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The role of athletics specific means in sports team training

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Abstract

At all levels of sports performance team games, athletics specific exercises are indispensable means of achieving the proposed objectives and performance training. This paper highlights the role of athletics means to achieve overall physical training for sports teams. The use of athletics means at all times and stages of training contributes to the development of motor skills and the increase of effort capacity. For sports games, strength is a key factor in the game, by means of which we can obtain high speed running, rapid changes of direction, jumping and physical contact with the opponents.

Keywords: athletics exercises, physical preparation, sports team, training;

Problem Statement

At all levels of sports performance team games, athletics specific exercises are indispensable means of achieving the proposed objectives and performance training. The physical training, the main factor of sports training must be done in accordance with the performance echelon, and this requires the use of means borrowed mainly from athletics. However, the optimal motor skills development is a prerequisite for learning and improving specific skills of all team sports games.

Purpose of Study

Sports games are highlighted by motion but high intensity discontinuities, in which players alternate jogging with sprints, while handling the ball by fast, agile movements and turns. Due to high energy and stress during the development of the game, we should consider the dominant type of energy system for each sport. This paper highlights the role of athletics means to achieve overall physical training for sports teams. In this respect, there were selected a total of 60 subjects practising the game of football, handball, basketball and volleyball aged between 14-16 years. The research subjects are included in each specific competitive game, making a volume of approximately 600 hours of training hours per year. The number of hours devoted to general physical preparation was equal, namely 6 hours per week.

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Methods

The research methods used were: the bibliographic information method, teaching observation, conversation, records, experiment, statistical and mathematical graphics.

To conduct the research in similar conditions, the measurements were made at the beginning of the training period, the subjects practising the same number of hours of physical training exercises aimed at improving general training through athletic means.

In team sports games, the muscle strength, especially in the legs is particularly important given the fact that the ball must be handled in conditions of speed, agility and adversity.

Findings and Results

The representative control tests for team sports games are:

30 or 50 m speed running, standing long jump, vertical jump, distance ball throwing; 5x30 m five jumps, Cooper test.

To assess the training level of the research subjects, each of the members of the sports teams passed the control tests within initial testing and after a training period of approximately two months in which the means used were mainly selected from athletics.

Thus the arithmetic mean of the 30 m initial running test was 4, 42 s ± 0,36 s and a coefficient of variation of 6.85% (high homogeneity) and 4.36s ± 0.22s for the final testing (CV = 5.87) and the "t" test value for the two tests was 3.134, significant for $p < 0.01$.

For the 50m distance running, performances in initial testing were 6.83 s ± 0.79, a coefficient of variation of 9.76% and in the final testing the average was 6.43 ± 0.53, and a coefficient of variation of 7.21%. The "t" value was 4,021 and showed significant results for $p < 0.01$.

The standing long jump in the initial testing: arithmetic mean 17.24 ±213cm, the coefficient of variation 14.31% (average homogeneity). Following the operation during the experiment with specific athletics means, the final testing recorded an increase of 13.12 cm, the arithmetic mean 236 cm ± 18,01cm and a coefficient of variation of 11.76 (average homogeneity). The "t" test in the initial and final testing was 8,437, the differences being significant for $p < 0.01$. The 5x30m running test had a value of 4.67s ± 0.41 and a coefficient of variation of 7.32% (high homogeneity); the final testing recorded a value of 4,48 s ± 0,32 s, Cv = 6.11, and the "t" test value between the two tests was 5.142 significant for $p < 0.01$.

The Cooper test performance value (12 minute running) was 2842m ± 161m in the initial testing and a coefficient of variation of 22,31% (lack of homogeneity), while the final testing recorded 2931m ± 138m, Cv = 16.67 (average homogeneity) and the "t" test value between the two tests was 5.148, significant for $p<0.01$.

In the five-jump test, the subjects recorded in the initial testing an arithmetic mean of 11.42 m ± 0.48 m and a coefficient of variation of 12.46% which showed an average homogeneity. In the final testing, the subjects achieved a value of 12.21 m ± 0.36m with a high degree of homogeneity, 8.36%.) and the "t" test value was 6,031 for the significance threshold of $p<0,01$.

The ball throwing test recorded in the initial testing a value of 46.32 m ± 6.28m and a coefficient of variation of 27.62% (lack of homogeneity), while in the final testing the value was 51.35 m ± 5.22 m, CV = 19.35 (average homogeneity). The "t" test value between the two tests was 11,341, significant for $p<0.01$.

The vertical jump in the initial testing had a value of 46.32cm ± 5.67, a coefficient of variation of 8.81%, while in the final testing, the performance average was 54.74± 5.38, and a coefficient of variation of 9.67%. The "t" test value 3,235 denotes significant results for $p<0.01$.

Conclusion and recommendations

The use of athletics means at all times and stages of training contributes to the development of motor skills and the increase of effort capacity.

To increase the attractiveness of the training process we need the use of a wide variety of means to contribute to the physical training, learning and improving the technique of the game.

The research results of subjects undergoing initial and final testing are statistically significant for $p < 0.05$ in all control tests.

Only the best athletic training will increase the players' fight, will, strength, positive aggression, especially in conditions of great fatigue. We need to individualize the athletic training means not only for each game but also for each game position because of individual differences, depending on the game rhythm, level of fatigue, classification of players and conditions of the competition.

For sports games, strength is a key factor in the game, by means of which we can obtain high speed running, rapid changes of direction, jumping and physical contact with the opponents.

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