METHODS OF DISTRIBUTING TRAINING LOADS DURING THE PRE-COMPETITION PREPARATION PERIOD OF MOUNTAINEERING

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Anatation: The article examines the main principles and methodological approaches to the distribution of training loads in the pre-competition period of skiers' training. The pre-competition period is a key stage in the annual training program, and the competent planning of the loads at this stage influences the athlete's results in competitions. The article presents the main aspects that need to be considered when building the training process, including acclimatization periods, specific training, and recovery.

Key words: mountain skiing, methodological approach, training loads, pre-competition period, planning, preparation periods, acclimatization.

Relevance. The most important stage of the annual training cycle is the pre-competition period, which includes adaptation to intense loads, acclimatization, and preparation for high performance in competitive conditions. Initially, fitness decreased and poor results were observed [7].

As VB Issurin noted in his research, in the pre-competition period it is necessary to achieve the peak of the athlete's functional capabilities and reduce the risk of overtraining and fatigue. The implementation of this approach can only be achieved with a competent distribution of loads, since a rational alternation of the intensity and volume of training work contributes to better adaptation of the body, increases aerobic and anaerobic endurance, and also prevents the accumulation of fatigue [2].

According to the principles of sports training (Bompa & Carrera, 2019), effective training should take into account the individual characteristics of the athlete: level of preparation, functional state, fatigue and susceptibility to injury. This is especially important for alpine skiers, since the success of their performances depends on a complex combination of physical preparation, tactical thinking and psycho-emotional stability. Therefore, the correct distribution of loads in the pre-competition period is directly related to managing the level of anxiety of skiers before the competition and increasing their confidence in their abilities [6].

In recent years, the concept of load management using heart rate variability (HRV) and biomechanical monitoring has been actively developed, which allows for more precise regulation of the training process and adaptation to the athlete's condition.

Therefore, it is of great importance to scientifically substantiate and develop effective strategies for distributing training loads in the pre-competition period of alpine skiers . This will help improve sports performance, reduce the risk of injury, and achieve optimal form at the beginning of the competition [1,3,4,5].

Organization and results of the study.

The load distribution method for skiers in the pre-competition period should take into account several important factors: the athlete's physical condition, the characteristics of the track, the duration of the training, the goal of the preparatory phase (technical or physical training), as well as the need for recovery. It is important that the load is progressive and aimed at improving specialized skills without overloading the body.

To effectively distribute workloads during a competitive period, there are several factors to consider:

1. Adaptation and recovery.

The most important element of preparing for a competition is to create suitable conditions for recovery. During this period, training sessions should be focused on improving technique, increasing physical endurance, increasing reaction and speed of movement. At the same time, it is important to regularly form elements of recovery: active recovery exercises, massages, proper nutrition, the use of physiotherapy methods.

2. Specificity of the cargo.

During the competitive period, training intensity should be increased, but the intensity and load should be carefully balanced to avoid overtraining. The inclusion of training at maximum intensity (e.g., sprints, short races, training for vehicles in competitive conditions) contributes to the development of peak performance.

3. The effectiveness of the learning process.

During this period, not only the intensity but also the quality of training is important. Special training aimed at developing technical and tactical skills should be combined with general physical activity. The use of video analysis and simulators to simulate landings is also an important part of training.

4. Cyclicality and targeted distribution of loads.

It is important to remember the cyclical nature of training and to vary the intensity and rest phases over time. For example, using the principle of volume training with short recovery periods and varying load levels will allow you to achieve maximum efficiency.

In the course of the research, we developed a methodology for distributing training loads for the Uzbek national team skiers during the pre-competition training period. A distinctive feature of this method was the stratified distribution of the load and planning of the training process, taking into account the chosen sport (see Figures 1 and 2).

The pre-competition training period for highly skilled skiers is divided into several stages:

1. Transition period (1-2 weeks). During this phase, the focus is on recovery from the main training cycle, light training that focuses on recovery and adaptation to physical activity. During this period, it is important not to overload the body and give all systems time to recover.

2. The main period of preparation (3-6 weeks). During this period, the intensity of training gradually increases. Training is carried out in conditions that simulate competition: descents, sprints, as well as tactical training with a coach. Also an important aspect is training for specific endurance and strength. At this stage, it is important to observe the correct ratio of load and rest.

3. Peak Load Period (7-8 weeks). At this time, it is important to reach the peak of physical fitness. Training in conditions close to the competition, including interval training and short, intense workouts on the road, will help the athlete to achieve maximum fitness. It is important to remember that during this period, excessive load can lead to excessive fatigue, so recovery also plays an important role.

