Annotation. Bases of perfection of long-term preparation of jumpers are presented in length and triple by determination of optimum volume of competition practice and training facilities. The results of analysis of long-term dynamics of sporting results of 84 leading athletes-jumpers of the world, which came forward at the greatest level during 10-20 years, are lighted up. Information is systematized more than 50 literary sources, touching structure and maintenance of long-term preparation of athletes-jumpers. Basic priorities of construction of training process of jumpers are set in length and triple on every stage of long-term perfection. The dynamics of volume of competition practice and trainings facilities of jumpers is certain in length and triple in the process of long-term preparation. As a result of experiment information is complemented to scientifically-methodical literatures, touching the training process of jumpers in length and triple on the stage of maintainance of higher sporting trade. 

Keywords: preparation, competitions, training, facilities, athlete, jumper.

Introduction

Theoretical-methodic principles of construction of many years long and triple jumpers’ training have been described in a number of fundamental works (V.A. Kreyer [2], A.P. Strizhak [3], V.B. Popov [6], A.L. Ogandzhanov [4], et al.

However the researches both: of general therapeutic character and in the branch of track and fields, jumps in particular) were limited by the stage of maximal realization of individual capabilities. To a large extent it was conditioned by the earlier trend to make teams staff as younger, which existed in many countries, and it did not promote situation, in which the stage of maintaining higher sports qualification would be considered as separate structural component. However, V.M. Platonov [5] in his works for the last years laid foundation for scientific search in this direction, videlicet in track and fields.

Thus, the trends to increasing of sports’ career duration condition necessity to review the fundamentals of many years training process’s construction on every of its stages.

The research has been fulfilled as per “Combined plan of scientific & research works in physical culture and sports’ field for 2011-2015” of Ministry of education and science, youth and sports of Ukraine as per subject 2.2 “Theoretical-methodic principles of high qualification sportsmen’s training, considering its professionalizing (on example of track and fields)”, state registration No. 0111U001721.

Purpose, tasks of the work, material and methods

The purpose of the researches: perfection of construction of long and triple jumps sportsmen’s training process by determination of optimal scope of competition practice and training means.

The methods of the research: analytical review of scientific-methodological literature (more than 50 sources), generalization of data about competition practice scope and means of different directions on the stages of many years training. With it we found insufficiency of such data on the stage of maintaining of higher sport qualification.

Organization of the research. For determination of modern structure of jumpers’ many years training we analyzed the dynamics of sports results of 84 leading jumpers of international level, who performed at the highest level during 10-20 years.

At the last stage we carried out analysis of practical activity of leading Ukrainian track and fields coaches: expert questioning of 16 coaches, who have experience of training of long and triple jumps sportsmen at the stage of higher sportsmanship’s maintaining, was carried out; analysis of sportsmen’s diaries (n=22) was conducted and optimal competition practice scope and training means were determined and proved by experiments with five leading jumpers of Ukraine.

Results of the researches

Modern trends of track and fields sports development conditioned increased of sports career duration and the age, suitable for reaching maximal results by jumpers. The age of reaching maximal results by jumpers coincides with age indicators of 1988-2012 Olympic Games prize-winners and is 26-27 years, that is much higher than 15-20 years ago (mean age of 1972-1980 Olympic Games jumpers-finalists was 22-24 years). With it leading world jumpers can perform at the highest level for 10-20 years and even more and demonstrate the best results at the age of 28-29 and more years old (see fig. 1).

