

THE EFFECT OF CROSSFIT ON HEART FUNCTION

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Annotation: Comprehensive physical fitness of Cadet Girls, health improvement, general endurance and fast-strength quality training, mastering the basics of running the competition in a combination way, developing special endurance, gaining competition experience.

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Crossfit is a branded physical fitness system created by Greg Glassman. (in general, an analogue of the Soviet "OFP"). Registered as a trademark by CrossFit Corporation, Inc. founded by Greg Glassman and Lauren Gina in 2000. It is promoted both as a system of physical exercises and as a competitive sport. The first gym was located in Santa Cruz (California), the first affiliated gym was in Seattle (Washington); by 2005 there were 13 gyms, by 2013 — 8,000, by 2015 — 13,000.

Crossfit is a comprehensive program for the development of strength and endurance, consisting mainly of aerobic exercises performed at high intensity in various time intervals in order to increase fitness. Workouts include warm-up, gymnastics (exercises with your own body weight) and weightlifting, high-intensity "workout of the day" (WOD), individual or group stretches, elements of high-intensity interval training, weightlifting, plyometrics, powerlifting, gymnastics, kettlebell lifting, strongman exercises, running and others. The results of each WOD are evaluated to stimulate competition and track individual progress. Crossfit gyms use equipment from a wide variety of disciplines, including barbells, dumbbells, gymnastic rings, horizontal bars, jump ropes, kettlebells, medical balls, plyoboxes, expanders, rowing machines, air bikes and various mats.

Crossfit is aimed at "constantly changing, high-intensity, functional movements", based on such disciplines and exercises as: gymnastics, weightlifting, powerlifting, strongman exercises, plyometrics, exercises with your own body weight (burpee is the most famous exercise with your own body weight in crossfit), rowing on specialized simulators, aerobic exercises, running and swimming.

The basic rules of the training:

- Maximum intensity in each workout;

- The more often you exercise, the better;
- A minimum of rest between exercises (or better yet, its complete absence);
- Changing the direction of loads at each lesson.

The pros and cons of crossfit:

Positive:

Versatility - you simultaneously develop various athletic qualities, due to which you run well both for long and short distances, develop strength, dexterity, coordination.

When doing crossfit, you will not get bored with the training program, as it is almost always unique and different from what you did before.

Minuses:

Lack of specialization. This is the price for versatility. In any case, you will be weaker than an enforcer, slower than a sprinter, your endurance will be an order of magnitude worse than that of a marathon runner, and your muscles will not compare with the muscles of bodybuilders.

The effect on the heart:

With proper crossfit training, the pulse lasts about 200 beats per minute for a long time, so training takes place almost without a break for rest. In this mode, the myocardium experiences a lack of blood supply and ischemia develops, but due to under-repair, myocardial hypertrophy.

The main reasons are:

Many athletes, especially beginners, feeling outwardly healthy, apply such loads in training that can easily kill even an elephant. Naturally, in such conditions, the harm of crossfit for the heart is obvious.

The main reason why this trend in fitness is so detrimental to the main organ of the body is prolonged work in an excessively high pulse zone. People without a prepared training base begin to train with a heart rate (HR) exceeding the maximum values.

Heart rate max = 220 – age (number of years) . For example, if a person is 25 years old, then his maximum allowable heart rate will be = 220 – 25 = 195 beats per minute.

The characteristic signs that an athlete clearly exceeds his physiological norms are:

1. Severe muscle fatigue.
2. Shortness of breath, shortness of breath.
3. You can hear the beating of the heart with a return to the head.

The physiological picture of this condition is as follows: the heart muscle works with such intensity that the relaxation phase is practically reduced to zero. As a result, there is an acute shortage of tissues in oxygen and nutrients. Ischemia, angina pectoris and myocardial hypertrophy develop with serious consequences.

In this form, crossfit affects the heart extremely negatively. If a person does not pay attention to this, thinking that such loads only harden his body, pathologies in the cardiovascular system cannot be avoided. Here, depending on the genetic predisposition, a variety of diseases can manifest themselves – valvular malformation, myocarditis, ischemia, myocardial infarction.

Treatment and prevention:

People who want to become more functional, resilient and mentally strong go to crossfit. And indeed it is possible. However, it is necessary for everyone to carefully weigh their strength, body condition and predisposition to various diseases. Based on this, you need to select the right loads, training frequency and other important load parameters.

The main aspect that is of maximum importance for a beginner crossfit athlete is heart rate control and exercise time. In order for the heart to receive a stimulating load, not to overwork and be ready for harder work, there are the following rules for the ratio of loads:

- Easy. Heart rate within 55-60% of max. The workout lasts from 15 to 40 minutes. For example, walking.
- Average. Heart rate = 60-70%. The duration of the loads is from 40 minutes to 1.5 hours. For example, light running or walking at a brisk pace.
- Medium heavy. Heart rate is 70-80%. The duration is no more than 40 minutes. Rowing is an example.
- Heavy. Heart rate is 80-90%. It should not last longer than 10 minutes (for very hardy ones). It can be an intense race.
- Marginal. The heart rate is maximum. The load cannot last longer than 5 minutes. It is allowed only for professionals. As an example, intensive work with a boxing bag, running up stairs or up a steep mountain.

The benefits of crossfit for the heart:

1. In a short period of time, you will be able to put your body in order: get rid of excess weight, build muscles, improve their tone. Anyone can practice this technique. But the intensity of the exercises, the permissible weight and the speed of execution vary depending on the parameter of the person.

2. Great for beginners: if a person has never been involved in sports regularly, then in order to "get involved" the main thing is to choose a competent coach who will monitor the correctness of the performance so that the person does not get injured.

3. Perfect for fitness fans: there is a group of people who prefer to exercise every day. The crossfit training plan is basically built in such a way that training will take place every day. The ideal option is 3 days with classes, and then one day for rest. But there are people who cannot live without training, so they sometimes practice not one at a time, but 2 times a day.

Often in crossfit, it is important to perform the entire volume in a short period of time, and for this you will have to work 100% without rest. But it is better not to bring it to overtraining, you should not forget about rest, however, if you feel that the "motor" has started to mess up, you should immediately consult a doctor. Only after a thorough medical examination can a doctor prescribe a corrective course of medications based on the condition of a particular patient, his medical history and many other factors. Self-medication can only lead to a deterioration of the condition. Perhaps, during the treatment period, the training process will have to be stopped or switched to moderate recovery loads.

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