



Exercises to learn and correct the serve.

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ABSTRACT

This article presents different exercises aimed at learning and correcting the serve. It explains key aspects of the serve such as the arm external rotation and the flexibility on the extension of the back. It also proposes exercises that can be used for the psycho-motor stage, for the preparation stage, for adults, and for prevention and warming up.

Key words: Serve, Exercises, Learning.

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INTRODUCTION

After having tested and evaluated a number of players over a long time, I consider that primary motor learning is key. It prevents the future player from having important limitations in this movement and reduces the risk of injury when working on the serve. We must consider the movement of the shoulder joint, but it is necessary to differentiate if it is a throwing or an impacting movement.

For a long time we said that Argentinians did not serve well because their primary education did not include enough sports that involved throwing. This is partially true, but we must also consider whether we are talking about movements that involve throwing objects (baseball, basketball) or movements in which the shoulders have a resistance role (swimming, volley ball, etc.).

I consider it very important, from the psycho-motor stage from mini tennis up to the professional or adult stage, to perform movements that are consistent with the motor action that we expect for the player in the future.

The exercises must be related to the sensitive motor stage the child is in, and carried out with the alternative element that favours the correct motor print. This will allow the right transmission from the racket to the tennis ball.

Before going straight to the exercises, I would like to make a brief introduction about the importance of the external rotation of the arm, and the flexibility in the extension of the back. Bob Prichard has written a very interesting article on the subject.

External rotation of the arm

Recent research shows that an important factor always present in all good servers is that their external rotation of their arm is noticeably greater than that of other players.

This knowledge will help us to work in order to improve this aspect from early stages so that the player can reach his/her maximum potential.

Flexibility in the extension of the back

This aspect is not vital to service performance but it cooperates with the external rotation of the arm, and it can be developed by stretching the abdominal muscles.

It is important to use alternative working elements like elastic bands, medicine balls, American football balls, different types of balance platforms, etc.

We must have a whole set of different exercises, since each individual has his/ her peculiarities and it is not always possible to use the same approach to solve a problem.

The exercises we are going to present can be classified as follows:

1. Exercises for the psycho-motor stage.
2. Exercises for the preparation stage.
3. Exercises for the competitive stage.
4. Exercises for adults.
5. Preventive and warming up exercises.

EXERCISES FOR THE PSYCHO-MOTOR STAGE

At this sensitive stage of the child's development, the exercises related to the serve motor movement aim at working with the primary print of a movement that requires a lot of coordination of the different levers. This movement will have a fundamental role in the game. At this stage we must dissociate and target the development of the different skills that are needed for the serve.

We must work on the following serve skills:

1. Balance

Balance is an element of motor skills that evolves with age and is closely connected to the maturity of the central nervous system. At the age of four the child can improve their dynamic balance and at about seven they can keep their balance with closed eyes.

2. Jumping

This motor skill in which the body is in the air because of the impulse generated by one or both legs, requires balance and coordination. No doubt, jumping is a more difficult skill than running; it implies more vigorous movements, in which the time in suspension in the air is greater.

3. Throwing

We must consider the relationship between this technical movement and the serve. When throwing, the non dominant arm is involved (to toss the ball). The types of throwing we find in beginner children include:

- Over the shoulder throwing.
- Lateral throwing.
- Back- forward throwing.

We are going to focus on the forward throwing only.

4. Hitting

The skill of hitting implies using the dominant arm with an object (the racket) to hit another (the ball). It is necessary to involve the technical movement of the serve, a complex movement in itself. Hitting skills take place in different planes and in very different circumstances: over the shoulder, laterally, back -forward, and with a racket. The success of the stroke will depend on the size, weight, adaptation of the hitting object to the hand and the characteristics of the object to be hit. This success is also conditioned by the position of the core and its limbs before and during the hitting phase.

When doing these exercises it is very important for the child to keep the axis of his head in line with his spine without leaning his head sideways.

EXERCISES FOR THE PREPARATION STAGE

During the first stages, it is very important to work with dissociation exercises of the lower and upper parts of the body. We must try to make the child keep his balance and throw his head in line with the longitudinal axis. For this reason, it is key to work with elastic bands to balance the scapula.



Photo 1. Exercises with elastic bands.



Photo 2. Exercises on unstable platforms.



Photo 3. Exercises with an American football.

EXERCISES FOR THE COMPETITIVE STAGE

When working with professional players, I always work with each player's coach, since it is the coach who must understand the mechanism of the movement and the importance of not going back to the previous motor print. It is always convenient to look for a concrete improvement by means of photo or video analysis in order to get a specific control of the problem presented by the player and the coach.

EXERCISES FOR ADULTS

The exercises proposed for adults are shown in the photos.



- Nimbleness.
- Correction of the movement with medicine ball.
- Balance.

Exercises for adults must be fundamentally driven towards injury prevention and in second place towards stroke performance. If there is no injury, we must make the adult work his shoulder joint freely from his body, since this will help him to generate more acceleration at impact.

PREVENTIVE AND WARMING UP EXERCISES

The exercises proposed here are shown in the next photos.



Photo 5. Before starting the exercises, try to find an anatomic position to work.



Photo 6. Work to align the longitudinal axis of the leg.



Photo 7. This exercise uses bands to work on the scapular stabilization to prevent future injuries.



Photo 8. Works on the rotation of the arm in relation to the shoulder, in the antero posterior axis.



Photo 9. This exercise is strongly related to the previous one, but the rotation of the shoulder with the arm is like a "lateral windmill".



Photo 10. The articulation must try to achieve maximum dissociation between the arm and the body, to achieve an excellent warming up and a future nimbleness.



Photo 11. Working with bands tries to get the feeling and balance of the muscular groups involved when raising the arm.



Photo 12. Working with a medicine ball (in which the weight depends on the age and bio-type) involves all the body chain.

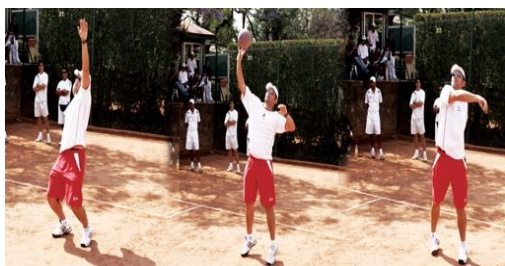


Photo 13. This exercise improves the dissociation of the lower body by means of a twist.



Photo 14. Before starting to use the racket, we make the complete movement with a medicine ball.



Before starting to serve freely, I always recommend to serve reducing the supporting base working on balance and, then, after 10 or 20 serves, start serving freely.

CONCLUSION

The serve is a complicated motor movement which can be improved in many ways. This article shows how some of the components of the serve can be worked with simple exercises that are very important to improve the action of the serve. But, the serve is not a stroke that only juniors can improve, adult tennis players can also do so. The serve is key and fundamental for success in a tennis match, thus, to include these exercises in the coaching programmes for players of all levels and ages can really help them to improve their level and satisfaction when playing tennis.

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