4. Pre-competition peak (9-10 weeks). During this phase, the intensity of training gradually decreases, leaving only the main exercises to maintain shape and maximum combat readiness. Important attention is paid to psychological preparation, relaxation and stress reduction before competitions.

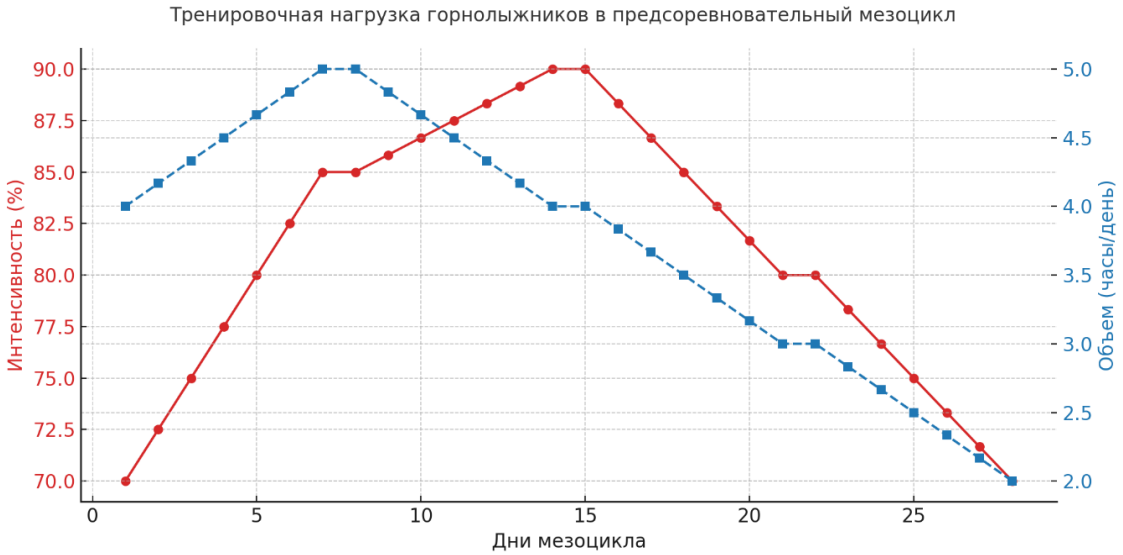


Figure 1. Differentiation of training loads of alpine skiers in the pre-competition mesocycle

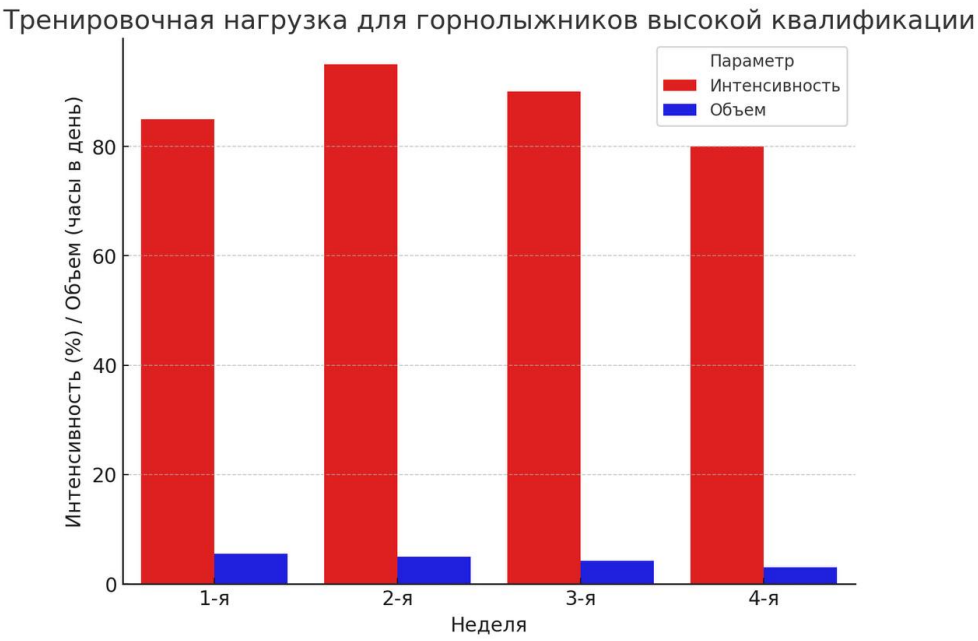


Figure 2. Percentage ratio of intensity and volume of training loads of alpine skiers in the pre-competition mesoscale

