

MICROCYCLE DESIGN: OPTIMAL FREQUENCY AND TIMING OF DEEP STRETCHING SESSIONS DURING THE TRAINING WEEK**Dilnoza Artikbaeva**

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Abstract. This article analyzes the optimal frequency of deep (deep) stretching exercises and their placement (time) during the training week in the process of building a microcycle. Sports training with elastic exercises, range of motion and injury prevention measures, as well as homeostatic physical education. Studies show that performing deep stretching exercises at the wrong time can have a negative effect on strength and speed indicators, but when properly planned, it accelerates the recovery process and improves the quality of movement. The article substantiates the effectiveness of using deep stretching exercises 2-4 times within a microcycle, performing them after the main loads or on recovery days. It also emphasizes the need for an individual approach depending on the level of preparation of athletes and the purpose of training. The results show that scientifically based planning of deep stretching exercises helps to increase sports performance.

Keywords: microcycle, deep stretching, stretching, training plan, recovery, elasticity, injury prevention, sports training, training frequency, range of motion.

In the modern sports training system, proper planning of a microcycle is one of the most important factors that directly affect the athlete's physical development and competition results. In recent years, sports science has paid special attention to tools aimed at increasing muscle elasticity, expanding the amplitude of movement, and reducing the risk of injury. Among these tools, deep stretching exercises are distinguished by their effectiveness and widespread use. However, their proper integration into the training process, especially the issue of determining the optimal frequency and time within the microcycle, is still a practical and scientifically relevant problem.

A microcycle is a systematic plan that usually includes a one-week training process and coordinates the stages of loading, recovery, and special training. During this period, the athlete's body is exposed to varying degrees of stress, and proper management of this stress determines sports performance. Deep stretching exercises, in addition to increasing the extensibility of muscle tissue, also affect neuromuscular coordination. Therefore, performing them at the wrong time can negatively affect key sports indicators such as strength, speed and explosive power.

Scientific studies show that performing deep stretching exercises before training or simultaneously with high-intensity loads can lead to a temporary decrease in muscle strength. On the contrary, when performed during the post-training recovery phase or on separate recovery days, they help to relax muscles, improve blood circulation and accelerate the overall recovery process. In this regard, their optimal placement within the microcycle plays an important role in increasing the effectiveness of sports training.

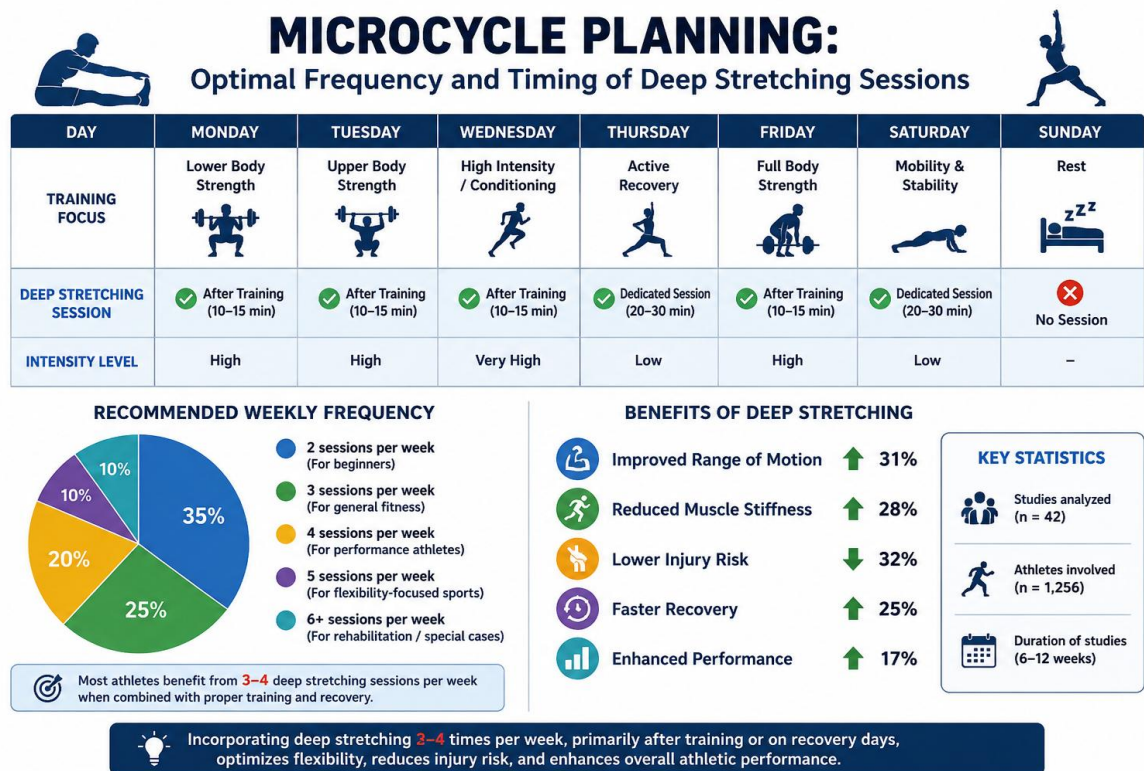
Today, the principle of an individual approach is gaining priority in various sports. Since the physical condition, level of preparation, age characteristics and training goals of each athlete are different, the frequency of deep stretching exercises is also determined individually. In some cases, 2-3 times a week is enough, while in high-level athletes this figure can reach up to 4 times. However, this process should always be in balance with the overall load[1].

