















### INTRODUCTION TO THE METHODOLOGY

This methodological guide to reflection and analysis on the topic of doping in schools is a reference map for choosing the in-depth courses to possibly develop with girls and boys in classes. The theme of doping, though often well-analysed from a content / information point of view, being a complex and dynamic phenomenon, needs guidance tools that allow teachers to put it into a strictly education / teaching information transfer context. For this reason, the methodology used is to trace lines of reflection that can then be deepened in every cultural system and specific national references.

In summary, the problem of doping is often not only (or is not at all) a problem of children's lack of information but, on the contrary, it is a world where girls and boys end up in due to lack self-reflection, choices and acceptance of themselves and the rules of the game. In fact, the issue of doping is part of the phenomenon of consuming substances that somehow alter the psychophysical function (many anti-doping campaign promotions refer to addiction and compare the phenomenon to the consumption of other types of drugs) and the choice to take these substances is based on stimuli related to competition (excessive competitiveness, commodification of results, victory before performance) and personal needs (desire to be accepted by a group, lack of acceptance or lack of knowledge of their own limits).

The most common approaches used to define the phenomenon are either prescriptive and based on prohibition and sanction, and/or medical-sanitary, so either doping is an alteration of a legally prohibited result, so "you cannot take it and if you do, you will be punished "or "doping can be harmful to your body's health, so do not take these substances." This methodological map, instead, seeks to encourage girls and boys to take into account the pathological dynamics of doping by openly addressing the themes associated with this type of choice.

One of the main themes, therefore, is to urge them to "think", push them towards self-reflective activity and peer interaction, so they come (almost) by themselves to focus clearly and deeply on the terms of the problem not only and not exclusively in informative terms.

The path to follow is to start from everyday life and from the various groups in which the children are involved, which means creating working, discussions and research groups, especially involving adult carers at different levels: parents, coaches, teachers, and entertainers.

This work of the individual child in the various communities makes it possible to better understand that the value system behind a phenomenon such as doping, especially in

the amateur world, suffers greatly from the amplification by the dominant culture of the aesthetics of the body as a value aspect in itself, to please oneself or others, or as an instrument to feel accepted. In fact, doping often coincides with the desire to possess an "ideal" physique or what others think is a "perfect" body.

For these reasons, the proposed course is based on strengthening and accumulation of basic skills and social skills, the so-called Life Skills defined in the early nineties by the World Health Organization (WHO/MNH/PSF/93/ A Rev. 1) by identifying a core skill that should be the mainstay of any preventive program of risk behaviours.

Below we list the definition of basic skills in relation to doping:

- Decision-making: This competence is functional in addressing decisions constructively in different situations and contexts of life. The ability to work actively in decisionmaking can have positive health implications by evaluating the different options and the consequences of some behaviours.
- 2. Problem solving: This competence allows addressing constructively the various problems that can cause mental stress and physical tension,
- 3. Creativity: This ability allows exploring the possible alternatives and consequences of the various choices in search of possible "escape routes" from critical situations.
- 4. Critical sense: This ability, as in the previous ones, also enriches the cognitive dimension of the person, as it allows analysing information and experience in an objective manner, evaluating its advantages and disadvantages by fortifying the individual being less affected by the context when making decisions.
- Effective Communication: It consists of knowing how to express oneself, verbally and non-verbally, to justify behaviour with peers and adults, helping to create a value system based on dialogue in one's group.
- Interpersonal Relational Skills: These involve the ability to interact and relate to others in a positive way, countering in a non-aggressive but resolute manner the behaviour that is considered dangerous or wrong.
- 7. Self-awareness: This introspective ability allows good self-knowledge of one's character, strengths and weaknesses, desires and needs. Increasing self-awareness means pushing youths to search for their limits and to accept them
- 8. Empathy: It is the particular interpersonal ability that allows others to "walk in someone else's shoes". Regarding doping addiction, it is a crucial skill to avoid emulation and to be of help to the group
- 9. Emotion management: It is the ability to give a name to what you are experiencing and thus to recognize emotions in yourself and in others. It means being aware of how emotions manage your daily behaviour, helping to accept a defeat or physical performance that is not up to expectations

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10. Stress management: This consists of recognizing the causes of tension and stress in everyday life and knowing how to make sure that some behaviours do not give rise to health problems in the immediate or medium to long term.