Figures 1 and 2 show the changes in two key parameters: intensity (% of maximum) and volume (hours of training) consistent with the classical approach to periodization of the training process. The change in the intensity of the training load was as follows: at the beginning of the mesocycle, the density increases from 90% to 95%, which corresponds to the principle of increasing relative loads. This increase is associated with the need to adapt the neuromuscular system to high speeds and external forces in the conditions of the competition route. In the following weeks, a decrease in intensity to 85% is observed, aimed at reducing the effects of fatigue and ensuring the athlete's optimal performance before the start. The high intensity of pre-competition training is explained by the need for special adaptation to extreme downhill conditions, where athletes experience significant overloads

At the same time, in the first half of the mesocycle, the volume of training load gradually decreased from 5 to 4.5 hours per day, which is associated with the transition from general physical training (GPP) to specific training (SPP), aimed at imitating competitive activity. And in the second half of the mesocycle, there was a significant decrease in volume to 2.5 hours per day, which is consistent with the “compression” strategy aimed at reducing fatigue and accumulating adaptive capacity before competitions. This approach allows you to ensure the restoration of energy systems, the nervous system and prevent the risk of excessive stress.

Figure 3 shows a load distribution scheme for alpine skiers in preparation for important starts of the season, which is consistent with the principles of sports adaptation and the supercompensation model, which ensures the optimal ratio between the effects of training, recovery and the athlete's timely achievement of the peak of sports form.

Thus, in the pre-competition mesocycle, the intensity of training is increased to 95% of maximum power using interval and competitive modeling methods , which helps to develop the speed, power and coordination characteristics necessary for competitive activity and allows the body to adapt to high loads. At the same time, the amount of preparatory loads in the first half of the mesocycle remains at a moderately high level (5-4.5 hours per day), necessary to maintain aerobic and muscular endurance. Whereas in the second half - it gradually decreases (up to 3 hours per day), which contributes to supercompensation and reduces accumulated fatigue.

In the competitive mesocycle, the load was distributed as follows: the intensity was maintained at 92-95% of the maximum to maintain speed, technique and explosive power, as is typical of high-intensity work. However, in the last weeks it was reduced to 90% to avoid overtraining. During this period, the volume of training loads was significantly reduced from 3.5 to 2.5 hours per day, which allowed the body to recover between starts and reduced the risk of fatigue. Specialized exercises and recovery exercises that simulate competition conditions prevail in training.

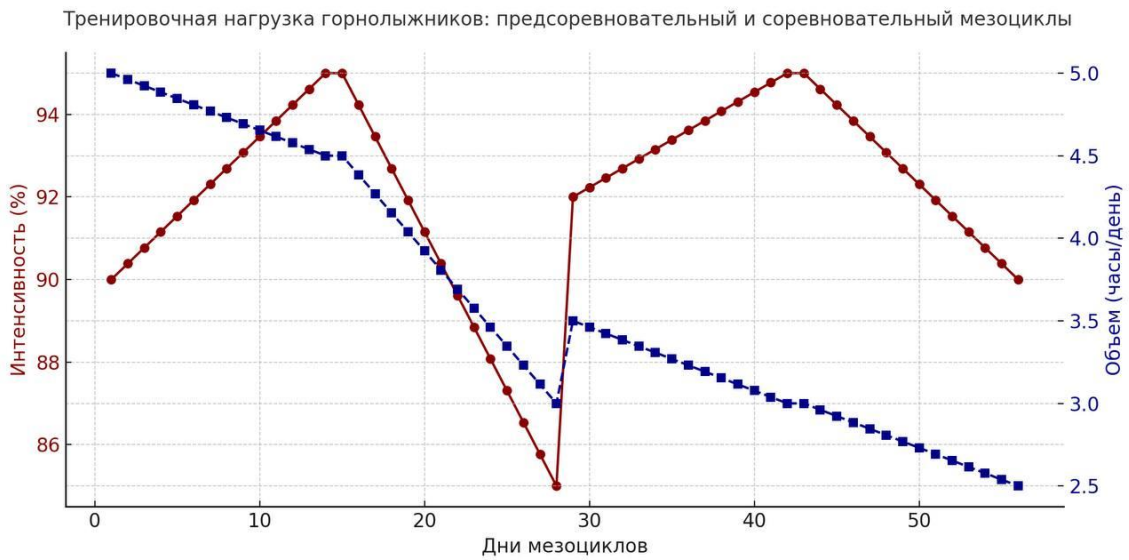


Figure 3. Load distribution scheme for skiers in preparation for the crucial start of the season

Conclusions. Planning training loads for alpine skiers during the pre-competition preparation period requires an individual approach that takes into account the specific characteristics of the athlete, his physical condition and goals for upcoming competitions. This takes into account all stages of preparation from the transition period to the highest loads.

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