

<p>According to the World Anti-Doping Code, the player is responsible for what will be detected in his sample, thus ignorance and lack of knowledge do not affect this liability.</p>	<p>The World Anti-Doping Code is a basic and universal document on which the World Anti-Doping Program in Sports is based. The purpose of the Code is to promote anti-doping activities through the universal connection of basic anti-doping elements. It is sufficiently precise to achieve full connection on issues where unity of positions is required, and at the same time general enough in other areas, which allows flexible implementation of anti-doping rules. The Code is a set of rules defining the rights and obligations of the player, penalties for the violation of anti-doping rules, and proceedings before disciplinary authorities.</p>
<p>Refusal to collect a physiological sample, failure to report for a collection without valid justification, or otherwise avoiding the collection of a physiological sample is considered to be DOPING.</p>	<p>Doping are psychotonic substances that stimulate brain cells. Their main task is to eliminate the feeling of tiredness or to delay it. These forbidden medicaments are also expected to increase the overall endurance of the body to exercise. They also reduce the pain threshold.</p>
<p>The use of doping is dangerous to health. There is a chance that we will become more temperamental because of increasing aggression. We will be much more psychically stimulated. It is also possible that we will experience insomnia or epilepsy. Manic and delusional syndromes are also possible. Doctors mention psychosis too. Doping also affects the internal organs – myocardial hypertrophy and liver damage may occur.</p>	<p>Side effects after taking steroids among young people can be slight (acne, hair loss), or more serious (myocardial hypertrophy, mental health problems), with other potentially life-threatening side effects (liver dysfunction, changes in the level of good and bad cholesterol).</p>

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<p>Hormones are responsible for regulating the body functions. These are chemical signaling molecules produced by endocrine glands and / or endocrine cells located in various organs (kidneys, heart, etc.). Hormones are released directly into the bloodstream and transported to the target cells with blood, where after they connect with the protein receptors cause specific effects. The main endocrine glands in the body include: pituitary, thyroid, parathyroid, adrenals, pancreas, as well as ovaries and testes. Improper use and abuse of hormones by healthy people can lead to hormonal imbalance in the body and result in a series of dangerous health symptoms.</p>	<p>There are many theories about the origin of the term "doping". The Kaffir tribe in Africa called "dope" the alcoholic drink used during religious ceremonies, as a stimulant. According to other sources, the Zulu Warriors' tribe used "dope" – an alcoholic drink made from grapes and cola, while Dutch colonists of the Boers used the term "dope" to determine any stimulant drink and thus the term was soon known all over the world. In the end, it was also accepted into sports dictionary, to determine a number of substances used by players, and the use of these substances was called "doping". The word "doping" appeared in one of the English dictionaries in 1889 for the first time.</p>
<p>In ancient times, during the Greek Olympics, specialists prescribed various nutrients to athletes in order to improve their physical form. This was considered necessary, and those recommending such methods can be compared to today's sports medicine physicians. In addition, there are notes that athletes just before the competition consumed various types of meat or blood, wanting to improve their strength. From ancient times and the Middle Ages, there are also notes about the use of herbs, mushrooms and testicles of the bull for the purpose of form improving during competition.</p>	<p>With the pharmacy development, complex endogenous substances that support strength and endurance have become available on the market – among them, erythropoietin (EPO), which stimulates the formation of red blood cells. This hormone became "popular" in sports where endurance is required.</p>
<p>While the occurrence of doping in sport has been clearly defined by the description of prohibited substances and methods, the use of doping in recreational sports is largely neglected. In our society, the abuse of stimulants can be seen in many people, not only among those who participate in the competition. Due to the effects that can be obtained by using different substances, they are used not only in competitive sport. Many so-called "amateur athletes" use stimulants, mainly to improve their physical appearance. The results of research confirm the frequent use of those products among people exercising in fitness clubs. What is more, psychoactive substances are not just a problem in sport. The abuse of psychoactive substances among students, teenagers, etc. makes this a new health problem in the world. We also know that certain professional groups use different means to cope, for example, with excess of work. Abuse of pharmacological agents = doping. Doping is not only a problem in sport, but in the whole society.</p>	<p>Many doping substances are primarily pharmacological agents of great therapeutic importance. They are used to treat severe diseases. Considering this aspect, they are effective in curing the disease, however on the other hand have many side effects. These biomedical side effects are controlled and tested in many special studies and are considered acceptable because of even greater health problems caused by diseases that can be cured. The problem of using drugs as substances enhancing exercise capacity in sport is that they are taken by healthy athletes without any legitimate need. In addition, most of these substances are consumed in so-called suprafarmacological doses, and that leads to side effects that nobody really is able to assess.</p>

