ФІЗИЧНА ПІДГОТОВКА ФАХІВЦІВ ЯК УМОВА ПРОФЕСІЙНОЇ НАДІЙНОСТІ

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CROSSFIT AND CIRCUIT TRAINING METHOD. COMPERATIVE ANALYSIS

The article presents the stories of the creation of crossfit and circuit training method, their essence, the means used, the effectiveness in the process of physical training of athletes. An attempt was made to present the distinguishing features of these two directions. In the article there are also presented examples of using crossfit and circuit training methods for developing physical fitness of athletes.

Key words: *crossfit, circuit training method, physical fitness, athlete, weightlifting, workout.*

Problem statement. Often, sports professionals identify crossfit as a "circuit training" method. However, with analyzing the scientific-methodological literature, let us try to present their similarities and distinguishing features.

Analysis of recent research and publications. The article presents an analysis of the literary sources presented by the authors in recent years about the crossfit and circuit training method.

Purpose of the article: The purpose of this article is to identify the distinguishing features of the crossfit and circuit training method.

Delivery of main material. To get a deeper concept of the above two directions of training, we shall start from the history.

More than 70 years ago, athletics coaches put in to the training process a new format, which became the prototype of the current circuit training method. The training with the system used by F. Koch was carried out as follows: after deviding athletes into groups (runners, jumpers, throwers, etc.), they were located in different places in the gym ("station") performing already defined sets of exercises. The training load was measured in groups and the duration was approximately three minutes at each station. After performing the planned exercises, the athletes were transported to the next station in a circular motion. The advantage of this method of training was the saving of time, variety of means, the possibility of training all participants at the same time [14, p. 39].

Later, English coaches and physical education teachers Morgan Adamson at the University of Leeds were looking for a new method of training for students, that would improve their muscle strength, improve internal organ function, and at the same time, would be interesting and engaging. After long experiments with different training methods, they discovered a method that matched their own ideas, called "circuit-training". Thanks to this training method, Morgan and Adamson managed to improve the general physical fitness level of the students [14, p. 40].

As for the history of CrossFit, it should be noted that its founder, American Gleg Glassman was born in 1956 in Los Angeles. He started his career as a personal trainer at the age of 18, and from the first years he used the name CrossFit for his own training system. Initially, the goal of crossfit was to lose weight through an individual training system, and the training was held in a regular gym. Later, the business model changed, and in 1995, the first crossfit gym was created,

which was different from ordinary gyms in its equipment and specialized training apparatus. Later, in 2000, the CrossFit, Inc. organization was opened [19].

At the beginning of its existence, crossfit was more popular among police, military, military bases, and military operations areas, as it was intended primarily for these professions. Later it was used in other professions. In 2005, there were a total of 13 interconnected CrossFit gyms, and by 2012 that number had risen to 3,400. There are currently more than 9,000 CrossFit gyms, and their number is growing every year. In addition, annual CrossFit tournaments are held, including European and World Championships [12].

CrossFit is becoming increasingly popular as a method to increase fitness and as a competitive sport in both the United States and Europe [1].

In order to find out the similarities between the crossfit and circuit training methods, it is first necessary to define these two directions.

Let us first touch upon the essence of the term "Crossfit". Professional website (Crossfit.com) describes CrossFit as a lifestyle characterized by safe, effective exercise and sound nutrition. CrossFit can be used to accomplish any goal, from improved health to weight loss to better performance. The program works for everyone – people who are just starting out and people who have trained for years [17].

Thus, Crossfit is an abbreviation of two words, literally means a united, cross-linked fitness, which includes everything from fitness, or, in other words, crossfit is fitness in movement. This concept of physical activity assumes the development of all aspects of the athlete's training – physical, technical, tactical, psychological and theoretical.

According to V.Yu. Ziambetov [15], crossfit is a system of exercises requiring high endurance, which involves a regular shift of exercises, including elements of athletics, weightlifting, bodybuilding, fitness, gymnastics.

According to other authors [9; 10], crossfit is a system based on high-intensity functional training and a competitive sport, which is based on elements of weightlifting, gymnastics, ball sports, aerobics and other sports.

CrossFit is a form of training that targets multiple components of fitness and has emerged as a popular and effective lifetime physical activity choice for adults worldwide [6].