For example Hyker Drexler entered the ranks of international leading sportswomen at the age of 17, reached the best result in long jumps (7.48 m) at the age of 24, then she repeated this achievement when she was 28 years old. She was the member of the strongest ten jumpers during 22 years and won her last victory at Olympic Games at Sydney in the year of her 36th anniversary.
However there are examples, when outstanding sportsmen entered international elite at rather late age. For
example, world triple jump champion Johnatan Edwards reached (by Ukrainian qualification) the level of international
master of sports only, when he was 23 years old, that did not prevented him from making further bright and long sports
career, from winning world record at the age of 29 and winning at Olympic Games at the age of 34.
Such data witness about significant coaches’ experience of efficient many years training of jumpers, Ukrainian
jumpers including. But this experience has not been practically systematized in scientific-methodic literature.
Our research resulted in establishing the scope of competition practice and means of different direction of long
and triple jumps sportsmen in the process of many years improvement (see fig. 2 and 3).
As we can see in fig 2, annual scope of competition practice in main kind is constantly growing from 4-6
competitions at the stage of initial preparation to 18-22 at the stage of maximal realization of individual abilities.
Starting from the stage of higher sportsmanship’s maintaining, the scope of competition practice year in year out is
constantly reducing from 18 to 14 competitions and in separate cases reaches much less values.
Such trend is observed in using of special training means, the scope of which is maximal at the stage of
maximal realization of individual abilities. At the stage of higher sportmanship’s maintaining training process is
characterized by reduction of special preparation means’ scope. For example, at the age of 30 years old, long and
triple jumps sportsmen have the scope of special training means (technical, speed/power, speed and power
orientation) in average by 15–25 % less.
The peculiarity of great many additional training means (basic power and speed endurance) application in
the process of many years perfection is that they are maximally used at the stage of training for higher achievements
(see fig. 3). The scope of speed/power endurance means reaches maximal level at the stage of specialized basic
preparation.
The scope of general preparation means is the greatest at initial stages of many years perfection process then it
is stabilized at the stages of specialized training and preparation for higher achievements and reduces at the stages of
individual abilities’ maximal realization and maintaining of sportsmanship. It is connected with reduction of general
training stages’ duration. However, the peculiarity of general preparation exercises (especially compensatory work) at
the stages of individual abilities’ maximal realization is that they are more widely used during all stages of annual
training, that facilitates quicker after-training or after series of training with great loads restoration as well as prevention
from traumatism.

Conclusions
The data from scientific- methodic literature about competition practice scope and training means of long and
triple jumps sportsmen in the process of many year preparation do not cover a number of stages, in particular the stage
of preparation for higher achievements and, especially, maintaining of higher sportsmanship.
Fig. 2 Dynamics of competition practice scope and special means of long and triple jumpers’ technical orientation in the process of many years training:
- maximal;
- minimal result;
Fig. 3. Dynamics of special, additional and general training means of long and triple jumpers in the process of many years perfection:

- **Maximal**: solid line
- **Minimal value**: dashed line

**Special training**
- Speed; 20-70 m, km run
- Speed/power thereof repulsions
- Power, tons

**Additional preparation**
- Speed/power endurance bounces 40–100 m, th. repulsions
- Speed endurance 80–200 m, km run
- Basic power tr., tons

**General preparation**
- General exercises, games, hrs.

**Age, years**
- 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32

**Initial preparation**
**Preliminary basic preparation**
**Specialized basic preparation**
**Training for higher achievements**
**Maximal realization of individual abilities**
**Maintaining of higher sportsmanship**
At present stage of development of jumping kinds of track and fields sports we can observe the trend of age limits increase of the winners at international competitions and achievement maximal results by them. Such trends are conditioned not only by growing professionalizing of track and fields sports, but also by increase of contest at the greatest international competitions, where, as researches witness, victory is won, as a rule, by experienced sportsmen, who often are elder than 30 years old and goes out of the limits of optimal.

The obtained by us research results of Ukrainian jumpers’ training experience systemize and supplement the data of scientific researches [1, 6, 7, 10] concerning the scope of competition practice and training means in the process of many years preparation of long and triple jumps sportmen.

The prospects of further researches. It is stipulated to further improve training process in the course of many years preparation of track and field jumpers, considering strategy, oriented on increase of sportsmen’s career duration. It requires conducting of scientific researches of track and field jumpers’ training process at every stage of many years’ perfection, considering individual features of every sportsman.

References: