

## MULTI BALL TRAINING METHOD

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**ABSTRACT.** *Multi ball training method.* The multi ball method was first introduced by the Chinese. It can be successfully applied in one-to-one situations (such as private coaching), where the coach is working with just one player, but it can also be used successfully with a 1:2 ratio of coach to players. Multi ball training implies hitting the ball at different spins, power, speed and the placement in different combinations. Continuous hitting the ball removes the time wasted picking up the ball, increasing thus the intensity of training and helps to improve drills execution by strengthening difficult moves. **Material and methods:** sixteen table tennis junior II level players of the Politehnica Sports Club of Cluj-Napoca were involved in this study. The participants were divided into two groups: the Experimental group (n=8) and the Control group (n=8). For two years, the players attending experimental group have performed trainings by alternating the multi ball method with regular methods. **Results:** Differences were noticed between the Experimental and Control group results. The Witness group results were improved comparing with the previous testing however the lack of improvement and of higher play consistency impeded further progress. Players of experimental group achieved better results on contests, being highly trained both from technical and tactical point of view as well as physical and psychological perspective. **Conclusions:** The players' training requires the improvement of technical procedures by acquiring them as correctly and effectively as possible, using methods and means suitable to their skills.

**Keywords:** *multi ball, table tennis, technical procedures*

**REZUMAT.** *Antrenamentul cu multe mingi - cutia cu mingi.* Metoda de antrenament – cutia cu mingi este o metodă, care a fost introdusă pentru prima dată de către chinezi. Aceasta poate fi aplicată în situații de unu la unu (cum ar fi coaching-ul privat), în cazul în care antrenorul lucrează doar cu un singur jucător, dar poate fi, de asemenea, utilizată cu succes și în raport de 1:2, antrenor și doi jucători. Antrenamentul cu multe mingi presupune lovirea mingii cu diferite

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rotații, forță, viteză, plasare în combinații diferite. Lovirea mingii în continuu înlătură timpii morți provocați de culegerea mingilor măbind astfel intensitatea antrenamentului și contribuie la îmbunătățirea executării exercițiilor prin consolidarea mișcărilor dificile. **Material și metode:** la acest studiu au participat șaisprezece jucători de tenis de masă, juniori II din cadrul Clubului Sportiv Politehnica Cluj-Napoca. Participanții au fost împărțiți în două grupe: Experimentală (n=8) și de Control (n=8). Timp de doi ani, sportivii din grupa experimentală au efectuat antrenamente în care s-a mizat pe alternarea cutiei cu mingi cu metodele obișnuite. **Rezultate:** S-au observat diferențe între rezultatele grupelor Experimentală și, respectiv Control. Grupa martor a crescut și ea față de testările trecute, dar faptul că nu a beneficiat de acumulare, de o siguranță mai mare la masă a împiedicat-o să progreseze mai mult. Sportivii grupei experimentale au obținut rezultate mult mai bune la competițiile la care au participat, având o pregătire foarte bună, atât din punct de vedere tehnico-tactic, cât și fizic și psihologic. **Concluzii:** În instruirea sportivilor se impune îmbunătățirea procedeele tehnice printr-o însușire cât mai corectă și economică a acestora, folosind metode și mijloace adecvate nivelului de cunoștințe ale sportivilor.

**Cuvinte cheie:** *cutia cu mingi, tenis de masă, procedee tehnice*

## Introduction

Table tennis being a duel game, the effectiveness of training is proportional to the strengths of the challenger. The availability of suitable level sparring partner is a big challenge for organizing any training sessions. Coaches of advance and high level players face more of this challenge, to find a right partner for training. One of the means to overcome this challenge and have a very effective training session for technical and tactical aspect is by using multi-ball training (Master Thesis, China Papers, 2012).

Multi-ball training in table tennis is an effective training method. Multi-ball training with different means of rotation, strength, speed, placement, arcs, combinations of different technologies and continuous ball hitting can compensate for the fewer to-and-fro times, more space and other weaknesses, in order to improve the exercise efficiency and make athletes grasp and strengthen a variety of difficult movements. Secondly, continuous hitting in multi-ball training can effectively increase the density and strength of the training, which not only strengthens the improvement of techniques and tactics, but also plays a role in training athletes' quality and will (Wei Zheng, Keyi Jin, 2016).

## Research Subjects and Methods

### *Research Subjects*

The experiment was conducted at the Politehnica Sports Club of Cluj - Napoca during the years 2016-2018. They were included 16 athletes, juniors II, divided into experimental group (8 athletes) and control group (8 athletes).

### *Research Methods*

Documentation: search and collect literature on multi-ball training in table tennis in domestic sports journals by hand or computer to provide a theoretical basis of this thesis.

