

# Application of the "Play and Stay" program in the training of tennis players up to 10 years

Dmytro Krylov  
Liudmyla Shesterova

Kharkiv State Academy of Physical Culture, Kharkiv, Ukraine

**Purpose:** based on the analysis of literature sources and the experience of coaches, to determine the advantages of using the "Play and Stay" program in the training of young tennis players.

**Material & Methods:** in the course of the study, the following methods were used: analysis and generalization of literary sources, generalization of the pedagogical experience of the trainers work.

**Result:** processing accessible to us literary sources has allowed defining advantages and lacks of application of the program "Play and Stay" in preparation of tennis players up to 10 years.

**Conclusion:** it is determined that the program "Play and Stay" is necessary for the training of tennis players up to 10 years, but when they go to standard balls there is a distortion of technical elements that requires a certain correction.

**Keywords:** tennis, tennis players under 10 years, the program "Play and Stay".

## Introduction

The problem of manufacturing and selection of equipment constantly excited and worried about experts in the field of tennis. Since the advent of tennis, in 1887, until the mid-1970s tennis racquets were made of wood, the rebound coefficient of the ball from such rackets was only 0,35. Since the mid-1970s metal was used to make rackets, which contributed to a certain increase in the rebound coefficient. With the advent of composite materials based on graphite, which are used to manufacture racquets at the present time, the rebound coefficient of the ball increases to 0,7. The work of F. K. Agashin, L. S. Zaitseva, S. Groppel, A. Jones, B. Wood [3] is devoted to solving the problem of selecting rackets and balls for adult players. Features of selection of equipment for children studied G. P. Ivanova, A. F. Bocharov, L. A. Konovalova, T. S. Gryadkina [3].

In the early 90s of the last century, the world's manufacturers of tennis equipment have a line of children's racquets that have different lengths, weights, the area of the string surface, the thickness of the strings, the strength of their tension. Smallest racket has a length of 19 inches, which corresponds to 48,26 cm. The availability of such equipment made it possible to recruit children for tennis from the age of 4. Fast and heavy standard tennis balls do not allow young tennis players to effectively master the technique of the game at the initial stage [3]. They have a high and fast rebound, which causes certain difficulties in the game for young athletes. This discrepancy was eliminated by the International Tennis Federation (ITF) by adopting a program in 2008 "Tennis 10s", "Official program of the International tennis Federation, 2008". The motto of the program "Play and Stay" is play and develops. It assumes a step-by-step structure for developing a game of tennis for children under the age of ten. Aware of the need for such a program, it should be noted that as a result of its application in transition to training with standard equipment, athletes have technical problems [1].

**The purpose of the research:** based on the analysis of lit-

erature sources and the experience of coaches, to determine the advantages of using the "Play and Stay" program in the training of young tennis players.

## Material and Methods of the research

In the course of the research, the following methods were used: analysis and generalization of literary sources, generalization of the pedagogical experience of the work of trainers.

## Results of the research and their discussion

The program "Play and Stay" divides the preparation of children into three levels: red, orange and green. Yellow level – level of adult players. Each level of training corresponds to its own types of "slow" balls, the size of racquets and courts, special formats for the competition (shorter matches, simplified scoring system).

Red level corresponds to the initial stage of the game of tennis and is recommended in the age groups up to 8 years. Task of this level: to quickly teach the player to serve and play balls, play on the account. Players learn the skills of holding the ball in the game, introducing the ball into the game, solving simple tactical tasks. Rackets used at this level have a length of 48,26 cm to 58,42 cm. For the game use both foam rubber and felt balls. The balls used at this level have the largest diameter, compared to balls at other levels. Red balls are 75% slower than standard balls. Purpose of the red level is to learn the skills of simple movements and learn techniques related to solving tactical tasks that the player encounters at this level. The size of the court for the red level: length – 11–12 m, width – 5–6 m, height of the net 80 cm.

Second level of the program is orange. The optimal age for the transition to this level is eight years. For this level, rackets from 58,42 cm to 63,5 cm long are recommended. Court dimensions: length – 18 m, width – from 6,5 to 8,23 m, mesh height 80 cm. At the orange level, balls with standard diameter, but 50% slower, lighter in weight and having a lower re-

bound height. This level corresponds to the following system of competitions: matches, consisting of three tie-breaks, or sets up to four games. At this level of the program, players master the game from summer, learn to play along the entire length and width of the site, attack and defend themselves.

Third – the highest level of the program – green, recommended to players 9–10 years. At this level, players use racquets ranging in size from 63,5 cm to 66 cm and green balls. Green balls are 25% slower than standard balls, they have less weight, less bounce height from the court surface and less internal pressure, compared to standard balls. Court has standard sizes. Players at this level learn to control the entire area of the site, master the technical elements for solving tactical tasks when playing around the court. Competitions at this level are conducted on a system of one or three sets to 4 games. Players start participating in regional competitions.