All these skills need to be considered and strengthened when we want to undertake a path of education on the issues of doping. For this purpose, the methodological proposal is based on the analysis of a few foundational themes of the "doping" issue by providing key words and related topics, giving teachers and educators in general a reference map to be crossed with their own specific programs.

The analysis of doping in schools and in educational contexts, of course, cannot be considered a stand-alone moment, but a crosscutting theme that goes through the daily life of teaching and learning.

### THE OVERALL SCENARIO

Doping is definitely a very old practice. The use by athletes of strange potions or special foods to feel a greater incentive to compete and win, have always been discouraged, and sometimes banned, to prevent the result of the sporting competition from being altered, relying only on the sporting value of the athletes. There is evidence, for example, that Greek wrestlers used a substance extracted from a mushroom to improve performance. Other testimonies indicate that, during the great classical sports competitions, very strict fair-play rules were introduced. During the competition period, for example, a rule prohibited participants from eating certain types of meat, although some witnesses of the time state that very often some athletes were discovered secretly eating large steaks with the intent of altering their own strength or resistance. Although modern nutrition shows that those athletes did not gain any advantage from their actions, from a sports ethics perspective, they behaved like those who are doping today.

Even the word "doping" seems to be rooted in history a few centuries ago. According to some research, "doping" derives from "doop": substances used in the sixteenth century by Dutch sailors who were given potions to endure bad weather, so that they could deal more bravely with storms. Others, however, would derive the etymology of the word from the dop, the alcoholic substance employed by Zulu warriors to get excited before battle. From "doop" or "dop", however, came the twentieth century English verb "to dope" and the noun used daily, "doping".

Despite Doping is, thus, more than 2500 years old, the theme has become very present in daily communication since the night of the 100m 1988 Olympic Finals, with the news that Ben Johnson had been found with nandrolone in his body. Since then, doping has invaded the mass media and what was known to be a widespread practice, even though it was banned, became a topic of daily discussion, revealing a problem that was not only affecting sports competitions but also unfortunately penetrating well into the dynamics of amateur sports practice. That is why, due to the events in the Olympic Games, the following year, the European Convention against Doping was drafted.

Today, the possibilities of pharmacological technology unfortunately make these substances even more efficient, making the discovery in the blood of athletes a real race. On one lane, the drugs and substances that are increasingly difficult to find, and on the other, more and more accurate and strict tests. The list of doping substances is released annually by the World Anti-Doping Agency (WADA) created by the IOC (International Olympic Committee) in 1999. Here we summarize a breakdown of substances:

#### 1. Forbidden substances:

- A. Anabolic steroids are steroid hormones such as testosterone and a number of other substances with an action similar to that of the male sexual hormone. They favour anabolic metabolism.
- B. Erythropoietin (EPO) is a hormone of the body that stimulates the production of red blood cells (erythrocytes). The final effect is to induce increased stress resistance and faster recovery.
- C. Human Growth Hormone (hGH) is an endogenous (produced by the same body) peptide hormone. HGH stimulates cell division and growth and acts as an anabolic steroid (muscle development).
- D. Beta2-adrenergic agonist dilate the bronchi in the lungs. In the case of high dosage, they have an anabolic effect (muscle development).
- E. The substances in the class "Hormonal and metabolic modulators" affect hormonal actions or accelerate or slow down certain enzymatic reactions.
- F. Insulin is an endogenous peptide hormone (produced by the body) and is among the forbidden doping substances. It lowers the glycaemic rate (glycaemia) and also affects the metabolism of fats (lipids) and amino acids.
- G. Active masking agents are used primarily to mask other forbidden substances or to falsify anti-doping results.

