

Effective Application of Functional Physical Training in Competitive Sports

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Abstract: The application of functional physical training in competitive sports is of great research significance as the functional physical training is different from the traditional physical training because it is more in line with the characteristics of the human biomechanics and more in line with the requirements of physical training. In terms of special sports, sports forms, and core strength training, functional physical training has shown good prospects combining with the other training forms as with functional physical training can also help the wounded to rehabilitate and effectively protect the joint health of the athletes and prolong the sports life of the athletes, which is worthy of in-depth study and discussion by experts and scholars.

1. Introduction

The functional fitness training has been widely used in the training of sports competitions in recent years and has shown good results of the functional physical training that has been developed from the field of medical rehabilitation and has been gradually applied into competitive sports training, as it is more of scientific and reasonable training method under the guidance of functional physical training of the athletes that will enhance their control over their own strength and also coordinate and enhance the efficiency and stability of sports movements, and greatly improve the effectiveness of the competitive sports training.

The functional physical training is a training method that conforms to the human body structure, it also plays a role in protecting and rehabilitating the human muscles and joint function that can significantly enhance the athletes' sports life and has far-reaching significance for the development of the competitive sports.

2. The concept of functional fitness training

The functional training was originally applied in the field of rehabilitation, in the medical field, “functional training” refers to the recovery process of daily life ability under the guidance of functional training but Nowadays, functional training involves more fields with its gradual development and improvement, functional training has continuously penetrated from medical English to competitive sports and the inventor of functional training is called Gray Cook, who pointed out that functional training essentially finds weaknesses through analysis of motion and power chains (such as badminton and tennis swings), and then targeted the reinforcement for weaknesses. training. On this basis, many experts and scholars believe that functional training pays more attention to the balance and stability of the body which requires a specific training actions by overcoming it with one's own gravity without the instrumental assistance, such as multi-dimensional motion trajectory acceleration and deceleration and stability.

The American Sports Commission has also pointed out that functional training focuses on the training activities of a certain movement, including balance training, stability training, dynamic sports training and core training [1].

In summary, the functional training in competitive sports is a kind of training that is consistent with the specific construction principles of the human body, and is aimed at a certain sports action or action chain.

3. Functional physical training is different from the traditional physical training

At present, the training of many competitive sports projects believes that the Tablet support the elastic band training and the Swiss ball strength exercise are performing the functional training, but in fact, the functional training is far from been simple and it is necessary to apply functions in competitive sports as the sex training requires an understanding of the nature of functional training and the difference from the traditional physical training [2].

Gray Cook made a brief summary of the difference between functional training and traditional training. It is considered that the traditional training is contrary to biomechanical characteristics and human physiology, while the traditional training is essentially a rigid training mode which does not conform to the law of human gravity and violates the relationship of the movement chain of the functional training, on the other hand, is a multi-dimensional plane motion that integrates isolated movements and conforms to biomechanical characteristics and human physiological characteristics.

In terms of purpose, the functional training is more focused on improving the athlete's special performance and overall physical quality than the traditional training, while the functional training is not also about the strength and muscle training of a certain part, but to improve the overall muscle, strength coordination and coordination training. It is a training to enhance the athlete's ability to control his muscles and strength, so it is aimed at the training of the action chain and not a single part and a fixed action and the result of this training is that the muscles and strength of the athlete's body are coordinated and they are in dynamic balance, thus improving the balance, coordination and explosiveness of the movement.

In terms of performance, the choice of functional training is more diversified because the functional training is a training for action chains, which can achieve a special training for maximization and limit, so that the training efficiency for a certain action chain becomes the highest. [3]. Moreover, functional training can be flexibly combined with other training methods and training equipment, such as combined with spine recovery, gymnastics, Pilates, etc., the significance of this is that it can carry out preventive training for athletes and injuries, thereby significantly improving the quality of life of the athletes and its Sports life.

4. The application of functional physical training in competitive sports

4.1. Emphasis on the training of sports rather than independent muscles

In order to apply functional fitness training to the training of the competitive sports, it is necessary to grasp the core point of functional physical training that is, training for sports form rather than independent muscle training.

The various functions of the human muscles are ultimately dominated by the brain. However, what the brain recognizes is not the reaction of a certain muscle, but the reaction of the human body to the functional actions caused by external environmental stimuli. So muscle training is not the fundamental method of sports training, because the muscle response depends largely on the changes in the environment. In some cases, the muscles react like this. In other cases, the muscles may make a ruin to the opposite reaction. However, the form of exercise is extremely complex because of it governs changes in muscles which can even be said that the interaction of muscle systems in motion constitutes a form of movement, including reactions to the effects of gravity, ground reaction, and dynamics. Therefore, in order to achieve good training results, the practical application of the functional training in the training of competitive sports should pay attention to the interaction between the human body system and also be forced to pay attention to the coordination and balance of muscles and strength, as well as paying attention to the mutual influence of various systems of the body.

In the functional physical training process, the coach should pay attention to the training of the athlete's multi-joint exercise form, instead of being limited to the strength training of a certain joint, which not only improves the training efficiency, but also reduces the movement of a certain joint of the athlete, stress and pain after training. For example, in the football training, the suspension

training can effectively improve on the body balance ability of the football players, so that the athletes' kicking speed and the speed of the running and kicking are improved, not only that, but also when playing the ball, the swaying speed of the supporting foot is significantly reduced [4]

Training on the form of exercise rather than independent muscles as it has a significant effect on improving the athletes' sports life and reducing the athletes' joint pressure, this is because the training of the sports form is aimed at the training of the multiple joints and the power chain and also the proportion of the forces between the joints is reduced, which not only can achieve the training of healthy athletes, but also can help in the rehabilitation of the wounded.

4.2. Paying attention to the training of “core strength”

“Core strength” is an important part of the functional physical training, because in the competitive sports, the completion of most actions is essentially the structure of an action chain and the process of this action chain is instantaneous, which requires the athletes to have a good explosive power. That is, the speed power of muscles is the combination and unity of muscle strength and speed as this requires the athletes to quickly convert the biochemical energy of the body into mechanical energy and kinetic energy, the greater the “power” of the muscle, the faster and complete the change. . Therefore, functional training should focus on the training of explosive force and explosive endurance [5]. As the training of “core strength” is the foundation and focus, and the core strength is also an important “power source” of the human body strength, as it is also an ability to stabilize the core of the human body that control the movement of the center of gravity, and transmit the strength of the upper and lower limbs. The training of the core strength allows the athletes to control and coordinate their own strength and the ability is greatly increased, which is conducive to the long-term development of muscle power and endurance.

5. Conclusion

The functional physical training in competitive sports is a training method that conforms to the biomechanical characteristics of the human body as it is different from the traditional physical training, and is training for sports forms rather than independent muscle training. The application of functional physical training in competitive sports makes the whole training process more in line with the physiological characteristics of the human body from the perspective of force characteristics and force efficiency, the functional physical training is more direct and more efficient. However, there are still relatively few studies on the application of functional fitness training in competitive sports which requires more in-depth research and discussion by scholars.

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