It can be said that Crossfit is a universal mean of general physical training, which has its peculiarities, motivational side, structure and emotionally attractive training horse, including elements in a strictly regulated order of kettlebell swings, weightlifting, gymnastics, athletics, swimming, rowing, athletics [11].

An example of crossfit training is the 21-15-9 workout consisted of the following exercises: a sumo deadlift high pull, a 0.5 meter box jump, and a 40-meter farmer's walk gripping two 20 kg bumper plates. The participants completed 21 repetitions of the sumo deadlift high pull and box jump in round one, 15 repetitions in round two, and 9 repetitions in round three. Each round was ended with the completion of one 40-meter farmers walk [2].

In the case of the circuit training method, the athlete performs one or more exercises continuously (or at rest intervals) in a "circuit". It can be called one of the training methods, which is one or more cycles with one or more repetitions of exercises, or multiple repetitions of the same exercise, increasing the weight of the barbell. As you can see, these are all training methods, while the concept of crossfit contains much more [20].

According to L.P. Matveev [13, p. 71] it is an organizational-methodological form of training that includes a number of highly regulated specific methods of performing exercises. The basis of "circuit training" is the serial (continuous or with intervals) repetition of several types of physical exercises, selected and combined into a complex in accordance with a certain sequencing scheme – the symbol of "Circuit training". Exercises are performed in the order of sequential passage of 8-10 "stations" which are located in the gym in a circle. One type of exercise is performed in each station (squats with loads, push ups, pull ups, etc.). Most of them have a local or regional orientation, that is, they affect a certain muscle group.

As an example of circuit training, let's present the "Workout multilateral!" complex of exercises proposed by M. Scholich [14, p. 62], which should be designed so that the training load falls on all muscle groups in turn, and some exercises should be of a completely oriented nature. In practice, a set of 10 exercises is used, which includes 2 different exercises for each major muscle group, in addition, 2 exercises for the whole direction.

Let us now turn to the essence of the two directions.

Circuit training is considered as an intensive training method. It is usually used to develop endurance. The basis of circular training is the performance of actions, multiple repetitions of movements defined by a clear measurement of training load and rest. As a rule, these trainings consist of both aerobic and strength exercises. One cycle includes several exercises for different parts of the body, each performed in one attempt, this can be done with both training apparatus and your own body weight. These exercises have a definite number of repetitions and they are performed over a period of time. Rest intervals between exercises usually last 30 seconds. Athletes rest longer after completing the full cycle, usually for 2-3 minutes. One such workout involves 2-6 rounds, lasting about an hour. It can be effective for both beginners and professionals. The intensity of training is being increased with each next round, and the duration of rest is being decreased [16].

The goal of crossfit is the physical development of the athlete in such areas as the work of the cardiovascular-respiratory systems, flexibility, strength, endurance, speed, coordination, etc. Crossfit is mainly a system aimed at the multifaceted development of the athlete, which uses a number of training methods, for example, from gymnastics, weightlifting, powerlifting, kettlebell swings. The popularity of this training system lies in its novelty: it is more diverse, in contrast to the standard circuit method, that is to say one of the ideas underlying crossfit is the variety and versatility of physical exercises, which makes the training more effective and more interesting for athletes [18].

Crossfit can be considered as one of the best training systems to improve general physical fitness. But before developing an individual training plan, it is necessary to take into account the individual characteristics of the athletes, as well as the equipment of the gym.

One of the peculiarities of crossfit is that it is not only a specialized system of physical training. It is known that in any sport - skiing, marathon, athletics, etc., a very strict specialization is used. In other words, the marathon runner develops aerobic endurance to overcome long distances, the powerweighter develops muscular strength to lift maximum weights. And the peculiarity of the crossfit program is that there is no such specialization: an athlete, who trains crossfit is able to develop muscle strength, strength endurance and aerobic endurance together [4].

In order to better understand CrossFit performance, it is necessary to determine the relationship of anaerobic and aerobic metabolism to this novel sport.

The hypothesis that anaerobic performance would likely be related to CrossFit performance is supported by the fact that runs of up to 800 m are often included in the event as well as weight training. A plausible connection with aerobic fitness exists as evidenced by the recent work by Farrar, Mayhew and Koch (Farrar R.E., Mayhew J.L., Koch A.J., 2010) who demonstrated that kettlebell swings presented an aerobic challenge that could influence VO₂ max. This work is very relevant as CrossFit training includes high volumes of repetitive weightlifting motion, similar to the continuous kettlebell swings in the Farrar, Mayhew and Koch study [1].

Aerobic capacity has also been accepted as a major component of athletic success [8].

In Crossfit trainings are being usually used multi-component exercises, that is, basic exercises that work many muscle groups. These exercises include push-ups, squats, the snatch and the clean and jerk, and more. In addition, crossfit Besides exercises for body weight, such as pushing, pulling, jumping, as well as anaerobic exercises such as running, cycling, swimming, rowing, etc. [5].

So let's look at the differences between these two directions. It can be said that crossfit is fundamentally different from the circuit training method. First, in the crossfit system, exercises are used to aim the complex development of several motor skills at once (strength, endurance, high-

speed endurance, agility, etc.). In other words, crossfit training mainly includes three directions: weightlifting, gymnastics and cardio training. Second, crossfit does not use exercises that focus on developing only one muscle group. Third, crossfit is a strength direction in sport that uses free weights, and the training load is applied to the whole body, not just some muscles, which occurs during circuit trainings. By way of contrast, the circular training is mainly aimed at the development of one muscle group.

Conclusions and prospects of further research: Thus, being considered one of the best training systems to improve overall physical fitness, crossfit training has a noticeable positive effect on the harmonious development of athletes' physical and functional fitness, as well as some motor skills. However, as with the obvious advantages, crossfit has its drawbacks that need to be taken into account when forming training programs. For example, the lack of specialization, which implies the following: it is impossible to reach the maximum in some individual parameters, as the crossfit athlete will always be inferior to the weightlifter in strength and marathon runner in endurance. He will not be able to compete with athletes with narrow specializations in specific directions. Another disadvantage is the possible deterioration of health, as nausea during training is quite common, especially for beginner athletes engaged in crossfit [5].

Crossfit is the concept of exercises with high intensity for the whole body, which is considered as a full-fledged sport. But the circuit training method simply improves the functional capabilities of the athletes. It is true that crossfit can be done by the circuit training method, but it is not worth to consider these two direction as the same.

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КРОССФИТ И КРУГОВАЯ ТРЕНИРОВКА. СРАВНИТЕЛЬНЫЙ АНАЛИЗ

Аннотация. В статье представлены истории создания методики кроссфита и круговой тренировки, их особенности, используемые средства подготовки, дан анализ литературных источников последних лет о сущности метода кроссфита и круговой тренировки. Автором сделана попытка представить разницу между этими двумя видами физической подготовки.

Многим специалистам в области спорта трудно четко представить отличия кроссфита от круговой тренировки. Поэтому перед исследованием была поставлена цель – выявить основные отличительные особенности метода кроссфита и круговой тренировки.

Чтобы лучше понять указанные направления тренировки, автором даны определения разных специалистов, особенности двух методов физической подготовки, их достоинства и недостатки. Приводятся также примеры тренировок в кроссфите и в методе круговой тренировки.

Кроссфит – это универсальное средство общеперифической подготовки, имеющий свои особенности, мотивационную основу, структуру и эмоционально увлекательную форму тренировки, включающую выполнение упражнений в строго регламентированном порядке со

штангой в тяжелой атлетике, упражнениями в гимнастике, легкой атлетике, плавании, гребле. Одна из особенностей кроссфита в том, что это не специализированная система физической подготовки для отдельных видов спорта.

Круговая тренировка считается интенсивным методом тренировок. Обычно ее используют для развития выносливости. Ее основу составляет выполнение действий, многократное повторение движений, четко измеряемое величиной тренировочной нагрузки и отдыха. Ее можно назвать одним из методов тренировки, который представляет собой один или несколько циклов с одним или несколькими повторениями одного и того же упражнения, увеличивая вес штанги.

В качестве примера круговой тренировки представлен «Упражняйся всесторонне!» комплекс упражнений, предложенный М. Шолухом и кроссфит-тренировка, по системе 21-15-9 (Г. Глассман).

По мнению автора, кроссфит – это концепция упражнений высокой интенсивности для всего тела, которая считается полноценным видом спорта. А метод круговой тренировки предполагает улучшение функциональных возможностей спортсменов. Есть мнение, что кроссфит можно делать и методом круговой тренировки, но рассматривать эти два направления как одно и то же направление подготовки не правомерно.

Ключевые слова: кроссфит, метод круговой тренировки, физическая подготовленность, спортсменов, тяжелая атлетика, тренировки.

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