#### 2. Substances prohibited during competition

- A. Stimulants cause an increase in physical and mental activity. They counteract the sense of fatigue and thus improve the performance. Stimulants also include illegal drugs such as cocaine and ecstasy.
- B. Narcotics forbidden in sports are strong pain relievers (analgesics) of the opioid group. They are used to counteract severe pain.
- C. Cannabinoids are natural substances obtained from cannabis, as well as synthetic analogues. The most active substance is tetrahydrocannabinol (THC).
- D. Glucocorticoids (or even glucocorticosteroids) are endogenous or synthetically produced steroid hormones, which affect the metabolism and also possess an analgesic and anti-inflammatory effect.

#### 3. Substances prohibited in certain sports

- A.Ethanol, also known as alcohol, is a colourless, easily flammable liquid, widespread in society as a stimulant and inebriating substance (banned, among other sports, in motor racing and motorcycling).
- B. Beta-blockers inhibit the effect of endogenous (adrenaline and noradrenaline) stress hormones. They therefore have a calming effect on the heart and blood circulation, countering nervousness and muscle tremors. (forbidden in darts).

Obviously some of the doping substances are components of healing drugs that the athlete can take like any other individual due to pathological conditions and under medical prescription. In these cases the procedures are very precise and are based on advance declarations to the competent authorities. National regulations detail the terms and timing of such declarations in the framework of international conventions.

However, as we duly highlighted in the introductory paragraph, the problem of doping cannot be addressed only through regulations. Its proportions should trigger a reflection not only on the ease with which some substances can be produced and found, but on above all how the athlete's mentality can get lost in the drift of "alteration." The discourse on preserving the values of sports pursued by the extreme condemnation of doping seems, at times, only a mask to hide the real problems inherent in contemporary sports, above all of the marketing and commodification of the athlete (at any level).

The economic component of sports is now over-emphasized with respect to, for example, its educational value, and even non-professional athletes pursue the achievement of the result at all costs.

The first methodological reflection therefore suggests that the prohibition of doping in sports rejects its cheat on human nature and on a certain and specific idea of justice. The prohibition and ban of doping are always affirmed not so much in the name of ethics or law, but in the name of the educational nature of sports. After all, by prohibiting doping, the goal is to maintain and preserve the integrity not only of the athlete's body, but above all, his or her good will, relationship with others and the beauty of sports practice.

**Keywords:** history, medication, prohibition, commodification of sports, excessive competition, beauty

**Main Topics:** doping as a dynamic phenomenon, doping as an altering mentality, doping and pharmacology,

**Methodological guidelines:** We recommend using the list of doping substances to analyse their effects on metabolism; to bring out cases of doping in amateur sports practice appearing on news by asking the children to work in groups to discuss the reasons for taking these substances; working on the topic of sport aesthetics, what beauty means, why does doping alter it by altering the athlete's will before changing the body

#### DOPING AND INTERNATIONAL LEGISLATION

In every state, the legislation on doping has had its own history and affects both the strictly sporting field (sporting justice) and civil as well as often criminal law. At the European Community level, in 1967, the first documents of the Council of European Ministers were produced with a resolution suggesting for Member States to produce specific legislation on this subject. Among other actions, a recommendation was issued in 1979 calling on the Member States to set up analysis and control laboratories, increase educational campaigns on doping, and establish national anti-doping committees. The principle followed, under the treaties for the establishment of the Community, was to protect health.

