MODERN MEDICINE AND PRACTICE
https://inovatus.es/index.php/ejmmp

EUROPEAN JOURNAL
OF MODERN MEDICINE AND PRACTIC
Vol. 6 No. 02 (Feb - 2026) EJMMP ISSN: 2795-921X

# METHODS FOR IMPROVING AND CONTROLLING THE AGILITY OF STUDENT HANDBALL PLAYERS

***Abduyeva Sitorabonu Savriddin qizi***

*Bukhara State Pedagogical Institute Associate Professor of the Department of Physical Education and Sports*

**Abstract:** The article discusses effective means and control systems for improving the quality of agility in handball teams of female students studying in higher educational institutions. The study analyzed a set of special exercises aimed at developing reactive agility and the ability to quickly change direction. It also describes modern tests used to assess the physical condition of female students and their impact on game performance.

**Keywords:** Handball, female students, agility, reactive ability, control tests, coordination, speed of direction change.

## Introduction

Handball is characterized by its abundance of unexpected situations and the speed of movement dynamics. For students, agility is not only a physical quality, but also a key factor in achieving superiority in tactical situations. In modern handball, the concept of "agility" is divided into two parts: a planned change of direction and a quick reaction to an external signal (reactive agility).

The growth of results in handball, the improvement of the quality of the game depend on many scientists, among whom agility certainly does not occupy the last place. The qualitative level of development of this movement indicates the level of preparation for all sports. Therefore, great attention should be paid to the theory and methodology devoted to agility. However, the analysis in the scientific-practical pedagogical and medical-biological directions shows that there are very few scientific works devoted to the study of methods for developing agility, paying more attention to physical qualities such as strength, speed, flexibility, and endurance. Two main reasons have led to this situation: 1) there are conflicting opinions on the definition of agility among all physical qualities; 2) there are not enough objective measurement criteria for its assessment. Therefore, difficulties are encountered in conducting research on improving agility.

When measuring agility, it is advisable to study the following:

a) the complexity of the movement to be performed (passing various obstacles set at different distances);

b) its accuracy;

c) the speed of execution.

In addition, the ability to see in agility meters depends on the analyzer of attention distribution and skill. Much work in this direction has been carried out in such sports (gymnastics, diving and other sports), which determine the results achieved in this area, both in coordination abilities and in sports and technical training. A study was conducted on the rapid mastery of coordination of simple movements and complex movements in different coordinations in more than 900 children by means of film recording. A decrease in the efficiency of performing simple movements performed by hands in the transverse direction was observed. Children with high abilities easily mastered movements of varying degrees of complexity. They stopped at the following method of assessing the available abilities by geometric, mechanographic and film methods:

1) coordination abilities (including agility) depend on the level of sports skills;

2) the proportionality of movements and results in competitions are inextricably linked;

3) abilities Gymnasts at a high level quickly and better remember and perform tasks of varying complexity, and repeat them.

Well-developed muscle sensitivity in qualified athletes determines the accurate and rapid development of new movement patterns. Having studied the changes in the kinesthetic analyzers of 230 participants in the study of various specialties aged 18 to 25 years in the process of regular sports training (measurement method: M.I. Zhukovsky's supine kinematometer and my own upright kinematometer), it was concluded that under the influence of regular sports training, kinesthetic sensitivity significantly increases, and an improvement is observed in the movement analyzer. Athletes have the highest muscle accuracy, and skiers have the lowest. The high accuracy of athletes-athletes is associated with the specific organization of training sessions. The main goal of training is the accurate execution of various movements in technical and tactical situations. In skiers, the use of the tools used The scale is not so large, in training they fight not for accuracy, but for the superiority of efficiency. When conducting research on the formation of accuracy of movements using goniometric and kinematic methods, it is shown that the accuracy of movements conditionally consists of three components: force, time and presence. The accuracy of the development of each component to a certain extent affects the accuracy of the entire movement.

The following standardized tests are recommended to monitor the agility level of students:

• Illinois Agility Test: Widely used to determine general agility and turning speed.

• Pro-Agility (5-10-5) Test: Evaluates lateral (sideways) movement and braking ability.

• T-Test: Comprehensively tests forward, sideways, and backward running speed.

• Reactive Agility Test (RAT): Measures the athlete's time to react to an unexpected signal and initiate movement.

They studied the reaction time of highly skilled handball players. The measurements were carried out using a universal electronic neurochronometer - a device that records various movements. 207 handball players participated in the study. They recorded 28,890 reaction times for various movements. The simple feedback effect of the legs and arms, the dilemma defect of the disjunctive legs and arms, the differential feedback effect on the reactivated stimulus signals and the hand braking (DPT), the reaction to the body in motion (RDO) and without visual control (BRZ) were studied. The results showed that in simple movements, the hand movements of the hand players respond faster than the leg movements. (Perhaps this is due to the better development of the upper limbs of the human body); However, the difference between small and large indicators is higher than in the simple and juxtaposition effect of the hands (the difference in hand movements is 67 milliseconds, and in the legs - 58 milliseconds).

In handball, another movement can be a response to one or another situation. There is no identical situation twice. Each player has to constantly change his actions and decisions depending on the activities of his and the players of the opposing team is forced. In such situations, rhythmic agility is the most valued quality, and having it, one can accurately perform all the necessary movements. An analysis of special literature shows that attention is also paid to the method of developing and assessing agility in handball. The best tool for developing this quality is handball. The authors suggest using additional exercises related to acrobatics and sports gymnastics. However, it is difficult to set a special time for situations that require high agility in the game. In addition, handball players try to achieve a good result in the game at the expense of their strengths. So, a player with high strength and speed builds the game through this quality, while those who excel in endurance and stamina compensate for the lack of other qualities through mobility and the ability to move widely.

The following methodological approaches are recommended for developing agility in the training process of female students:

1. Circuit training: 15-minute intensive training blocks that include short-distance acceleration, jumping, and maneuvering with the ball.

2. Ladder Drills: An effective tool for increasing the coordination of foot movements and the frequency of movements.

3. Cone maneuvers: Exercises that involve running in a zigzag pattern through obstacles, with 90 and 180 degree turns.

4. Reactive exercises: Unexpected changes in direction of movement (for example, tricks against an opponent) based on a coach's voice or visual signal.

When improving the agility of female student handball players, it is necessary to use reactive exercises that combine cognitive (thinking) and motor (movement) elements, not limited to running exercises. Conducting regular control tests allows you to properly plan the training process and prevent sports injuries.

**List of References**

1. Isroilov Sh. X. Jismoniy tarbiya va sport nazariyasi hamda metodikasi. – T.: "Fan va texnologiya", 2020.
2. Khabibullayev S.Kh. Sports and movement games and their teaching methods (Handball). Textbook. Tashkent, 2023.
3. ResearchGate. Development of speed endurance, agility and body control in handball.
4. IJCRT. Effect Of Mobility Training On Flexibility And Agility Among Athletes.
5. PMC. Reactive Agility Performance in Handball; Development and Reliability.