

VIEWS REGARDING DEFINITION OF THE NOTION OF UPPER LIMBS DETENT

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Abstract: *The trainer's creativity during preparation process plays a determinant role in the achievement of major sports performances. Their contribution in conceptualizing and practical implementation of working strategies, of new preparation methods and means based on an adequate quantification of effort, has as main goal the achievement of proposed objectives on short, medium or long terms. Permanent modeling of sports preparation is one of the main modalities by which the increase in performance capacity is being accomplished. The scope of this scientific approach is to define the notion of superior (upper) limbs detent, the specific means in order to reach this objective as well as the assessment mode. The group of means used in current practice for developing the superior (upper) limbs detent is based on the phrase: the individual's capacity to detach from the ground or from an apparatus through the superior limbs. The precise delimitation of the means circumscribed to this definition is owed to the elimination of confusions created by the means used for pushing, throwing, or launching of some objects through the superior (upper) limbs. For the assessment of this quality/motric capacity I propose two control tests (only for advanced groups, performance and high performance): three pushups with advancing and five pushups on the spot, with ground detachment. Knowledge and constant utilization by trainers of the means for developing the detent/explosive force of the superior limbs may constitute the basis of future sports performances.*

Keywords: *modeling, detent, means, assessment.*

1. Introduction

The performance sports, beyond the show offered by both the media and the electronic informatics system daily accessed by an increasing number of users, become a profitable industry sustained by some states policy as well as by some private interests.

Beyond these obvious aspects sometimes necessary for a high level support of sports performances, a permanent and intense work process is developed in: planning of the training strategies, perfecting of the working means and methods, stimulating of the sportsman's energetic potential, recovering of the body system during an optimal amount of time after effort,

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introduction of new and performing physical development apparatus, explaining of new terms and notions regarding the theory and method of the physical education and sports, etc.

Permanent modeling of the sports preparation is one of the main modalities by which the increase in performance capacity is being accomplished. In numerous situations the practice generates the apparition of new terms used currently by the teachers within sports preparation classes.

2. The purpose of the research

The development of the detent/explosive force remains one of the qualities/motric capacities very often found in the preparation of the performance sportsmen from many sports branches. Because the majority of trainers understand and comprise under the generic term of detent all the exercises for ground or apparatus detachment by means of the lower limbs, we will maintain the same denomination also for the upper limbs exercises.

The purpose of this scientific approach is to define the notion of upper limbs detent, the specific means in order to reach this objective as well as the assessment mode.

3. Material and methods

The observation method combined with a long term practice with junior and senior level sportsmen from athletics have contributed to the finalization of this notion.

The term *detent* is frequently used in the sports practice and it is originally from the French word *détente*. This term is borrowed from Physics and it describes the expansion of an arch or gas that has been previously compressed. In defining of the detent, as well as for the case of other

physical education and sports notions, there is a large diversity of opinions.

4. Comparative study

In the specific works studied, I came across the following definitions:

Zeno Dragomir: *The capacity for ground detachment by jumping* [5].

E.L. Bran, quoted by D. Zeno: *Represents the quality to develop maximum of muscle force in the minimum of time given, when it tends towards zero* [5].

Ioselini D. M. quoted by Gheorghe Mitra and Alexandru Mogoş: *The capacity to manifest large values of this quality in the smallest time unit* [4].

Tudor O. Bompa: *The detachment power...body projection towards the highest point* [1].

Adrian Dragnea: *consists in the muscle group's capacity to develop maximum force in a shorter amount of time* [3].

Dicţionarul explicativ al limbii române (DEX – Explanatory Dictionary of the Romanian Language – EXD): *A sportsman's quality by which he manages to detach from the ground in height and length by a combination of force and speed* [2].