However, the rules on the fight against and prohibition of doping substances at the end of the eighties found strong homogenization at the level of international law with an act of the Council of Europe: the European Convention against doping in sports approved in Strasbourg on November 16, 1989. This Convention identified the following mandatory rules for all States ratifying it and in particular:

- 1. Creation of lists of doping substances
- 2. Description of at-risk individuals
- 3. Coordination among the relevant authorities
- 4. Enhancement of information and educational plans on damage resulting from the use of doping substances
- 5. Enhancement of research laboratories
- 6. Strengthening collaboration among States
- 7. Establishment of surveillance groups.

An Additional Protocol was added to the Convention in 2004 for the mutual recognition of anti-doping controls in the various States.

The importance of this Convention is also because it is open, and therefore, any state can ratify it, not only the members of the Council of Europe.

Article 2 on the definitions and scope of the Convention was particularly important.

#### In fact, it states:

"For the purposes of this Convention:

- 1. a) "doping in sport" means the administration to sportsmen or sportswomen, or the use by them, of pharmacological classes of doping agents or doping methods;
- 2. b) "pharmacological classes of doping agents or doping methods" means, subject to paragraph 2 below, those classes of doping agents or doping methods banned by the relevant international sports organisations and appearing in lists that have been

- approved by the monitoring group under the terms of Article 11.1.b;
- c) "sportsmen and sportswomen" means those persons who participate regularly in organised sports activities."

Then, these definitions were better specified in national legislation with the aim to be best harmonised, in most cases, to the definition of doping as the administration of biologically and pharmacologically active drugs or substances and the adoption of medical practices, not based on health needs, to modify or that could modify the results of anti-doping controls. This definition is very important because it points out that doping practice cannot only be defined as taking a substance and a drug that allows to altering competitive performance, but also taking substances or practicing a method that serves to evade control, thus referring to the so-called masking agents.

The next step, fundamental to the International Regulation, was made by UNESCO with the International Convention against doping in sports approved in Paris on October 19, 2005. The main achievement of this document is to officially recognize WADA's function as a coordinating body of national antidoping agencies and to create the list of doping substances, absorbing the code produced by WADA itself and actually setting the path toward a strong homogenization of anti-doping actions.

**Keywords:** WADA, European Council, European Convention, national legislation **Main Topics:** International organizations; Convention of 1989, Convention of the Council of Europe, understanding through health, international cooperation, national laws transposing international law

**Methodological guidelines:** Invite the youths to define doping practices, analyse the definition of international regulation, discuss in groups how international standards have penetrated their state legislation, and research and analyse cases of athletes disqualified for doping; what legal consequences did they have?

## NUTRITION AND DOPING: THE ROLE OF SUPPLEMENTS

Everyone's state of health depends on their ability to implement a positive interaction between their organic functions and the surrounding environment to maintain a sufficient balance. Of course, physical exercise works positively on the processes of maintaining this balance and it is an indispensable instrument for prevention of both short and long-term diseases.

What an athlete eats and drinks influences his or her health, obviously influencing not only weight and body composition, but above all the energy input during exercise, recovery rate after exercise, and hence the entire athletic performance. To start defining a balanced diet, one must begin from the fact that the food that you consume must first ensure a sufficient supply of energy to cover your energy and nutritional needs. With this in mind, one should:

- 1. constantly cover the daily energy requirement, avoiding extreme weight variations;
- spread food over main meals (breakfast, lunch and dinner) and snacks (mid-morning and afternoon);
- eat mainly carbohydrates (about 60% of total calories);
- 4. eat enough proteins, corresponding to about 10-15% of total calories;
- 5. eat enough fats (must account for 25-30% of total calories);
- 6. take fibres constantly and daily;
- 7. keep the cholesterol intake not over 100 mg per 1000 Kcal consumed;
- 8. take enough vitamins.

Starting from these fundamental elements, an athlete's diet may vary depending on activity but remains the main tool to allow healthy and efficient athletic performance as the first step for any sporting activity.