By the age of 10 years, the player is ready to switch to a standard-size racket (67,5 cm) and standard yellow balls.

Using slow balls for each of the levels of the program allows children to meet the ball after bouncing off the court at points that correspond to their anthropometric data and generated motor skills. Playing these balls creates a lesser load on the locomotor apparatus of the child.

In Figure 1 shows the characteristics of the types of balls used in the ITF "Tennis 10s" program and standard yellow balls.

Program "Tennis 10s", its advantages in comparison with other programs, was dedicated to the 51st scientific and practical conference of the International Tennis Federation, where representatives of various countries and tennis schools offered to consider practical work of trainers for the use of slow balls in training children under 10 years [4–15]. Along with other issues discussed at the conference, the problem of matching balls used in the training of young tennis players, their growth (Table 1).

One of the reasons for using slow balls in tennis is the percentage ratio between the growth of a young athlete and an adult player of 19 years (Table 2) [11].

Quick and convenient development of the account in tennis and tennis rules for children under 10 is devoted to the performance of S. Procter [14].

Since 2010, the program "Tennis 10s" has been implemented in Ukraine. Tennis clubs in Ukraine use slow balls, shortened racquets, reduced court sizes for teaching children under

**Table 1**

**Conformity balls tennis player growth**

No. i/o	Balls used in the program "Tennis 10s"	Athlete's height (cm)
1	Standard yellow balls with a pressure of 100%	135–147
2	Green balls with a pressure of 75% of the standard	118–132
3	Orange balls with a pressure of 50% of the standard	110–115
4	Red balls with a pressure of 25% of the standard	85–105

**Table 2**

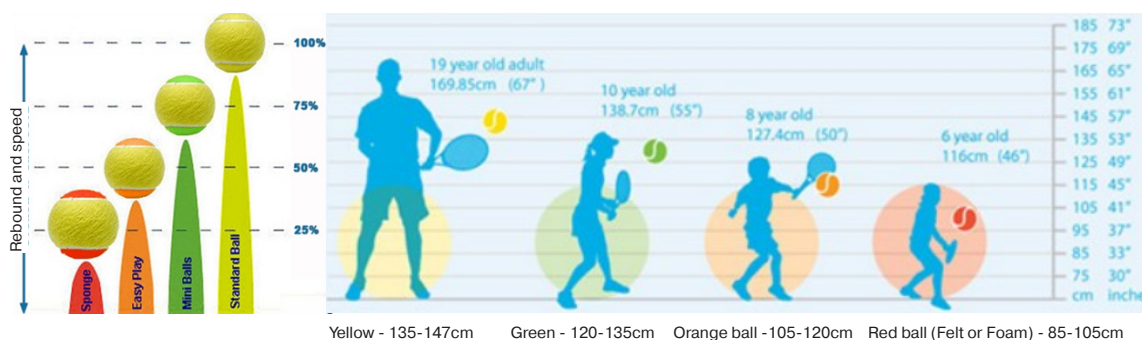
**Ratio of the growth of a young tennis player and an adult player of 19 years**

No. i/o	Age	Height (cm)	% of the growth of an adult
1	5	110	64,8
2	6	116	68,3
3	7	121,8	71,7
4	8	127,4	75
5	9	133	78,3
6	10	138,7	81,7
7	19	169,85	100

10 years old [2]. By the age of 10 young tennis players play green balls and rackets 66 cm long. Features of tactics and techniques of 10-year-old tennis players are considered in detail by W. Elderton [8]. He points out that during the game young tennis players exchange balls; the speed and height of the bounce from the court are at least 25% less than those of yellow balls. The area of contact of such a ball with the string surface of the racket is much larger than that of the yellow balls. This allows the young player to hit the ball not necessarily the center of the racket, allows you to accurately guide the balls without the necessary for the yellow balls of accompaniment. In addition, green balls allow you to move the racket more slowly.

According to the regulations of the Tennis Federation of Ukraine, competitions for athletes under 10 years old are held with green balls. After 10 years, when a young tennis player is allowed to participate in the official tournaments of the Tennis Federation of Ukraine, he starts playing with yellow balls [2]. A survey of 20 coaches in Kharkov made it possible to establish that with the transition to the game with yellow balls, an athlete should use racquets of standard size.

Change of balls and rackets leads to a change in the pace



**Fig. 1. Characteristics of the balls used in the ITF "Tennis 10s" program and standard balls [16]**

of the game of young athletes. Yellow balls bounce faster and higher from the surface of the court. They have a lower compression ratio, which leads to a reduction in the area of contact between the string surface of the racket and the ball. Standard racquets are longer than junior racquets, which increases the distance to the point of impact relative to the player's brush. These factors lead to a distortion of the technique of performing strikes on the ball by ten-year-old tennis players. There is a need for their correction. Correction extends to all the elements of tennis players' technique, such as a kick to the right with a rebound and from summer, a blow to the left with a rebound and from summer, serve and smash. There is a need to change the beat rhythm, accelerate the swing and the speed of carrying the racket to the ball, increasing the length of the ball with the racket. Athletes perform blows from a rebound in open racks. This leads to a change in the legs when the player approaches the ball. When striking from the summer, feeding and smesh need a greater concentration of the player's attention to the ball, an increase in the length of accompanying the ball with a racket, greater rigidity of fixing the handle of the racket with a brush at the moment of contact with the ball. Proceeding from the above, there is a need to

correct the technique of ten-year tennis players in the transition to standard balls.

## Conclusions

1. Analysis and generalization of literary sources made it possible to establish that the application of the program "Play and Stay" makes it easier to train young athletes in technical and tactical methods of tennis.

2. Results of the research indicate that changing balls and standard racquets leads to a change in the pace of the game, the technique of carrying out strikes and feeds, the speed and rhythm of the tennis player's movements on the court, therefore, in order to successfully compete in competitions, it is necessary to correct all technical elements, taking into account the changed conditions.

**Prospects for further research.** It is proposed to search for the most rational ways of correcting the technique of 10 years tennis players with the transition to the game with standard balls and rackets.

**Conflict of interests.** The authors declare that no conflict of interest.

**Financing sources.** This article didn't get the financial support from the state, public or commercial organization.

## References

1. Krylov, D.S. & Shesterova, L.Y. (2016), "Assessment of technique of tennis players of ten years old", *Slobozans'kij naukovno-sportivnij visnik*, 4 (54), pp. 47-52, doi: 10.15391/sns.v.2016-4.014 (in Russ.)
2. Tennis Federation of Ukraine (2017), Regulation of "Tennis Federation of Ukraine" in 2017, available at: [http://www.ftu.org.ua/libs/spaw2/uploads/docs/reglament\\_ftu\\_2017.pdf](http://www.ftu.org.ua/libs/spaw2/uploads/docs/reglament_ftu_2017.pdf) (in Ukr.)
3. Zhang Xiaoquan (2012), *Nachal'naja podgotovka detej 6-10 let v tennis na osnove ergonomicheskogo podchoda: diss. kand. ped. nauk* [Initial preparation of children 6-10 years in tennis on the basis of ergonomic approach: PhD thesis abstract], St. Petersburg, 146 p. (in Russ.)
4. Anderson, K. (2010), "Quick Start Tennis", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 15-16.
5. Barrell, M. (2010), "Incoming!: Reception Skills", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 7-8.
6. de Boer, J. (2010), "How the Tennis Industry Will Be Affected by Tennis 10s", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 11-12.
7. Declercq, L. (2010), "10 and under competitive framework in Belgium", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 9-10.
8. Elderton, W. (2010), "Tactical & Technical development considerations for 10 and under players", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 18-19.
9. Cabral, V. (2010), "Tennis 10s and Play and Stay in Portugal", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 24-25.
10. Crespo, M. (2010), "Psychological issues when dealing with 10 & Under tennis players", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 20-21.
11. Miley, D. (2010), "Serve Rally and Score....The ITF tennis Play and Stay Campaign and Tennis 10s", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 3-4.
12. McEnroe, P. (2010), "The importance of slower balls and smaller courts in developing high performance 10 and under players", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 26-28.
13. Newman, J. (2010), "Why smaller balls and smaller courts for 10 and under players?", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 5-6.
14. Procter, S. (2010), "Helping children to learn scoring and rules", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 13-14.
15. Tennant, M. (2010), "Competition Formats and Considerations for 10 and Under Players", *ITF Coaching and Sport Science Review*, Vol. 51, pp. 22-23.
16. ITF (2017), Play+Stay, available at: <http://www.tennisplayandstay.com/tennis10s/about-tennis10s/about-slower-balls.aspx> (accessed 14 November 2017)

Received: 07.11.2017.

Published: 30.12.2017.

## Information about the Authors

**Dmytro Krylov:** Kharkiv State Academy of Physical Culture: Klochkivska str. 99, Kharkiv, 61058, Ukraine.

**ORCID.ORG/0000-0002-7606-0638**

**E-mail:** d\_krilov@mail.ru

**Liudmyla Shesterova:** PhD (Physical Education and Sport); Associate Professor, Kharkiv State Academy of Physical Culture: Klochkivska str. 99, Kharkiv, 61058, Ukraine.

**ORCID.ORG/0000-0001-8777-6386**

**E-mail:** lydmula121056@gmail.com