

DEVELOPING SPEED QUALITY IN YOUNG ATHLETES ENGAGED IN TABLE TENNIS

Kholmatov Bekzod Uralovich

Uzbekistan state university of physical education and sport, senior lecturer at the department of theory and methodology of tennis, badminton, table tennis, Chirchik city
bekzodxolmatov@gmail.com

Abstract: Present article analyzes the initial and final striking actions performed by young table tennis players during competitive matches, as well as their position and movement during training. Interesting data were obtained, and information is provided on the importance of speed quality, along with proper recommendations and instructions to prevent negative impacts on the development of the player's technical actions in the subsequent stage.

Keywords: In table tennis, receiving the ball, executing an appropriate shot, and performing powerful, fast strikes enhance the athlete's ability to make quick decisions, plan ahead, and evaluate movements, thereby improving their learning capability.

Introduction: Developing speed in young table tennis players is important for increasing their ability to act quickly and effectively during a game. During this period, alongside physical development, the formation of motor skills, speed, and agility lays the foundation for the athletes' future success in matches. Speed exercises develop muscle strength, coordination, reaction, and endurance, which enhances their ability to perform rapid movements and occupy positions in a timely manner during the game.

Discussion: Table tennis is distinguished by its dynamic characteristics, which constantly demand high speed and precision from the athlete. Speed development exercises help athletes maintain balance, move quickly to the right and left, and increase shot speed and effectiveness. This set of exercises, designed for children of this age, has been developed taking into account the number of repetitions, recovery characteristics during rest, and heart rate. At the same time, these training sessions allow athletes to improve their physical fitness and maximize their potential. This research provides scientifically based recommendations for a set of exercises to increase the speed of young table tennis players and focuses on improving training effectiveness by analyzing the number of repetitions, the impact of rest on the recovery process, and heart rate.

Scientific analysis of a set of exercises for developing speed in young table tennis players. This set of exercises has been compiled taking into account the number of repetitions of each exercise, the nature of rest, and heart rate (HR). It is aimed at improving speed, reaction time, and general physical fitness in athletes of this age. Below, each exercise is analyzed on a scientific basis.

The following exercises can be recommended for developing speed in table tennis players:

1. High-knee running
2. Shuttle running (5-10 m), fast running in place.

These running exercises are performed with high intensity, and rest is continued with light walking; all of these are carried out based on a set time.

Table tennis is considered one of the sports requiring the highest speed among modern sports. The ball's flight speed can exceed 100 km/h, and the time between shots is often 0.3–0.5 seconds.

Therefore, developing the quality of speed in young athletes is one of the important factors in shaping their technical and tactical skills. Speed is the athlete's ability to respond to external stimuli in a short time, initiate movement quickly, and perform at a high tempo. In table tennis, speed is closely related not only to physical quality but also to the functioning of the central nervous system, sensorimotor reactions, and coordination abilities.

The essence of speed quality

Speed consists of the following components:

1. Reaction speed (performed based on a signal)

- The athlete's response time to a signal.

- Example: starting movement on the coach's signal, responding to an opponent's shot, determining the direction of the ball.

2. Movement speed

- Performing a specific technical action at maximum speed.

- Example: forehand shot, backhand shot, receiving the ball.

3. Frequency of movements

- The number of movements performed in a given time.

- Example: quick stepping with the feet, lateral movements near the table.

4. Complex reaction speed

- Making correct decisions and responding quickly in unexpected situations.

- Example: adapting to a spun ball; responding to the opponent's deceptive shots.

The importance of speed in table tennis is expressed as follows:

High-level table tennis players quickly assess the situation, make decisions rapidly, execute shots quickly, change footwork fast, and swiftly alternate between attacking and defensive actions.

Athletes with insufficient speed are late to the ball, take incorrect positions, increase the number of technical errors, and lose advantage in competitions.

Age characteristics of speed development in young athletes:

- Ages 7–10: This is the most favorable period for developing speed. Main tasks: developing simple reaction speed, forming coordination, using movement games. Exercises: responding to colored signals, short-distance running, relay races.