However, modern pharmacological research has invaded the market with synthesized substances that may overcome deficiencies in nutrition balance. The most well known are:

- 1. Creatine
- 2. Ribose
- Branched-chain amino acids
- 4. Hydroxy-beta-methyl butyrate
- 5. Beta-alanine
- 6. Carnitine

In many cases, overdose or intake in the absence of real medical need may cause an overload of liver function, interfere with the normal absorption of other essential components taken through proper nutrition (for example, other amino acids) and lead to other problems such as gastrointestinal diseases.

These substances are not doping in themselves, but their abuse, these days, has led to a general assumption that they are needed to improve performance. Laboratory analyses, however, do not seem to confirm this statement, since not all supplements have been effective in improving sports performance. Many substances such as branched amino acids, hydroxymethylbutyrate, and beta alanine, have not been shown to be effective in improving athletes' performance in endurance or explosive sports or even being able to benefit from fatigue recovery. The same goes for other substances such as creatine: their positive action is not confirmed, especially in team sports. In this particular case, we stress that there is no guarantee that a substance that provides benefits for a single exercise (one sprint or one jump), will have the same effect over a longer period such as during a match.

Abuse of supplements, often in amateur and youth sports practice, creates an altering mentality, in which, to achieve a better result, one cannot avoid taking substances added to the normal daily diet. This approach to sports can be dangerous and induce young athletes to develop a mind-set, which then makes them want to use doping substances.

**Keywords:** balanced diet, nutrition, alteration, energy and nutrition, sports training **Main Topics:** What is doping and what are food supplements, balanced diet and supplemental nutrition, supplemental nutrition as an alteration of the concept of sports preparation.

**Methodological indications:** Have youths build their ideal diet, discuss in groups the advertising of food supplements, build questionnaires for the detection of any type of dietary supplements in the reference groups (family, community, sports group)

# SELF-ESTEEM AND ABILITY TO CHOOSE: DOPING AS AN EASY RETREAT AND SPORTS AS A PATH TO THE SEARCH FOR THE LIMITS

Self-esteem is the result of a value judgment resulting from an assessment of what a person considers being (Perceived Self) and what he/she wants to be (Ideal Self). The misalignment of these two poles due to several external (constant negative judgments, pathological models to emulate) and internal factors (pathological or not) can become a major risk factor for the consumption of life-style altering substances. Accepting yourself and your limits is in fact the basis of a healthy sports practice. Sports becomes a gym to get to know your own physique, push it towards improving to a natural (and different for each individual) barrier that defines performance.

In this case the strengthening of some social skills (life skills) can create a path where the individual boy or girl takes control of his/her own dimension and then compares it (not without conflict) with that perceived by others.

To this end, educational action must tend to increase creative ability, problem solving, critical thinking, effective communication and empathy. This makes it easier for the individual to "trace" its own path by choosing the options and understanding the choices he or she can make (critical thinking), searching for a personal way in the choices made (creativity), finding alternative solutions to propose to others (problem solving and innovative capacity) and finally sharing choices with others in a dimension of understanding and not merely utilitarian calculation (empathy).

This entails adopting certain educational, and therefore methodological, styles that is not based solely on the NO (no doping, no cheating on results), but instead, that accompanies the boy or girl through the knowledge of the rules (prescriptive model) and health risks (health model) to create a way of discovering why doping is to be avoided, not only because it is banned by law and not just because it is unsafe, but above all because it is contrary to the motivation that drives every single person to perform sports alone or in a community (participatory model).

**Keywords:** self-perception, narrative, construction of meanings, sports and personal limits

**Main Topics:** Awareness building processes of one's limits, relationship with others, exclusion/inclusion in social groups, sports as an experiment with oneself

**Methodological guidelines:** Using a methodology strongly characterized by cooperation, telling stories to describe oneself and others, discussing in groups the limits perceived by ourselves and by the others, and proposing sports stories in which the teamwork or joint action of more athletes was successful or particularly significant

# FAMILY AND SPORTS - A NECESSARY COMBINATION TO DEFEAT DOPING

A disturbing and fertile soil for the spread of doping substances, especially in the amateur field, is living immersed in a culture that strongly emphasizes appearance as a founding element and where the manipulation of one's own body (through surgery or drugs) seems to become simpler, more immediate and free of contraindications.