From the presented definitions, the main aspect acknowledged by the majority of specialists in the field, is that the basis trace for the detent consists in the ground detachment by means of the muscle force developed through the lower limbs. Taking this into consideration I have defined the *upper limbs detent* to be: *the individual's capacity to detach from the ground or from a gymnastics apparatus through the upper limbs, on site or in movement, with a certain speed, force and coordination indicators.*

The group of exercises circumscribed to this definition is not numerous compared to the exercises used in order to develop the inferior (lower) limbs detent.

The trainers from all sports branches creativity may contribute to implementing, in the preparation, of some new exercises for developing of the superior (upper) limbs detent.

5. Discussions

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We agree with this definition for the following means:

- pushups on the spot, with detachment;
- pushups on the spot, with left-right detachment;
- pushups on the spot, with detachment on one object;
- pushups on the spot, with detachment on one lower object;
- pushups on the spot, with detachment and arms changing back and forth;
- pushups on the spot, with detachment, side support with extended arms;
- pushups on the spot, with detachment, forward support with extended arms;
- pushups on the spot, with detachment, arms on inclined plan;
- pushups on the spot, with detachment, feet placed on an object;
- pushups with detachment and moving forward, sideways and backward;
- pushups with detachment and advancing on inclined plan;
- pushups with detachment and advancing, with feet supported by a training partner;
- pushups with forward detachment, on inclined plan, with feet supported by a training partner etc.

Both in practice as well as in the dedicated written works we have not come across control tests for upper limbs detent assessment. Therefore we propose, for the assessment of this quality/capacity, the following control tests:

1. Five pushups on the spot, with timed jump;
 - The longest time duration will mark the higher ground detachments;
 - From assessments made for jumper groups (18-19 years old) the maximum performance for this test was of 5.30 seconds.
2. Three pushups with advancing;
 - The distance from the start line to the last landing is measured with a tape;
 - From assessments made for jumper groups (18-19 years old) the maximum performance for this test was of 4.70 meters.

In practice we may speak about a reduced number of exercises on the *arms detent development*. Using of these in a judicious manner among the sportsmen preparation shall bring a major contribution to educating the force in a speed rate regime.

The exercises that cover this training area are mainly executed by the advanced groups of performance and high performance. In order for the successful execution of these exercises some recommendations must be taken into consideration:

- They cannot be introduced in the training without an adequate preparation of the upper limbs by medical balls, hand weights, elastics, weights lifting bar;
- They shall be planned mostly in the training and pre-competition periods;
- The repeating amount is low on each series compared to the intensity, which is maximum;
- The breaks between series are considerable;

- Between series, exercises in which other muscle groups are involved shall be conducted;
- These shall be used especially in the last part of the training program;
- No more than four exercises for the upper limbs detent are to be used within a training session;

7. Conclusions

The effects while using among preparation of the exercises for upper limbs development are:

- Development of the detent/explosive force of the upper limbs in order to successfully sustain the sports performances from the sports branch or sports test that is practiced;
- Strengthening of the scapula-humeral belt;
- Increase of the upper limbs extended effort resistance;
- Muscle mass and scapula-humeral belt development;
- Increasing of the mental toughness by permanent overcome of the previous performance possibilities;
- Increasing of the focusing capacity by respecting the specific exercises for upper limbs development;
- It removes the classic training specific monotony for developing the upper limbs force through weights or medicine ball;

For the jumpers and runners groups from athletics at least two trainings for developing of the upper limbs detent per week are recommended during preparation period and maximum one in a weekly micro-circle before the competition period.

For the athletics throwing groups, a minimum of three weekly trainings during preparation period; at least two before the competition period and maximum one in

the competition period are being recommended.

The teachers/trainers knowledge of the exercise group subscribed to the definition of upper limbs detent shall eliminate the actual confusion between this and the group of the means used for pushing, throwing, or launching of some objects through the upper limbs.

The assimilation of this notion by specialists shall redefine the use of means regarding the development of this quality/capacity within sports preparation classes and, not at least, an increase in the number of means used for development of the upper limbs detent, as well as an improvement of the assessment method through new control tests.

Moreover, the list of indicators resulted from each branch or sports test assessment on years of age or gender shall remain open.

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