

# Are You In Sleep Debt? Your Lack of Quality Sleep Is Sabotaging Your Runs

*Steal these tips for better rest.*

There's no doubt that sleep does the body good—it's essential to reach the best state of physical and mental health. But oftentimes, we sacrifice sleep to fit in the demands of our everyday lives—family, work, training, the list goes on.

While it may seem like you can make withdrawals from your sleep “bank account” without issue, your sleep debt (or not getting enough sleep over multiple days, as defined by the CDC) can build up over time and make it difficult for you to catch up on zzz's, leaving you feeling tired all the time.

So to help you catch more shut-eye, we spoke with experts to break down exactly why you need so much sleep, what it does for your performance, and how to get more quality [rest](#).

## Why You Need Quality Sleep

As a runner, you probably know how important recovery is to your training (at least you should!). And your body does its best form of recovery and regeneration during your sleep cycles. Catching that shut-eye creates an optimal environment for your body to repair your muscle cells, which is what then leads to improved physical fitness over time.

A solid seven to nine hours of sleep will give your body the time it needs to go through the phases of recovery and can help prevent injury. When your body gets the sleep it needs, your immune system is also better equipped to stave off sickness. On the other hand, if you chronically miss out on rest, it can increase inflammation in the body, which can increase risk of disease, according to research.

Your eating habits can also be related to your sleep. While the research on sleep deprivation versus appetite is skewed, there is evidence that sleep is linked to your appetite hormones. “These are known as leptin and ghrelin. People that have poor sleep, or not enough sleep, those appetite hormones are altered in a way that can affect metabolism and weight gain,” says Ryan Soose, M.D., director of the sleep division and associate professor in the department of otolaryngology at the University of Pittsburgh.

Research also shows a link between good sleep quality and better mental health.

Soose says sleep is important for restoration and repair of nerves, muscles, and other tissues. “Sleep, especially deep sleep, is when growth hormone is released, which is important for athletic training,” he says. Human growth hormone (or HGH) is responsible for cell regeneration within tissues and organs all over the body. It also influences your basal metabolic function, including uptake of amino acids and protein synthesis.

“There's plenty of evidence now that chronic sleep deprivation, and reduced quality or quantity of sleep, is associated with increased injury rate, increased reports of chronic pain issues, reduced endurance, and even reduced cognition,” Soose says.

## What does “quality” sleep even mean?

Different stages of sleep bring on different types of recovery. Scott Kutscher, M.D., clinical associate professor of psychiatry and behavioral sciences at Stanford Sleep Medicine Center explains what happens during the sleep phases and why hitting them (which is what makes your sleep quality rest) is so important for runners:

### What Happens During Slow Wave and REM Sleep

You usually go through multiple sleep cycles (between four to six) while you're asleep, moving between light sleep, deeper sleep, deepest (or slow-wave) sleep, and REM sleep, with most shut-eye (about 75%) occurring in the non-REM sleep stage.

“Slow wave sleep is important for physical recovery, and REM sleep is important for mental recovery,” Kutscher says. “In slow wave sleep, our body’s metabolism is at its lowest rate, our heart rate and blood pressure are at their lowest rates. REM sleep is typically when we consolidate our memories. This is important for racing too because running is also a mental phenomenon. You need the focus and the reaction time.”

REM sleep is typically responsible for your dreams and you're usually more restless during this stage, with possible irregular muscle movements. If you're running longer races, that requires constant attention to your tasks, whether it's monitoring your pace, your breath rate, thinking about your form, or mentally pushing through tough [intervals](#). These are the areas that you can lag if you're skipping on REM sleep.

If you're getting up early for a morning run or workout, combined with not getting a full night of rest, you're potentially losing out on slow-wave sleep.

Slow wave sleep is usually referred to as the deepest sleep stage. It's when your brain waves are the slowest, and it's harder to be woken up from this stage. Your growth hormone secretion is at its greatest level during this stage, too. It's the time during your sleep cycle when your body gets to work restoring and regrowing tissues, building bone and muscle and strengthening the immune system. If you're missing out on this important stage, your body will have a harder time recovering after a challenging workout or run.