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<p>Anabolic steroids or anabolic and androgenic steroids (SAA) are hormones. Like most hormones, they go to the blood to regulate the specific functions of the body. For example, SAA enhances protein metabolism leading to increased muscle building. "Anabolic" means "to build".</p>	<p>Testosterone is an anabolic steroid responsible for male sex hormones, produced in the testes, ovaries, adrenal cortex and in the liver. In medicine anabolic steroids are used for muscular dystrophies.</p>
<p>Athletes sometimes want to "build" their muscles by overusing steroids that support protein synthesis and that leads to muscle growth. At the same time, with the increase in protein synthesis the use of steroids should also lead to faster regeneration. SAA can affect muscles, especially when intensive training is accompanying it. Athletes must be active because anabolic steroids do not cause muscle growth by themselves. What is more, muscles are not physiologically prepared for such extreme and rapid growth, therefore, muscle damage may also occur as a result of abuse of anabolic during training.</p>	<p>Doping substances can be pills or intramuscular injections, indirectly causing the risk of losing health in the infection (e.g. HIV or hepatitis).</p>
<p>The endangered health resulting from the abuse of anabolic androgenic steroids has an androgenic basis. For men there is a hypertrophy of the breast glands (they become more feminine), and for women male sexual features appear (they become more masculine). Additional side effects:</p> <ul style="list-style-type: none"> • Hepatitis, the formation of liver cysts and damage to adipose tissue are examples of direct tissue damage • Acne • Testicular atrophy • Gynecomastia (hypertrophy of the male breast glands; • Degeneration of the skeletal system • Circulatory disorders occur due to insufficient cardiac oxygen supply caused by cardiac hypertrophy without adequate adaptation of blood vessels • The appearance of facial hair (women) / alopecia (men). 	<p>Dietary supplements may be necessary for some athletes, e.g. when an increased amount of calories is impossible to provide with a normal daily diet (for example, Tour de France participants, etc.). B vitamins and minerals such as iodine, zinc and partly iron are particularly important, which are ejected with sweat. Nevertheless, a well-balanced diet is better than taking any supplements. Furthermore, the amount of supplements that are used should be taken into account, to avoid overdose.</p>

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<p>Many athletes use supplements without knowledge about their side effects and recommended doses. Facing a huge market of supplements and huge sales of nutrients all over the world, the boundary between recommended doses and exceeding them is difficult to clearly determine.</p>	<p>At the request of the IOC, over 600 various nutrients were tested and one quarter of them were found to have doping substances, such as anabolic agents.</p>
<p>Dietary supplements should only be used in specified cases, mainly in deficiencies discovered by the doctor, during a diet in illness or during pregnancy. Inconsiderate use of supplements may lead to hypervitaminosis, or vitamin overdose in the body. The symptoms are sluggishness, muscle weakness, bone decalcification, loss of appetite, adverse dermatological changes (skin ulceration, alopecia), hemorrhage, cardiac disorders, kidneys disorders and central nervous system disorder. Tumors are possible to appear.</p>	<p>Excess of synthetic vitamins (i.e. those in dietary supplements) can have fatal consequences. We are not able to "overdose" vitamins derived from nutrition, because the body will excrete their excess. However, excessive consumption of pills can lead to many diseases.</p>
<p>Wise healthy diet without any problems will satisfy all needs necessary even during very intensive training.</p>	<p>Nutrients limit the development of the natural self-healing mechanism. Someone who begins to take them starts being addicted to them, at least until the end of sports career, as well as significant health problems after the career had been finished. This is particularly dangerous for young athletes. For example, consuming high doses of protein by young people can lead to the failure of kidneys, liver; also it damages bones.</p>

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<p>Protein supplements available on the market are in most cases products full of chemicals. Flavors, dyes and, above all, sweeteners are substances that have huge side effects on our body.</p>	<p>Nutrients are mostly sweetened with Acesulfame K (Aspartame) or Sucralose (E-955) – substances much more toxic and carcinogenic than the sugar we know. Acesulfame K is also added to "sugar-free" products. Consumption of this substance causes headache, hyperactivity, increases the risk of lung and breast cancer. Sucralose; substance 600 times sweeter than sugar also has carcinogens, causes migraine headaches. Another group of harmful substances added to protein supplements are dyes. One of the substance is the quinoline yellow responsible for the yellowish color of the nutrients and it is highly allergic. It causes hyperactivity and is carcinogenic. It is added to ice cream, sweets. The yellow color of Rutinoscorbin is also due to the quinoline yellow. In case of children, it causes hyperactivity, lack of concentration, "fidgeting", anxiety. It is banned in countries such as: USA, Japan, Canada and UK.</p>
<p>It should be kept in mind that no pill will burn fat or increase muscle mass alone. For this a high-protein and low-fat diet and intensive exercise are essential. Dietary supplements can only help to burn fat and build muscle mass. However, they should only be used after consulting a doctor, as they may cause a number of side effects.</p>	<p>Creatine is a supplement for athletes, the use of which gives such effects as faster growth of muscle mass, improvement of capacity, greater resistance to fatigue.</p>
<p>Energy drinks differ from isotonic drinks not only in composition, but also in purpose of use. These beverages include ingredients such as caffeine, taurine or inositol. So-called "energizers" can be used by overworked and distracted people. People who are vulnerable to severe and prolonged stress should be careful about it. Caffeine in energy drinks occurs in very large quantities and its side effects are: diuretic effect and "rinsing" magnesium.</p>	<p>Isotonic beverages' osmotic pressure is the same as the osmotic pressure of human body fluids. These drinks are intended for people with a high level of physical activity – athletes or manual workers. Isotonic beverages contain minerals: sodium, potassium, calcium, phosphorus, magnesium, vitamins and carbohydrates (sugars). During intensive physical work along with sweat we lose large amounts of electrolytes – isotonic beverages align this deficit and quickly hydrate the body. The carbohydrate causes that despite the effort, there is no reduction of glucose in blood, thus its proper concentration allows to extend training time, without a decrease in exercise capacity. Those who try to lose a few kilos through physical effort, should pay attention to isotonic drinks, because they are a source of a large dose of kilocalories.</p>

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