

Training for proprioceptive control in gun modality shooters

Entrenamiento del control propioceptivo en tiradores de la modalidad de fusil

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Abstract

The article refers to the effects of a good technique for an effective shooting, giving more priority to this aspect rather than to the physical capacities. It is emphasized the importance of the components of the sportman preparation, giving priority to psychological conditioning, specifically to proprioceptive sensations which influence the command of different technical elements and should be taken seriously into account by trainers so as to improve the shooter's performance. Thus, this article provides a way for practical application of tasks aimed at the development of proprioceptive control in sport shooting, gun modality.

Keywords: Psychology. Proprioceptive control. Techniques.

Resumen

El artículo aborda los efectos de una buena técnica para lograr un disparo más efectivo, dándole mayor prioridad a este aspecto que al desarrollo de las capacidades físicas. Se enfatiza en la importancia de los componentes de la preparación del deportista, dando mayor prioridad a la preparación psicológica, específicamente las sensaciones propioceptivas, las cuales determinan la precisión de los elementos técnicos fundamentales y que deben ser tomados en cuenta por los entrenadores para perfeccionar el desempeño del tirador. De esta forma el artículo propone una variante de aplicación práctica de tareas encaminadas al desarrollo del control propioceptivo en el tiro deportivo, específicamente en la modalidad de fusil.

Palabras clave: Psicología. Control propioceptivo. Técnica.

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Introduction

Sport shooting constitutes a discipline where sport results depend to a great extent, on the technical level the practitioner can reach, providing that the technical elements that make up this modality are performed adequately because the scoring should be given according to competition requirements.

It is not the case of minimizing the value of physical capacities for reaching a high result, but basically, exceptional levels of them are not required for the shooter to have a victory in competition because a good technique allows to economize efforts and achieve the necessary stability in the weapon so as the shooting to be effective.

For a positive result to be factual in a competition it is necessary, starting from the training, to pay attention to the development of the components in the preparation of the sportman, emphasizing the psychological preparation and including technical - tactical and theoretical ones, taking also into consideration physical fitness, in spite of the fact that it is not the most determinant.

It is important to recognize, according to the requirements of this sport discipline, the outstanding role of the components of psychological preparation and its effects in the command of different technical elements for each one of the modalities. According to the author's point of view this constitutes a premise that should be taken into account by the trainer for increasing the shooter's performance level.

Taking into consideration the fact that all performance in shooting with a gun is going to depend on the stability achieved in the gun while the shoots are taking place in different positions (standing, laying down and on the knees), and this is at the same time, conditioned by the position of different body segments in each one of them, as well as the operation of the trigger with accurate magnitude and direction, then, it is indispensable to carry out the exact education of proprioceptive sensations inherent to such performance.

On the other hand, gun modality requires shooter performance from the three basic positions mentioned above: standing, laying down and on the knees. There is an only common denominator for each of them and it is the alignment of aim devices or sight adjustment, the tightening of the trigger, and with less variation the facing or phase position when placing the weapon to perceive the sights. The other technical details vary from one position to another and should be lastly controlled by the shooter so as to achieve the desired stability in the weapon.

That is why this paper approaches the proprioceptive control of un shooters, because the author gives an outstanding importance to this component in the technical command of the fusilier in order to get weapon stability and with this, there will be a greater disposition to

perform shoots with great accuracy.

Proprioceptive sensations constitute the basis for motor coordination and thus they provide information about muscular tone, position of the different body segments in the space and the position of the body according to gravity force. All this is necessary for muscular effort gradation in the actions that are performed, as well as for adopting accurate positions according to the technical patterns that are being carried out.

The receptors associated to this sensorial modality are located in the muscles, bones, joints and also in the vestibular apparatus when dealing with the position of the body in the space

Its physiological basis, according to Sainz de la Torre (2010) "Lies in the afferentation feedback mechanism, that is, the information going back from the locomotor apparatus to the sensitive area of the motor crust, so this allows the practitioner to create his own motor experience, to improve his movement images and therefore, to be able to regulate his performance."

