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«Сучасні досягнення фізичного виховання»

*Матеріали науково-практичної конференції
з міжнародною участю*

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The most common means of educating general endurance in mass practice are long running, walking, skiing, cycling, swimming, health aerobics, step aerobics and other cyclic types of exercise of moderate and variable intensity.

Proper organization of physical activity involves a variety of tools, methods that can have a comprehensive beneficial effect on the body, subject to basic principles (regularity, gradual increase in load, individualization, etc.) and taking into account the physiological characteristics of age and physical fitness. Thus, each level of physical health is characterized by a certain reserve of adaptive reactions of the cardiovascular system, which is improved in the process of exercise.

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A BRIEF REPORT ON EUPHORIA

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Relevance: "Runner's euphoria" manifests itself as a sudden feeling of happiness, joy and lightness. Mood rises, dulls pain, fatigue, and hunger. There is a feeling of "enlightenment and firm confidence in their own strength."

Objective: To determine of "runner euphoria", what hormones affect it, and how it improves health.

Why does a runner's euphoria develop?

The first version by which scientists tried to explain the causes of this condition was brain hypoxia. Our brain has no oxygen reserves in the tissues and cannot work in anaerobic mode for more than 5 seconds. During prolonged exercise with moderate or increased intensity and shallow rapid breathing, the brain is able to experience a lack of oxygen, which can provoke changes in perception of the surrounding reality and their own feelings. But what about well-trained and prepared athletes? It became clear that the mechanism of euphoria, most likely, has a more complex nature associated with the release of biologically active substances - endorphins.

Imagine that you have just trained hard. Your body is stressed, in addition, there is pain - this is a signal for the release of biologically active substances from the hypothalamus and pituitary gland, which are called "endorphins". Contrary to popular belief, endorphins are not "happiness hormones" because this condition is caused by very complex interactions of a number of hormones.

Many anthropologists claim that man was originally created by a runner and that only comfortable evolutionary conditions lead to the abandonment of the daily multi-kilometer run. So, the euphoria of a runner is nothing but a mechanism of the survival, a natural reward for endurance.

In 2004, researchers at the Georgia Institute of Technology named a possible "culprit" of euphoria endocannabinoid anandamide, which is formed in the body to overcome stress and pain. It is similar to the main active ingredient in marijuana, but is formed in the body naturally.

Plasma endorphin levels increase in response to various stress and pain stimuli. This effect is described in medicine, when patients have elevated levels of endorphins in the blood after surgery. Studies show that exercise has the same effect, with peak endorphin release an hour after exercise.

Many studies confirm that after exercise, endorphin levels increase significantly, but in the blood and not in brain tissue. Of course, we can assume that if the level of endorphins in the blood, it is definitely elevated in the brain. However, a study conducted in Germany showed that endorphins present in the blood after running are actually difficult to penetrate from blood vessels into brain tissue, so they do not cause euphoria. It can be caused by anandamide, the level of which also rises after running, but it penetrates very well into the brain.

Serotonin and norepinephrine can also act as sources of running pleasure. Increased production of these biologically active substances can also lead to a good mood and a feeling of strength during running.

Scientists have linked low levels of serotonin and norepinephrine to depression. Exercise is the cheapest and safest way to increase the level of these substances in the blood, and thus reduce the severity of depression and stress.

Conclusions: Cycling sports: running, swimming, cycling etc - will help you not only in improving fitness and become slimmer, but also better withstand depression, stress, and therefore improve not only duration but also quality of life.