Because your body is working extra hard during training, skipping out on necessary sleep stages will become even more noticeable. “Even a day or two of less than seven hours of sleep can decrease reaction times significantly,” Kutscher says. Your reaction time is how quickly you respond to stimulus. Whether you [run sprints](#) or like to [run trails](#), your reaction time will improve your performance and help prevent injury and accidents.

### How Poor Sleep Can Affect Performance

A study published in *Physiology & Behavior* in 2020 suggests that just one night of sleep deprivation can affect your performance the next day. Researchers tested a group of 20 runners after they got varying amounts of sleep and had them perform two 12-minute exercises. Researchers ran one test after a night of six and a half hours of sleep, the other after a night of partial sleep (ranging from a half hour to four and a half hours).

They found that after the night of less rest, runners exhibited a higher rate of exertion, lower physical performance, and a change of heart rate—not to mention, a difference in overall mood.

As mentioned, skimping on sleep can also impair your recovery, which can make subsequent runs more difficult. It can also tank your mood and concentration, making your mental game suffer on the run.

## **6 Sleeping Tips to Improve Your Rest**

Not only is the amount of sleep you get important for performance, but so is the quality of sleep you get—and that means hitting all stages. If you're going to bed and waking up at random times, or if you can't seem to settle once your head hits the pillow, here are some tips to help you out:

### **1. Stick to a sleep schedule**

Go to bed and get up at the same time every day. “Make sure [those bed times and wake-up times are] giving you an adequate amount of sleep, and stick to them,” Kutscher says. This sets your body's circadian rhythm, helping you feel more tired around bedtime and more awake in the morning.

### **2. Watch what you eat and drink before bed**

Avoid heavy meals before you hit the hay, and skip the [caffeine](#) and [alcohol](#). They can cause stimulating effects, which make it harder to fall asleep, and they can mess with your sleep quality.

One study published in *Sleep Medicine Reviews* in 2021 also shows that there may be a link between diet and sleep quality. Consumption of healthy foods (think fruits and veggies) helps to promote better sleep, while high intake of processed foods and sugar-rich items may trigger sleep problems.

### **3. Take time to calm the mind**

A study published in *Mindfulness* in 2021 suggests that mind-body activities, like practicing mindfulness, might improve sleep quality over time in people with chronic pain. Consider incorporating mindful exercises like meditation, [yoga](#), or breathing techniques into your daily routine to boost relaxation and help you catch more shut-eye.

### **4. Optimize your sleeping environment**

Soose recommends creating a space that is cool, comfortable, and dark. “Athletes are often in hotels and different environments that physically make it hard to get the right amount of sleep. The more you can control that bedroom or sleep environment, the better,” he says.

## **5. Get active during the day**

Just being a runner should pay off in better sleep, as exercise can improve your rest. Research shows physical activity, particularly weight training, promotes better sleep habits. Exercising earlier in the day may help you fall asleep easier at night.

## **6. Put down your electronics**

Winding down before bed, sans your devices, can positively influence your sleep hygiene. That's because the light on your phone, TV, or tablet can mimic sunlight and then mess with your sleep-wake cycle, according to research. Try to ditch screens 30 to 60 minutes before hitting the pillow.

## **The Bottom Line on Sleep for Runners**

It can be challenging to switch up your sleep schedule and get into a healthier routine—some habits may be easier to kick than others. One of the important factors is follow-through: If you're noticing more lethargy during your runs or your body isn't recovering as fast after a few hard workouts, your sleep routine may be the culprit. Start with one small change, like going to bed 20 minutes earlier, and take it from there.

Lastly, if you find that your sleep difficulties don't improve after testing out new practices, consult your physician or a specialist. Sleep disorders like apnea and restless legs syndrome could be at play. A professional can help you create a plan for quality sleep so that you're well-rested and ready to hit the ground running.

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Joglar, A. (2025, May 30). *You Need Quality Sleep for Better Performance—Here's Exactly What That Means*. Runner's World. <https://www.runnersworld.com/health-injuries/a64928229/how-sleep-impacts-running-performance/>