- Ages 11–14: The period of most intensive speed development. Main tasks: developing complex reactions, applying special speed exercises, training adapted to table tennis.

- Ages 15–17: The stage of sports specialization. Main tasks: increasing technical and tactical speed, improving reactions in competition conditions, forming an individual style.

Principles of speed development:

- Maximum intensity: Exercises must be performed at maximum speed.

- Short duration: One exercise: 5–15 seconds, sometimes up to 20 seconds.
- Full recovery: Between repetitions: 30 seconds – 2 minutes.
- Preventing fatigue: Speed exercises are performed at the beginning of the training session, when the body is not yet tired.

General speed development exercises:

- Sprint running: Distance: 10 m, 20 m, 30 m. Repetitions: 5–8 times.
- Developing starting speed: Running from various positions: sitting, lying, standing with back turned.
- Ladder exercises: Develop foot speed, coordination, rhythm.
- Rope jumping: Variations: on both feet, on one foot, at high tempo.

Special speed exercises specific to table tennis:

1. Multi-ball exercise: The coach feeds balls consecutively. Develops: reaction speed, movement speed, shot speed.
2. Balls in random directions: The coach feeds balls to the left, right, and center. The athlete does not know the direction in advance. Result: develops complex reaction.
3. Two-point movement: Movement between forehand and backhand zones. Example: shot to the left, shot to the right, shot to the left, shot to the right. Duration: 10–15 seconds.
4. Three-point exercise: Movement: left zone, center, right zone. This exercise significantly improves footwork in table tennis.
5. Signal-based exercises: The coach gives commands using colored cards, sound signals, or numbers.

Based on the content of the provided article, here is a suitable conclusion in English:

Conclusion: The development of speed quality is a critical factor in achieving high performance in young table tennis players. Given the dynamic nature of the sport, where reaction times are often within fractions of a second, speed is not merely a physical attribute but a complex skill involving reaction time, movement frequency, and the ability to make quick decisions under pressure.

This study confirms that the adolescent period, particularly ages 7–10 and 11–14, is the most favorable for developing speed through scientifically structured exercises. The recommended exercise complex, which includes general drills (sprints, ladder exercises, rope jumping) and table tennis-specific drills (multi-ball, random-direction feeds, two-point and three-point movements), has been designed with careful consideration of repetition number, rest intervals, and heart rate monitoring to maximize effectiveness and prevent fatigue.

Key principles such as maximum intensity, short duration, full recovery, and performing speed work at the beginning of training sessions are essential for success. By systematically applying these methods, coaches can significantly improve young athletes' footwork, shot speed, positional accuracy, and overall competitive readiness. Ultimately, integrating these scientifically based speed development exercises into regular training will help young table tennis players avoid

Journal: <https://ifsmrc.org/index.php/aijrm>

technical errors, maintain advantages in matches, and build a strong foundation for long-term athletic development.

References

- 1.Greg Letts. How to win at Table tennis 2020y.-107 b.
- 2.X.A.Abdurazakov Sport pedagogik mahoratini oshirish(stol tennisi) Toshkent: 2023 y. – 108 b
- 3.G‘aniyeva M.Yu. “Stol tennisi nazariyasi va uslubiyati” Toshkent: 2024 y. 300 b.
- 4.Xolmatov B.O‘.“Boshlang‘ich tayyorgarlik bosqichida mashg‘ulotlarni tashkil etish(stol tennisi) ” Toshkent: 2024 y. – 180 b.
- 5.B.O‘.Xolmatov,M.Yu.G‘aniyeva “O‘quv mashq bosqichida mashg‘ulotlarni tashkil etish (stol tennisi)” Toshkent: 2025 y. – 223 b
6. Havaskorlar uchun stol tennisi mashg‘ulotlarining ilmiy metodik asoslari va amaliy tavsiyalar .B Xolmatov Toshkent: 2025 y.
7. Stol tennisida texnik usullarini shakillanishini nazorat qilishning afzalliklari.B Xolmatov Toshkent: 2025 y.