.1 Personal liability

If the coach **administers** or **prescribes** a prohibited substance (e.g., anabolic steroids without the athlete's knowledge), they can be criminally prosecuted.

If the coach **turns a blind eye** to obvious doping, they may be prosecuted for failure to assist a person in danger (if the athlete develops a serious condition) or for complicity in doping (under certain laws).

6.2 Good practices to protect oneself

- Write down which supplements are permitted (provide the WADA list).
- Keep a register of nutritional advice given.
- Have athletes sign an anti-doping ethical charter.
- Consult the sports physician before any prescribed supplementation.

7. Special case: contaminated dietary supplements

Many “legally” sold supplements contain undeclared substances (hidden steroids, masked stimulants). Studies show that 10-20% of analysed supplements contain prohibited substances.

Recommendation to athletes:

- Buy only certified products (Informed-Sport logo, batch tested).
- Beware of unreliable websites.
- Do not take “miracle” supplements without medical advice.

Key points to remember

- ✓ **Doping** = use of a prohibited substance or method listed by WADA, leading to sporting and criminal sanctions.
- ✓ **Main categories**: anabolic steroids, EPO, hormones, stimulants, diuretics, blood manipulation.
- ✓ **Medical risks**: serious (heart attack, stroke, cancer, psychosis, infertility, death).
- ✓ **Sanctions**: suspension (2-4 years), fines, prison (in France up to 5 years).
- ✓ **Coach's role**: educate, monitor, create a climate of trust and ethics, never trivialise, report if necessary.
- ✓ **Dietary supplements**: risk of contamination → prefer certified products, avoid unsecured internet purchases.
- ✓ **Prevention**: “Play True” programme, ethical charter, medical consultation for any supplementation.

Appendix: Useful resources

World Anti-Doping Agency (WADA): www.wada-ama.org (annual list, “Play True” e-learning)

Informed-Sport: www.informed-sport.com (batch verification of supplements)