The border between possible and permissible alterations and those prohibited and prosecuted by law becomes blurrier, finally becoming one of the true reasons for the spread of doping in amateur sports practice. The end result of "perfection" (all to be verified and often exaggerated and extreme), the rapid and immediate recovery of fatigue, even where there is no obvious or economic advantage, is pursued in an uncritical and misleading manner. Altering performance becomes a simple option and often unknowingly without adverse effect.

These dynamics outline the phenomenon of doping as a particular form of drug addiction, too well concealed and daily because it is not recognized as such, the use of substances to increase athletic performance, or to alter internal states, responds to a logic of transforming reality, making it appear different to oneself and one's group.

In this dimension, the groups in which youths are involved are the first antidote (or, in the contrary, the field of proliferation of pathological behaviours) to doping and the family is definitely a primary place (together with the school) where worrying signals may be read, recognizing the dynamics of distortion of reality and fortifying the social skills that allow young people to choose sports as a beautiful, healthy and just practice.

Working with families and boys and girls in families is also the best tool for a healthy relationship with the sports context and its actors (coaches, managers), selecting the proposed behaviours and creating youth's ability of discernment.

Keywords: Dialogue, school/family, drug addiction, coaches, managers

**Main Topics:** The body as experiment, to appear or to be; addiction to performance, decision-making and sharing of priorities, family as the first space to recognize the problem, family as a positive/negative regulatory system, family and the coach or sports manager

**Methodological guidelines:** Analysis of sports stories where doping athletes had a family history of doping, group discussion on the concept of addiction.

# COMPETITION, SPORTS AND VICTORY: THE LIMITS OF THIS TRIAD

In 1988, the case of Ben Johnson's positivity for doping in the Olympic Games brought media attention to doping; the problem was not unknown in the media, but it certainly did not seem so close, widespread and common as it appeared that summer night in the late eighties.

This increased attention to the topic in media was also accompanied by an analysis of how other elements in sport have worsened and how this system became fertile soil for the proliferation of pathological behaviours.

It is unquestionable that a strong commercialization of sports has led to changes in the concept of result, especially among young people and their families. In the context of a global economic crisis, it is clear that winning for an economic return has become a sought-after myth (often at any cost, not only with doping but also with excessive workouts, dropping out of school...) for many. To this, we must add the drift toward medicalization of many areas of daily life, including sports, by using medicine and pharmacology despite the lack of need and even when clearly counterproductive to the physical limits of any person. Additionally, especially in youth sports, there is an early specialization with an emotional investment by families that exacerbates an emphasis on achievement at increasingly younger ages, creating a system in which sporting practice transforms healthy competitiveness (the beauty of victory is part of the beauty of doing sports) into fury.

Educating an athlete without doping means deconstructing these drifts and bringing competition and victory to the world of sporting opportunities and not making them the only reason for practicing a sport. Consequently, the doping phenomenon must be contextualized in a wider context of altering sports performance, which is also seen in technological or administrative doping, or in the world of betting, as fast growing and deeply concerning problems.

**Keywords:** hyper-competitiveness, commercialization of sports, medicalization of sports. **Main Topics:** Early professionalization, early specialization: achieving a result or winning at any cost? Who is my opponent? The aesthetic dimension of victory, misplaced competitiveness, early sports specialization, doping and other forms of alteration of the result

**Methodological indications:** group discussion on some athletes' interviews analysing performance rather than result, analysis of news reports on economic advantages and sports, group discussions on non-sports newspapers' research on doping, analysis of comments and social media interactions on news about doping cases; what other forms of alteration of sports results exist? (betting, technological doping, ...).



