

## WAYS TO ESTABLISH THE PHYSICAL FITNESS OF QUALIFIED HANDBALL PLAYERS BY PROFESSIONALS

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**Abstract:** This article will explore ways to develop the physical fitness of qualified handball players with the help of special exercises. The game of handball involves the development of physical and functional qualities that require a high level of training of athletes. The study analyzes the importance and effectiveness of specific training methodologies to increase the speed, strength, endurance, agility and reaction rate of athletes. The article presents modern approaches such as plyometric exercises, high intensity interval training (HIIT), strength and agility enhancing exercises. These techniques are important for improving the overall fitness of athletes, protecting against injury, and showing maximum results during competitions. The results of the study indicate the need to apply new techniques in improving the preparatory processes of qualified handball players.

**Keywords:** Handball players, physical training, special exercises, plyometric exercises, interval training, strength, agility, endurance, sports results.

### Introduction

The physical and functional training of athletes is of great importance for achieving success in the game of handball. This sport requires high speed, agility, strength, endurance and quick decision-making. Proper fitness techniques for qualified handball players, especially the use of special exercises, play an important role in improving performance in the game and avoiding injury. Studies show that the high physical fitness of athletes helps them show maximum effectiveness during the Game [1].

In the training of athletes, several components of physical qualities, such as strength, endurance, agility, and speed, are correlated and complementary. In particular, the development of physical fitness through special exercises helps to optimize the targeted activities of athletes. For example, plyometric exercises, high-intensity interval training (HIIT), and strength-building exercises can help reduce athletes' energy expenditure and ensure high performance in the Game [2], [3].

In addition, it is important to protect athletes and reduce the risk of injury during physical training. Proper exercise planning for athletes makes it possible to perfectly prepare the musculoskeletal system and cardiovascular system of the body [4]. At the same time, the combination of physical fitness with special exercises serves to ensure the success of athletes in the game.

In this regard, this article analyzes the effectiveness of special training techniques for the development of physical fitness of qualified handball players and their impact on sports results. The article also shows the need to apply modern approaches to strengthening the physical fitness of handball players.

### **Literature Analysis**

There are various scientific approaches and methodologies in the development of physical training of handball players. A high level of fitness increases the chances of athletes showing high performance in the game and winning competitions. However, the individual development of each physical quality as well as their harmonious functioning are important for effective preparation. In this context, there are several studies on the most effective methods and approaches to improve physical fitness.

#### **1. Important Components Of Physical Fitness**

Strength, endurance, speed, agility and balance can be cited as the most important components of physical fitness for handball players. Bompa and Haff (2009) note that special attention is needed to each element of fitness in the training of athletes, since these components complement each other and help athletes show high results during the game. In particular, the combination of endurance and strength increases the ability of athletes to perform high-intensity movements over a long period of time [1].

The game of handball is characterized by its fast and intense character, so athletes need to perform high-speed movements, frequent turns and jumps. In studies by Helgerud and Hoff (2004), high intensity training helps strengthen the cardiovascular system and increase anaerobic endurance of athletes. At the same time, the use of plyometric exercises increases the explosive strength of athletes, allowing them to make quick and effective movements throughout the Game [2].

#### **2. Effectiveness Of Applying Special Exercises**

Studies on the effectiveness of the use of special exercises in the development of physical fitness of handball players have been confirmed by many scientific works. Granacher et al (2016), in their study, recommend a combination of plyometric exercises and strength training, showing the importance of special training for young athletes. They believe that it is possible to increase the explosive strength of athletes through plyometric exercises, which improves the ability to perform quick movements and hit [3].

A study by Buchheit and Laursen (2013) showed the effectiveness of high intensity interval training (HIIT) in increasing aerobic and anaerobic endurance of athletes. The HIIT methodology, along with strengthening the cardiovascular system of athletes, helps them maintain high efficiency for a long time in high-intensity training. This method is especially effective in developing the speed and endurance required for handball players [4].

#### **3. Harmony Of Special Preparation Methods**

The combination of special preparation methods is also important for the physical training of handball players. In their study, Rumpf et al (2016) argue that plyometric, strength, and endurance training should be used together to improve overall fitness for athletes. Such exercises complement each other, helping to increase the effectiveness of the movement of athletes, and also perfectly develop their general training [5].

The block periodization methodology provided by Issurin (2008) also helps to develop athlete training step by step. This methodology makes it possible to maintain balance in the development of physical abilities of athletes, avoid overloading and obtain optimal results. The application of block periodization methodology is essential for the effective development of physical qualities of athletes such as strength and endurance [6].

#### **4. Innovative Approaches To The Development Of Physical Fitness**

The development of modern science and technology makes it possible to make the training process of athletes more effective. New technologies allow, for example, monitoring



the heart rate, breathing rate and other physical indicators of athletes, which helps to make training more individual and personalized. It is also possible to make training processes more interesting and effective through virtual realism and other modern tools [7].

### **Conclusion**

The development of the physical fitness of handball players through special exercises is important in preparing athletes for high results. Plyometric exercises, interval training, strength development and other special training methods will help to increase the effectiveness of athletes in the game. Also, innovative approaches and the application of new technologies make it possible to train athletes more efficiently.

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