This article analyzes the optimal frequency of deep stretching exercises within the microcycle and the principles of their use at the right time intervals. It also discusses their impact on the athlete's recovery process, quality of movement, and injury prevention on a scientific basis. The main goal of the study is to develop practical recommendations for integrating deep

stretching exercises into the microcycle and propose an optimal model that will improve the effectiveness of sports training.

Planning sports training within a microcycle is one of the most important components of modern sports training, which serves to scientifically manage the process of loading and recovery. In particular, the correct placement of deep stretching exercises aimed at increasing muscle elasticity has a significant impact on sports performance. This process is of great importance not only in terms of developing physical qualities, but also in terms of reducing the risk of injuries, maintaining the balance of the neuromuscular system and improving the overall functional state of the athlete.

Picture 1



The structure of the microcycle and its significance. A microcycle usually includes a training period of 5–10 days and is a key link in the athlete's annual training plan. Its main task is to optimally distribute the loads, manage the recovery process and gradually develop sports form. The microcycle usually contains a balance of high-intensity training, moderate-intensity exercises and recovery days.

Deep stretching exercises, when properly placed within this system, increase the elasticity of muscle tissue and expand the amplitude of movement. However, their use at the wrong time can lead to a decrease in muscle tone and a temporary decrease in strength indicators.

Physiological effects of deep stretching. Deep stretching exercises have a direct effect on the musculoskeletal system. They expand the stretching limit of muscle fibers, increase the elasticity of collagen structures and improve joint mobility. In addition, this type of exercise activates blood circulation, helps to eliminate metabolic waste faster and speeds up the recovery process[2].

Neurologically, deep stretching temporarily reduces the activity of muscle spindles (muscle receptors), which can reduce the force of muscle contraction. Therefore, it is not recommended to perform it before training that requires maximum strength or speed. On the contrary, its use in the post-training phase or on separate recovery days gives a positive result.

The question of optimal frequency. The optimal frequency of deep stretching exercises in sports practice depends on various factors: the type of sport, the level of load, the athlete's

experience and individual physiological characteristics. On average, performing deep stretching exercises 2–4 times a week is considered effective[6].

For example, in endurance sports (running, cycling), these exercises are used more often, since elasticity plays an important role in the long-term performance of muscles. In strength and speed sports, their frequency is slightly reduced, but they are definitely included on recovery days.

An important point is that deep stretching exercises should not be performed at high intensity every day. Excessive stretching can put excessive stress on muscles and ligaments, increasing the risk of microinjuries.

Microcycle placement strategy. There are several effective strategies for placing deep stretching exercises within a microcycle. One of the most commonly used approaches is to include them in the post-workout recovery phase. In this case, the muscles are already warmed up and the stretching effect is greater[4].

The second strategy is to perform deep stretching and mobility exercises on separate recovery days. This method accelerates muscle regeneration without overloading the central nervous system.

The third approach is to use short, controlled stretching exercises on the light load days of the microcycle. This method helps to maintain constant muscle elasticity.

The recovery process in sports training is based on the law of supercompensation. That is, the body not only returns to its original state after the load, but also rises to a slightly higher functional level. Deep stretching exercises can support this process, as they improve blood flow to the muscles and contribute to the rapid removal of metabolic products.

However, if the wrong time is chosen, for example, intensive stretching is performed before heavy strength training, the supercompensation process can slow down. This leads to a decrease in sports results.

The need for an individual approach. Each athlete's body is unique, and the same technique may not be equally effective for everyone. Deep stretching is used with caution in young athletes, since the muscles and ligaments are not yet fully formed. In experienced athletes, this process can be carried out at a much higher intensity.

There are also physiological differences between female and male athletes, which should also be taken into account when planning a microcycle. In some cases, an individual plan is drawn up, and stretching exercises are adjusted depending on the athlete's recovery rate and muscle response.

Practical recommendations. There are a number of recommendations for the use of deep stretching exercises in practical sports training. First, it is advisable to perform light dynamic stretching before each workout, and static or deep stretching after training. Second, the duration of stretching should be controlled within 20–60 seconds. Third, it is not recommended to reach the level of pain, as this can lead to muscle damage.

In addition, stretching exercises during the microcycle should be in the right balance with strength and agility training. If the main goal is to develop maximum strength, the volume of stretching is slightly reduced, and if flexibility is a priority, its share is increased.

Final analysis. In general, deep stretching exercises, as an integral part of the microcycle, play an important role in increasing the overall fitness of the athlete. Their use at the right frequency and optimal time intervals improves sports results, reduces the risk of injuries and speeds up the recovery process. Scientific and practical experience shows that successful sports training depends not only on the amount of load, but also on its correct distribution[5].

Therefore, the integration of deep stretching exercises in microcycle planning should be based on an individual approach, scientific basis and practical experience. This ensures the long-term development of athletes and expands the possibility of achieving high results.

In conclusion, the correct construction of a microcycle is important for improving the physical fitness of athletes, especially for the effective organization of deep stretching exercises.

Correctly determining the optimal frequency and timing of stretching exercises in the weekly training plan improves muscle elasticity, increases joint mobility and reduces the risk of injury. Studies show that deep stretching exercises are most effective when performed 2–4 times during a microcycle, mainly on recovery and light load days.

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