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DEVELOPMENT STAGES OF HIGH JUMPING TECHNIQUE

Nizom Tokhtaboev
Professor, Deputy director of Physical Education and Sports Science Research Institute, Chirchik city, Uzbekistan
E-mail address: tnizom@mail.ru

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Nizom Tokhtaboev

Professor, Deputy director of Physical Education and Sports Science Research Institute, Chirchik city, Uzbekistan

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Abstract: This article provides information about the history of the development of high jump methods (skip, wave, roll, flip and fosbury flop), analysis of records set in different ways, effective jumping methods among high jump techniques..

Key words: functional state of the body, jumping technique, "jumping", "wave", "roll" and "flip" techniques.

Actuality. The result achieved in athletics requires maximum effort from the athlete, which is shown at the limit of his capabilities. As a result, excessive stress on the functional state of the body reduces the efficiency of the athlete's motor apparatus, which can lead to stagnation or even a decrease in sports results. In such cases, it is especially important to choose the individual-optimal option of the movement, in which the movement abilities of the athlete are used in the best way. High jump is one of the most popular types of athletics. As a result of its development over a period of more than a hundred years, it has reached a very high level as a sport.

According to the sources, the origin of high jump goes back to a long history. Its development is inextricably linked with the development of jumping techniques. The first technique of high jumping is explained by running straight and bending the legs during the height.

Over time, different methods of jumping are invented. Now, in high jump, there is a method of "jumping" by running not directly, but slightly from the side, lifting one leg and landing with the other. This method of jumping has been used by leading jumpers for almost 30 years.

The purpose of the work: To study the stages of development of high jump methods.

Research results and discussion. The history of high jumps goes back to ancient times. This type of competition was popular among different peoples at different times. In ancient Germanic times, for example, jumping over horses standing in several rows was very popular and it was called a royal jump. In some tribes living in Central Africa, running and high jump competitions are considered as one of the main events of the annual national holidays. Representatives of the Watus tribe of Algeria jump from a smaller springboard (flat stone, tight layers of termite nests) and exceed a height of 240-250 cm.

The search for rational forms of movement aimed at cost-effectively crossing the plank has continued for many decades. As a result, there were more than ten different options for jumping over the plank, which were combined into four fundamentally different groups of jumps: "crossover", "wave", "perekat" and "perekidnoy" methods. Official competitions that started the modern history of high jumps were held for the first time more than a hundred years ago.

In 1864, Robert Meych from England became the first British record holder (there were no world records yet) with a jump of 5 feet 45 inches (167.4 cm) using the jump method. He jumps from the plank in the simplest way, "crossing the line", which is still used by beginner athletes. Compared to jumps in gymnastics, the economy of movements, the simplicity of execution and the possibility of reliably landing on both feet ensured the wide popularity of this way. However, the absence of a pit filled with sand behind the plank prevented the development of new, more perfect methods of jumping.

From 1866, high jump became widespread in Europe and America. The results of the athletes continued to grow. The development of sports achievements was caused not only by the development of speed and power qualities of jumpers, but also mainly by the improvement of the technique of movements above the plank. If during the first 30 years the results were improved due to the improvement of squatting, then in the following years (after 193 cm was conquered by "crossing the line") the development of the high jump technique went more towards perfecting the technique of jumping over the plank.

High jump in athletics was included in the program of competitions for men and women from the 1st Olympic Games in 1986. Until then, many competitions in pole vaulting have been organized in several countries of America and Europe. This is an important factor in the popularization and development of high jump.
Later, the "wave" method of high jump begins to be used. The implementation of this method is associated with the name of the American jumper M. Sweeney. M. Sweeney was the first to use this method in the 1895 competition with a result of 197 cm. It can be seen from the results shown by the athletes that this method is more effective than the "crossing" method.

Over the years, another method of high jump "perakat" is invented. The American D. Khorain achieved high results with this method and in 1912 he set a world record by crossing a height of 200 cm. All high jump records prior to 1936 were set by jumpers using this method.

Since the 30s of the last century, the "perekidnoy" method has been introduced as a competitor to the "perakat" method. In 1936, two American jumpers K. Johnson "perekat" and D. Albriton "perekidnoy" reached a height of 207.6 cm. Until 1968, many world and Olympic records were set using the "perekidnoy" and "perekat" methods.

The 1968 Mexico City Olympics were very successful for a number of athletics events. In addition, these Olympic Games presented new names and records for high jump. In particular, the American jumper R. Fosbury uses a

unique new method in the high jump competitions, and as a result, reaches a height of 224 cm. This result of his will make history as an Olympic record holder. This method, used by R. Fosbery, is named in his honor and is the foundation of today's "Fosbery-flop" method. Since these years, many players have been able to repeat and break many records through "perekidnoy" and "fosbury-flop" methods. Including, 1971 P. Matsdorf (USA, 229 cm "perekidnoy"), 1976 D. Stones (USA, 232 cm "Fosbury-flop"), 1978 V. Yashenko (Former Union-Russia, 234 cm "perekidnoy") demonstrated the advantages and effectiveness of both methods through their records.