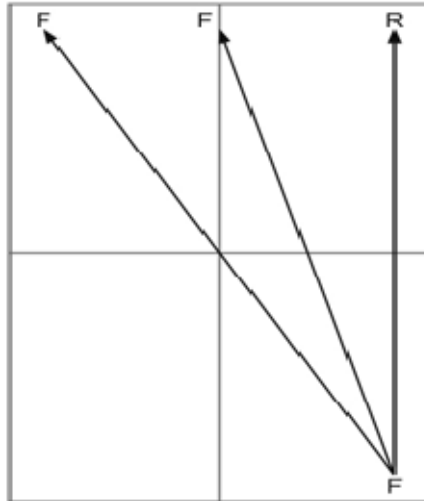
### *Experimental Methods*

Both the experimental and the control group are mixed groups containing 8 players each. The experiment has been performed on groups training in the same conditions on initial, intermediary and final testing. The experiment lasted for two years, and consisted in the use of regular methods (drills performed with partners) for the witness group and the alternative use of multi ball and regular methods for the experimental group.

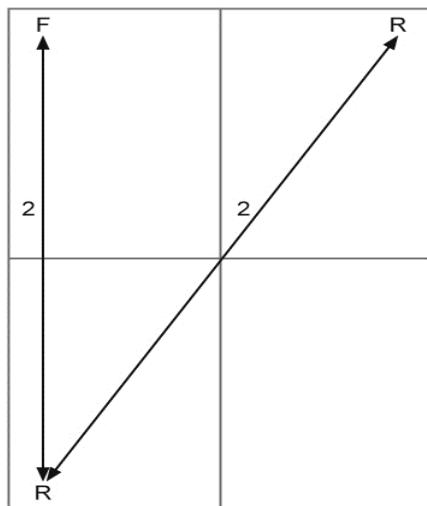
At the beginning of the experiment, both groups were put to the initial tests consisting of three combined drills of table tennis in order to observe the number of correct strokes. These initial testing was identically made, both groups having the same type of training and preparation methods.

These three **combined drills**, that will be resumed during the final and intermediary tests are:

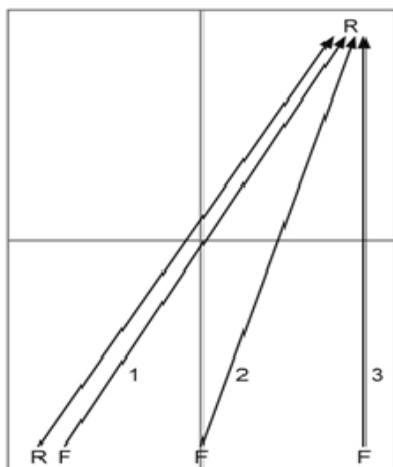
1. Forehand counter – forehand counter – backhand counter to the opponent's backhand (F-F-R→F); **Fig.1**
2. Forehand 2 counter – 2 backhand counter to the opponent's backhand (2F-2R→R); **Fig.2**
3. Cross backhand counter optionally followed by forehand from the backhand side, followed by forehand counter from the middle, followed by forehand counter down the line from the forehand side (R-F-F-F→R). **Fig.3**



**Fig. 1.** Forehand counter - forehand - backhand counter to the opponent's forehand (F-F-R→F)



**Fig. 2.** Forehand counter 2 forehand-2 backhand to the opponent's backhand (2F-2R→R)



**Fig. 3.** Cross backhand counter optionally followed by forehand from the backhand side, followed by forehand counter from the middle, followed by forehand counter down the line.  
(R-F-F-F→R)

## Results and Discussion

The results obtained by the two groups on the 3 drills at the **initial and final testing**:

**Table 1.** Experimental group results

Nr.	Name	Initial testing			Finale tests		
		Theme 1 F-F-R→F	Theme 2 2F-2R→R	Theme 3 R-F-F-F→R	Theme 1 F-F-R→F	Theme 2 2F-2R→R	Theme 3 R-F-F-F→R
1	L.G.	10	14	12	15	19	18
2	S.D.	12	10	13	16	16	19
3	Ş.A.	13	12	11	18	19	16
4	A.K.	14	9	12	19	17	15
5	C.A.	10	10	10	15	15	18
6	O.M.	11	14	14	16	21	20
7	R.T.	12	10	12	18	17	19
8	T.M.	14	13	12	20	17	18
<b>Sum</b>		<b>94</b>	<b>92</b>	<b>96</b>	<b>137</b>	<b>141</b>	<b>143</b>

**Table 2.** Witness group results

Nr.	Name	Initial testing			Finale tests		
		Theme 1 F-F-R→F	Theme 2 2F-2R→R	Theme 3 R-F-F-F→R	Theme 1 F-F-R→F	Theme 2 2F-2R→R	Theme 3 R-F-F-F→R
1	L.G.	10	14	12	15	19	18
2	S.D.	12	10	13	16	16	19
3	Ș.A.	13	12	11	18	19	16
4	A.K.	14	9	12	19	17	15
5	C.A.	10	10	10	15	15	18
6	O.M.	11	14	14	16	21	20
7	R.T.	12	10	12	18	17	19
8	T.M.	14	13	12	20	17	18
<b>Total</b>		<b>94</b>	<b>92</b>	<b>96</b>	<b>137</b>	<b>141</b>	<b>143</b>

On **initial testing**, based on the individual results of the players on each of the three combined drills and from the total of each group on the same drills, it outcomes that the players of the two groups are approximately equals from the technical perspective of mastering the technical and tactical procedures of table tennis. In addition, we mention that until initial testing, the players performed the same type of training (drills with partners, general and specific physical training). It's worth mentioning that, the players participated in both official and amicable contests, where the players of the two groups obtained approximately the same value results, both in individual and team contests.

