

# Analysis on the Reasons Why Functional Training is Superior to Physical Training

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**ABSTRACT.** *With the concept of functional training becoming more and more popular in recent years, the research on functional training in the field of sports has become more and more in-depth. Compared with traditional physical training, the features and functions about functional training become more and more prominent. In this regard, based on the two different training methods of functional training and physical training, this paper deeply analyzes the different characteristics and different functions, and summarizes the main reasons why functional training is superior to physical training, and provides reference for further research.*

**KEYWORDS:** *Functional training; Physical training; Field of sports; Characteristics and functions*

## 1. Introduction

In general, we adopt physical training in most training activities. No matter which sport is trained, physical training is always indispensable. However, the role of functional training has gradually been magnified under the development of the field of rehabilitation, and it has deeply affected the sports world [1]. Also because of this, more and more athletes start to pay attention to functional training. Therefore, a high focus has been placed on the research between functional training and physical training in the academic circles.

## 2. The Concept of Physical Training and Its Characteristics

Before understanding the concept of physical training, we need comprehend physical fitness. The so-called physical fitness involves many factors, such as the athlete's body shape, physical quality, and physical function. Body shape refers to specific indicators like the height, weight, and body fat percentage of athletes; physical quality refers to a comprehensive ability that combines the athlete's ability to exercise and athletic ability; physical functions, which are divided into physiological and psychological functions, refer to the physiological functions of athletes' body organs and the psychological functions reflected in sports at the same time[2]. Therefore, we can see that physical fitness generally has a great relationship with congenital genetic factors and is more closely related to acquired training. As athletes get older, all hereditary factors in physical fitness gradually decrease, and training factors begin to increase. Hence, the purpose of physical training is generally to help athletes significantly improve all their athletic qualities and physical functions, such as the speed shown in sprints, the strength shown in shot throws, the endurance and coordination shown in long-distance running, the sensitivity shown in playing basketball and the flexibility shown in flexible sports. So physical fitness training is a special training method to help athletes adapt to the physical qualities and athletic qualities that need to be displayed in sports [3].

## 3. The Concept of Functional Training and Its Characteristics

Functional training can be understood as training with purpose. This training started from rehabilitation. Generally, when treating athletes with muscle injuries, the rehabilitation therapist usually thinks that the reason for muscle damage is that the athlete's stable muscle function is not stable enough, causing compensatory work in other muscle groups transferred from the force. Therefore, functional training can also be understood as a kind of purposeful training for specific target muscle groups. The difference from general physical training is that functional training is not a simple purpose of training muscle shape or increasing muscle volume. It does not require athletes to increase the strength of the target muscle group in a specific series of actions. Instead, it requires that the athlete's muscles and sports awareness are unified and the utilization rate of the athlete's own neuromuscular system becomes higher. At the same time, the small muscle groups of the athlete can be

effectively improved in the functional training, and the injury in sports can be reduced. Functional training helps athletes use the motor nervous system to control the whole body muscles better in the competitions, so that the muscle groups can generate greater energy in the transmission of sports signals. Meanwhile, it improves the sensitivity of the motor nervous system during contraction and expansion, and develops the coordination between the athlete's motor nerve and muscle groups [4].

#### 4. Analysis of the Main Reasons Why Functional Training is Superior to Physical Training

When researching functional training and physical training, studies mostly combining the theory of dynamic chain are carried out in the field of traditional sports. As we all know, the movement cannot be separated from the effective support of various joints of the human body. The synergistic effect of these joints combines to form a holistic movement, that is, the external performance of sports activities [5]. If a joint function is affected by some uncontrollable obstacles in cooperative movement, it is easy to cause the imbalance of the overall movement. Therefore, the human body must effectively control joint functions and coordinated movement of the whole body muscles. And it also need the support from the muscle control of nervous system. In the dynamic chain theory, human movement is regarded as a chain activity composed of a muscle chain and a nerve chain. Related studies have shown that if an athlete's pelvic muscle force is imbalanced, it will directly affect the normal functions of the athlete's back, groin and knee joint. In biology, the concept of compensatory response is very common, and this theory is also applicable to function research in sports. In the overall chain activity, the compensatory response will cause the athlete's pain and strain to transfer. This is due to the working chain of the muscle groups and joints that appear a weakening reaction, and the energy cannot be transmitted to the end and cause energy leak, however, the body also needs to perform high-intensity exercise, which makes other muscle groups perform compensatory work. These series of problems may cause sports injuries. For instance, athletes suffer pain due to uneven hip injury, which can easily be transferred to the waist and cause waist pain. But functional training can help athletes' chain activities to improve their coordination and fluency. Obviously, this is something that traditional physical training cannot do.

In addition, the current purpose of functional training is mostly medical rehabilitation or bodybuilding in the domestic programs. Therefore, in the term of training intensity and training load, functional training is not as good as physical training. But this cannot be concluded that functional training is not suitable for athletes to improve their athletic ability. Taking the forward motion of the contralateral arm to one leg as an example, research shows that functional training helps athletes to improve the coordination among the hip muscles, hamstring muscles, and spine muscles better in this motion training[6]. It can improve the stability of athletes in neural chain activities as well. This can also explain well why many athletes, in spite of being able to adapt to high-intensity physical training, cannot effectively control and adapt to functional sports.

#### 5. Conclusion

As the saying goes, great oaks from little acorns grow. In the comparison between functional training and physical training, we should start with small target functional training first. In terms of competitive sports, more and more coaches and professionals engaged in sports work have begun to focus on the purpose of functional training, and have developed many functional training actions and training systems, which plays a vital role in improving sports foundation of athletes and participator.

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