Which of these two methods is convenient for a high result has been the cause of debate among athletes, coaches and experts for many years. Because, with the introduction of the "Fosbury-flop" method, the "perekidnoy" method did not remain in its shadow. Such controversial situations culminated in the 1972 Munich Olympics. Yu. Tarmak (1st place, 223 cm, Former Soviet Union-Russia), S. Junge (2nd place, 221 cm, Germany), D. Stones (3rd place, 221 cm, USA) won prizes in these competitions. He used the "perekidnoy" method, not the "Fosbury-flop" method.

This style differs from the previous styles in that the jumper makes the last steps of the run in an arc and falls on his back. For 3-5 years, the Fosbury jumping technique became popular all over the world and started to be used instead of the jumping style. Russian jumpers learned to jump in the Fosbury style somewhat later than in other countries.

The fact is that the school of jumping "hatching" had a long and strong position and was considered the leader in the world until the appearance of jumping in the style of "fosbury-flop".

The technique of jumping in the Fosbury-flop style is a little more complicated than the previous one, it is considered more difficult from the point of view of coordination, i.e., from the point of view of landing and preparation for jumping. But it creates difficulties for the jumper to perform the sprint, because it

has an arc-shaped character and is performed with a dip, which is performed under the conditions of the impact of centrifugal forces on the athlete. The new technique made new demands on the physical fitness of the jumper.

The appearance of jumping in the style of "fosbyuri" was the impetus for a new creative search: elements of the style of "hatlap" were introduced into this jumping technique, and, conversely, elements from "fosbyuri" were introduced into the style of jumping "hatlap". Jumpers who specialize in "Fosbury" style jumps try to use a straight running approach, and perform lunging movements with straight legs and both hands. In the "cross-over" style, jumpers began to master running along an arcing line and swinging on the bent leg in the squat. With the appearance of "Fosbury" jumping technique, new opportunities arose for improving the sports skills of jumpers. Over the years, as high jump techniques and methods have improved, the records have changed several times.

At the end of the last century, US high school jumpers began using new, more economical ways to high jump. Representatives of the eastern states used the "wave" method, which was often called the "eastern" method (in our case - "eastern American"). The jumper's lunge run was performed almost perpendicularly to the plank according to its direction. When the athlete was crossing the plank, his body turned towards the runner with a blow. The legs were moved alternately over the plank: first the swinging leg, then the squatting leg. As the jumper's body moves over the plank, it moves like a wave, that's why the new method was called "wave".

Among the students of the western states, the technique of jumping on the head was spread. They ran to the plank at an angle of 35-55° from the side of the kicking leg, and crossed over the plank in a horizontal position, bending the body towards the kicking leg. In this case, the jumper seems to be rolling over the plank. Later, Khorain used this method for the first time. The method made it possible to increase the efficiency of the jumper's movements above the plank. Since the transition is performed with the front part of the body in relation to the plank, the

jumper has the opportunity to visually control the option of all parts of the body in relation to the plank and to some extent control his movements in flight.

After Khorain, all the climbers who used the "perakat" method of crossing did not blindly repeat the technique of his movements. Many have used the basic principle and refined the method to suit their own body structure. Tall, but relatively slow-moving jumpers preferred to stretch horizontally across the plank (Gramm, Osborne, K. Johnson - USA). Quick-moving jumpers considered it appropriate to collect the body on top of the plank and concentrate, which helped to "dive" behind the plank with the upper part of the body. Thus, a new method of jumping - "perikydnoy" appeared.

In 1952, the world record was again set by American W. Davis, a representative of the "rolling" method. Steers' record was improved by 1 cm. Although Davies used the most perfect "dive" variations, landing on the ground with hands and swinging legs, this did not show the advantage of "jumping over". Davis was an exceptionally tall (204 cm) jumper, so he managed a lower height than his compatriot V. Page, who jumped half a century earlier by "stepping" (height - 169 cm, result - 193 cm).

The first world record was set in 1932 and was 165 cm (D. Shile, USA). The development of this type of jumping was ensured in the 90's by the adoption of the "step-by-step" method. This method was widely used by all leading track and field athletes until 1956. The one-sidedness of technical training is justified by comments about the "impossibility of women". Executing the jump is as simple as stepping. Because of this, the competition and training activities of women are sharply limited.

Thanks to the efforts of a large number of specialists, a school for training sacro players was created in all countries. The developed system made it possible to educate great athletes - European and world record holders, champions and prize winners of the Olympic Games. V. Brumel, V. Yashchenko, G. Povarnisin, Avdeenko, V. Kozir, I.Surkovaya, V.Polomar, V.Stepina (Athens-2004 Olympiad

winner), Yu.Krimarenko (2005 World Championship winner) and many other athletes deservedly defended the honor of world athletics.

At the moment (2015), the world record in high jump belongs to H. Sotomayor (Cuba) - 2.45m for men, and S. Kostadinova (Bulgaria) - 2.09m for women.

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