



AVOID OVERTRAINING IN ATHLETES BEST PERFORMANCE BY EFFORT AND RECOVERY

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Abstract

Fatigue is a physiological discomfort, is countered by the body itself, it has cut that by a natural reaction, spontaneous to remove the consequences of exercise-induced by effort. In an sporty effort things evolves in the same way to a point. Over that point it is necessary to intervene with modern assisted recovery.

It is known that the ability to solve a task is conditioned by training and sports directly proportional to the biological performance. This performance capability depends on many factors of which are prominently power generating sources, neuromuscular functions and mental rehabilitation capacity, etc.

Rigorous research conducted in recent years allowed to define pathological fatigue. Thus, pathological fatigue expresses discomfort induced physiological effort sporty and behavioral disorders characterized by decreased yields sport

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JEL classification: I31, I39

1. Introduction

Any disturbance uncorrected by timely recovery may lead to pathological onset of fatigue in athletes. As we know, in sport, they are of particular quality of training, the environment in which the sporting effort, motivation, health, stress, etc. Overcoming the optimum ratio between may and recovery training Pathological lead to onset of fatigue at first by so-called residual signs of fatigue and the then accumulating the true pathological fatigue.

2. Issues addressed

From the clinical point of view, are distinguished two forms: muscular fatigue (peripheral) fatigue and neuropsychiatric (central).

The muscular fatigue, muscle describe five causes:

- CP depletion of muscle present in anaerobic efforts alactacide and lactacid;
- depletion of CP accompanied by increased lactic acid, present in endurance type short efforts;
- lactic acid increased muscle endurance efforts present in the medium;

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- depletion of muscle glycogen present in the medium and long endurance efforts.

It is necessary to combat these forms and we must have in mind, along with the workout and recovery after exercise. In the mental fatigue (central), according to the pathophysiological mechanism, as described next. Lowering blood glucose present in long endurance efforts. It being known that the central nervous system during exercise, consuming about 5 wt. glucose / hour and the brain is one of the vital organs highly sensitive to low blood sugar. It is also known that the form of reserve of glucose in the body is estimated at about 500 g glycogen which about 400 g muscle (normal = 1 g glycogen 100g muscle tissue) and 100 g in the liver, reducing this level is extremely serious for the body.

Avoiding central pathological forms of fatigue is achieved through a neuropsychological rehabilitation and metabolic controlled.

These two forms of fatigue, muscular and mental, can appear solitary or paired.

The acute form of pathological fatigue is known as supraîncordare and disagreement moment of psycho-physical demands and the body's ability to respond appropriately.

The most common forms are:

- muscle crack is a muscle stiffness and often expresses a muscular lesion. It is manifested by signs and local competitor out of the effort.
- heart crack that can manifest from a simple change in heart rate, reaching up to cardiac arrest and death on the sports field.
- disorders of decreased muscle tone, decreased reflexes, impaired coordination and balance, gait disorders, sensory disturbances, visual, auditory, mental disorders such as feeling of exhaustion, mental fatigue, impaired orientation in time and space.

If it exceeds the peak of the acute phase, in particular the latter two forms, general condition and the exercise capacity tasks.

3. Practical applications

Overtraining is chronic fatigue pathological form, expressing a disturbance of the whole body.

Specifies three situations that may arise Overtraining: after obtaining shape sports as a result of mistakes order methodically workout by overwork before the athlete to have achieved a higher degree of training, in terms of efforts reduced volume, intensity or the preparatory period but amid mistakes in lifestyle sports or to stress as a result of sudden personal conflict situations.



Symptoms that should be taken into account in finding overtraining are physical and mental fatigue, difficulty concentrating, loss of mental and physical efficiency, sleep disturbances, weight loss, decreased appetite, increased catabolism.

From the mental point of view, the athlete is anxious, discouraged, moody, emotional, apathetic or conversely aggressive, overactive, accusing headache that emphasizes exercise, decreased memory driving, palpitations, throat, dyspnea, tachypnea, visual and hearing, dizziness, or fainting rotation.

The biological processes contributing to increased athletic performance is based on the alternation of exertion, fatigue, and recovery. After a physical effort within the functional capacity of the body, installs physiological fatigue with decreased physical performance capacity, which disappear after 24 hours through the recovery process. The phenomena is repeated until the installation of overcompensation.

If the optimum ratio between training and recovery is exceeded (too intense workout or other stressors) appears pathological fatigue, discomfort exceeding the functional capacity of the body to reach baseline condition through rehabilitation and medical treatment. Pathological manifestations of fatigue are acute - known as the supraîncordare and chronic - overtraining.

Chronic fatigue pathological form, called overtraining is characterized by a profound imbalance of the whole organism (disrupting homeostasis rest and effort) with more obvious manifestations in the sphere neuropsychiatric and endocrine-vegetative and sports progressive decrease in yield. Syndrome is more common in endurance athletes, a large percentage of whom were diagnosed with overtraining at a time of their sporting career.

In the training camps, recovery periods are shortened sometimes deliberately as a way to increase the load, leading to a decrease in short-term performance, followed a proper recovery period, an increase in physical performance.

It is necessary to fix the limit of demarcation between the pathological and physiological fatigue. Recovery time required is one that distinguishes between the two forms of fatigue.

There are several possible causes incriminated in the occurrence of overtraining, errors workout: workout excessive sudden increase in the intensity or its volume, changing the type of workout, workout devoid of periodization, no restoration or rebuilding inadequate important competitions common, inadequate nutrition, dehydration, various pathologies acute or chronic psychological stress: different athlete events in life such as family problems, exams, emotional problems, extreme temperatures, high altitude, humidity.



4. Conclusions

In 3-4 weeks the athlete can be reintegrated into the sport after a thorough medical expertise and effort under close guidance from the coach, the athlete must remain monitored for the rest of your sports career. The basic treatment is prophylactic: scientific training, lifestyle sports fair, regular medical supervision, close cooperation between the coach and doctor.

Overtraining syndrome is better to be diagnosed in the preclinical phase of overloading, when general signs dominate, especially psychic manifestations. At this stage medical intervention is more effective and events at the device or system is corrected quickly and efficiently.

Often these signs and symptoms are insufficient for diagnosis but the mere presence of one of them should lead us to think and diagnosis of this syndrome.

The mere increase in heart rate occurred every morning without any other symptom or sign, we must put a question mark. Symptoms are individualized, so the athlete must learn to pay attention to his body.

Recovery after effort is part of sports training. The targeted use of means with physiological effects aims to restore the body's balance to the previous level of competition or training. Subsequently tends to achieve a higher level - overcompensation - which is when optimizing recovery. Restoration is considered by some authors to prepare biological ergotrope phase of the competition. It aims to not only restore overcompensation body's homeostasis. In preparation for the great performance, recovery problem in a short time is essential.

5. Motions

Directed recovery can not replace natural restoration is only a supplement to help accelerate natural recovery, physiological. It is necessary to resort to this strategy because natural recovery requires a longer time and a higher consumption of energy, which is trying to be avoided sports.

Thus, a necessity, directed recovery becomes part of sports training and obeys its basic principles: accessibility, continuity, systematization.

Means that we recommend in recovery are:

Diet recovery: When given within the following hour after the competition, its purpose is to replenish the body after exercise, and to compensate for dehydration, exhaustion of energy reserves and to fight against protein catabolism, she favoring equally disposal and fighting accumulation of lactic acid.

It is considered to remove the lactic acid from the blood and transforming it into muscle glycogen, the reaction occurs at a maximum rate in the first 30 minutes after exercise. While the highest rate of refill muscle glycogen stores are in the first 4 hours.

The administration of carbohydrates in order to have maximum efficiency in large quantities to be distributed in small portions and frequent relizând a high



glycogenesis muscle. Glucose-fructose proportion will be determined based on priorities and is well known that muscle glycogen recovery is predilection by intake of glucose and liver glycogen by intake of fructose.

Also, it should not neglect your protein intake to offset losses caused by low effort by damaging muscle cells, or consumption and extended great efforts.

Because during exercise 75% of the chemical energy consumed by muscles is converted into heat, it causes a rise in body temperature that to maintain thermal equilibrium resorting to sweat. In turn, these sweat loss can lead to dehydration if not offset steadily and timely, dehydration is worsening and may lead to exhaustion and collapse.

To prevent these metabolic imbalances, the athlete must learn to hydrate during exercise, before the advent of thirst, respecting certain rules: the maximum amount ingested per hour does not exceed 500-600 ml, divided in 15 to 15 minutes, solution hydration should be at a suitable temperature, not too cool to not accelerate intestinal transit, hydration solution contains mineral salts and vitamins to replace their losses through sweat for an hour longer efforts should contain carbohydrates.

Pharmacological means to recovery: Restoring the body after a great effort made in short time, characterized by a very high energy consumption, is hard only on food intake. The amount of food required would exceed the possibilities of digestion and absorption of the body and so diminished physical effort. For these reasons it appealed to pharmacological support directed recovery, addressing those groups medicinal products consisting of synthetic or naturally occurring in metabolism, having an important compensatory role. Mention groups: vitamins and minerals - their compounds being present in all rehydration drinks, carbohydrate compounds - also present in moisture recovery, given their importance in the hours after exercise metabolic and medicinal preparations, antioxidant etc.

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