

HOW CAN YOU PROMOTE NERVE RECOVERY?

The antithesis of physical effort is sleep. Strength training wears out the nervous system, and sleep promotes recovery. Unfortunately, things are a bit more complex than that.

WHAT IMPACT DO SPORTS HAVE ON SLEEP QUALITY?

Instinctively, you might believe that fatigue caused by sport training will help you sleep better. This is not true. Paradoxically, athletes are one of the groups that have the worst sleep.⁹⁻¹⁰ The incidence of sleep disturbances is higher among athletes than it is in the general population. Athletes often suffer from a reduction in both the quality and quantity of sleep.¹¹ These are only averages, of course, which can hide large differences. But generally, a minority of athletes have better sleep and a majority tend to have worse sleep. Strength sports are particularly affected by this, because with a larger body weight comes a greater risk of sleep apnea.¹²⁻¹³ Pathologies in the neck, back, or shoulders can also disrupt sleep.

So we can conclude that sports easily have a rather negative effect on sleep, but, at the same time, physical activity tires out the body. In this context, it is even more important to sleep well, especially for nerve recovery, which is so problematic in strength training! This is an obstacle in the way of making progress, because a lack of sleep slows recovery and has a negative effect on health. Additionally, serious disruption in sleep is often an indicator of generalized, profound overtraining.¹⁴ But, if you sleep longer, you will perform better.¹⁵

A KEY ROLE FOR MELATONIN?

Melatonin is one of the main hormones that makes you sleep. But melatonin's work does not end there. It also plays a key role in nerve recovery by protecting the integrity of the nervous system (anti-catabolic effect) and aiding in the proliferation of specialized stem cells to regenerate the nerve network (anabolic effect).¹⁶⁻¹⁸ During some studies in which researchers purposefully damaged animals' neural networks, the researchers observed that melatonin had properties that protected myelin and preserved nerve conduction.

Melatonin acts as a primary hormone in charge not only of protecting existing myelin through its specific anti-inflammatory action but also of stimulating myelin renewal by accelerating its synthesis.¹⁹⁻²² In addition to the crucial hormonal aspect, nutrients like vitamin C and cholesterol also play an essential role in myelin synthesis.²³⁻²⁵

Myelin membranes are very rich in saturated fat and are composed of more than 25 percent cholesterol. The latter is essential for myelin regeneration, just as it is for muscle recovery.²⁶ Too great a reduction in fat, during a diet, for example, will only slow down nerve recovery.

WHAT IMPACT DOES PHYSICAL ACTIVITY HAVE ON MELATONIN?

If melatonin plays such an important role, you might expect that strength training would promote its secretion. This is, unfortunately, not necessarily the case. After physical activity, there may be a brief peak in melatonin secretion. You might feel like taking a nap, but this peak is not enough to allow you to sleep all night. Should you use the peak to take a little nap? Of course, so long as you have the time and it does not prevent you from sleeping well that night! However, a late workout can delay the normal evening rise in melatonin, which can delay your falling asleep that night.

As far as sport's impact on overall melatonin levels, research has been very contradictory. Some studies show that, following physical activity, there is a greater increase in the average melatonin level. But other research shows no effect, and still other studies detected a decrease in melatonin. These conflicting results are to be expected since the analyses were done with a small, random sample of people. As we saw with athletes, some sleep better, and some do not. It does not make sense to take an average out of all these people and use that to make a rule that is supposed to apply to everyone. It would be better to study more homogeneous groups and just look at the secretion of melatonin in athletes who are not sleeping well. It seems logical that, in this group, strength training causes a negative effect on this hormone.

If you do not sleep well, and because of that your nerve recovery is abnormally slow, there are two supplements that may be helpful to you: tryptophan, which is a precursor to melatonin synthesis, and Montmorency cherry extract, which can supplement for a melatonin deficit in a more natural way than taking melatonin supplements.

DO NOT CONFUSE NERVE RECOVERY AND MUSCLE RECOVERY

Sleep allows you to recover, especially to recover strength, primarily through its regenerative action on the nervous system. But this does not mean that you build muscle preferentially during the night. On the contrary, during the night there is a lack of nutrients, especially protein, and this means that muscles tend to lose their amino acids. This is nocturnal catabolism! Fortunately, it is not very strong.