This type of sensation differs in being static or dynamic, and it is opportune to say that according to the characteristics of sport shooting in the gun modality, the static ones are the most common because we are dealing with positions where movements are not described in the different body segments.

The dynamic sensations are only present in the operation of the finger when pressing the trigger and when incorporating the weapon to the location of the shooter's body, in certain positions he may occupy, being this last aspect not more than a conditioning action for developing the shooting technique.

According to Sainz de la Torre (2010), when starting to learn a new movement proprioceptive sensations are not well defined. The author herself adds that as tasks are applied for their development, they become each time more precise and constitute essential elements for action regulation and for the inner model of them. Thus, shooters who achieve a right education of proprioceptive perceptions will have better conditions to get the necessary weapon stability, and with this, a higher precision in discharges.

In this sense, this paper provides a way for practical application of tasks that from the theoretical point of view have been stated in specialized literature for the work with proprioceptive control, taking into account the characteristics of sport shooting in gun modality.

Development

For the proposal stated in this paper, some tasks for the development of proprioceptive sensations or proprioceptive control collected and declared by Sainz de la Torre (2003 and 2010) have been taken into account. They are the following:

1. Visual information blockade

This task can be carried out in the following way:

With blind eyes, adopt shooting position without incorporating the weapon in the performances (repetition of this exercise will be carried out so as the shooter to focus his attention in the location of his different body segments according to the technical pattern for each of the positions, this will allow feeling the right position he should have without the influence of the incorporation of the weapon. The proposal may contribute to correct mistakes that are usually made when standing or on the knees position and where the practitioners look for the weapon instead of taking it to the adapted initial position so the gun is incorporated completely without provoking variation in his position.

Another way to do the task is, once the grasp or holding of the weapon has been made according to the position of the shooter blind his eyes for him to adopt the position making correction movements until feeling the exact location and convenience according to the technical pattern. It is important to state that this alternative should be carried out once the shooter has a beforehand position that has been fixed after some time of training and not at the beginning of the teaching-learning process neither during the first day of the macrocycle.

This alternative may become more complex if the pressing of the trigger is added after making the position stable, with both shootings: with and without bullets, the former with the purpose of feeling the action of rebounding produced by the weapon.

In the case of shooters who have some sport mastery, the eye that may be blockaded should be the director one, which maintains the visual control in the sights whenever he has the sights adjusted and properly located in the target for him to

make blind shootings. For doing this a sheet card may be used, it should be placed by the trainer between the shooter's eye and the back sight. With this alternative may be carried out making shoots with and without bullets. Once the shoot is done the sheet card is removed so the shooter is able to verify the place where the sight adjustment is located in relation to the target. Now, a marker of a good proprioceptive control is the fact that there is not variation in this sense, that is, the sight adjustment is kept in the position indicated in relation to the target.

2. Making of performances with an increase or decrease of weight in the sport implements

The implementation of this task could be carried out when pressing the trigger, putting in this, greater or lesser tension so as the shooter to achieve a fine discrimination of muscular tone necessary to do this type of action. This alternative could be carried out in a more simple way, making tightenings of the trigger without adopting the shooting position, or making shoots to an aim with or without bullets.

The same task could also be done either adding an additional weight to the gun or diminishing the weight of it, according to trainer's consideration, without the effect of an alternative that might affect the technique. In relation to this, it would only be advisable to make rising ups to adopt the position without making adjustments of the sights or shoots, because this could cause variations in the technique, mostly if greater weight is used. Moreover, the objective of this task is the shooter to achieve discrimination of the muscular tone which is necessary to hold and maintain the weapon in its shoot position.

Conclusion

The practical application of these alternatives presented have not been put into effect yet, so all this constitutes a prime objective by the author, to materialize them after the publication of this article. However, dealing with alternatives based on tasks which have been proposed by other authors who have demonstrated their validity and factible approach, it is considered by the author of this paper that its application should enhance the development of proprioceptive control in shooters of gun modality, so it constitutes a contribution for them to improve from the technical point of view and achieve a more favorable disposition for a high performance in this sport.

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