The experimental group trained using the multi ball three times a week, while the control group continued to practice only with partners. Trainings of the experimental group were more complex, being conducted in two ways:

- accumulation (multi ball) and drills with partners during the offseason competition period;
- drills with partners and emphasis on the game, before contests;

The results on intermediary testing reveals a progress of the experimental group, comparing with the control group, which is due to the multi ball training made by the players of experimental group, who had more control during play. The results obtained in official contests were also different, the experimental group achieving notable results.

**Final tests** revealed an increased performance of the experimental group comparing with the control group, the differences increased both in individual and overall contests. The control group had improved results comparing with the previous testing, but the lack of accumulation and control impeded its further progress. The players of experimental group achieved significantly better results in official competitions, being very well trained from technical and tactical perspective as well as from physical and psychological viewpoint.

### **The Application of Tactical Combination in Multi Ball Training**

When do tactical training for athletes, multi-ball training is a good choice. In the technical combination training in table tennis, the quality of training and the results in some technical training content with single ball training methods and means are not ideal. It is susceptible to opponents' ball quality and cannot reach the continuously, if you use the single ball training method, the ladder player cannot master well and it is easy to clean the ball. In addition, the ball is not high quality which will affect the continuity and exercise difficulty. However, these problems do not exist in multi ball training, which ensures the quality and intensity of training. In a tactical combination, we should accelerate the speed as much as possible in accordance with the tactical set and acceptable range for athletes, in order to improve athletes' response threshold to adapt to fast ball speed in actual games (Wei Zheng, Keyi Jin, 2016).

### **Conclusion**

Multi ball is great and can really help to increase the speed of your development. It's extremely versatile and can be used for players at all levels. Multi-ball training method has an obvious effect on improving players' technical and tactical levels, special qualities and will.  
(<http://www.experttabletennis.com/use-multiball-training-to-speed-up-your-table-tennis-development/>).

One is the formation of movements and correction of the techniques. The density and intensity of multi ball training is stronger than the single ball training. Second is to strengthen the footwork exercises. Due to the good continuity in multi ball training, trainees can run continuously. For example: when practice the above in the full court, the trainee may run continuously for about 30 balls. This is difficult to achieve in the single ball training. In addition,

multi-ball training can practice a variety of footwork, including front and rear footwork, left and right footwork, and some combination footwork. Based on each player's weaknesses, we can also make targeted exercise. Third, it could improve the combination ball techniques. Using the Multi ball training method to practice combination techniques may increase plate times, which is fewer in the single ball training. It can also improve athletes' response ability. Use different placements and different speeds of the ball to improve the combination ball techniques. Fourth, the develop athletes' good will to never give up in the face of adversity. Moreover, they will do not relax at the lead and do not hesitate in the face of pressure. In the face of fatigue they can withstand it. All these are necessary qualities for modern table tennis athletes (Wei Zheng, Keyi Jin, 2016). After the implementation of 11 Points Competition System, it requires the athletes to have stronger mental qualities. In the multi ball training with high-intensity, high-density and highly complexity, it requires athletes to insist on that, struggle it and never give up easily. It is effective to exercise athletes' willpower.

## REFERENCES

- Doboși Ș., Apostu P. (2009). *Metodologia instruirii în jocul de tenis de masă*. Editura Napoca Star, Cluj-Napoca.
- Lacombe, B. (2013, February 13.). *Use Multi ball Training To Speed Up Your Table Tennis Development*, Retrieved from:  
<http://www.exeprttabletennis.com/use-multiball-training-to-speed-up-your-table-tennis-development/>.
- Letts, G. (2008). *Multiball Table Tennis Training – Using Multiball in Your Ping-Pong Practice*. Retrieved from  
<http://tabletennis.about.com/od/trainin1/a/multiball.htm>.
- Multi ball training method in table tennis: technical and tactical application of combination*. Master Thesis, China Papers (2012). Retrieved from:  
<http://mt.china-papers.com/6/?p=202756>.
- Wei Z., Keyi J. (2016). *Multi Ball Training Method: A New Attempt of Table Tennis Training in Colleges and Universities*. 5th International Conference on Social Science, Education and Humanities Research (SSEHR).