

# Exercise and Sleep

More than 30% of people suffer from sleep disturbances, and it is estimated that 25% to 35% of Americans are inactive. The more that is learned about sleep and exercise, the more it seems that the high rates of these two problems is no mere coincidence.

Both exercise and sleep are known to be important contributors to a person's overall health, but research has increasingly come to demonstrate that they are intricately connected as well. Getting frequent exercise can deliver sleep benefits including for people with insomnia or for older adults who frequently struggle with sleep problems.

In this guide, we'll review what the research shows about how exercise can promote healthy sleep. We'll address whether it's advisable to exercise before bed and answer other common questions about how to optimize sleep and exercise to promote health and wellness.

## Does Exercise Affect Sleep?

Getting regular exercise can have a significant positive impact on sleep.

Because both sleep and exercise involve multiple bodily systems, the mechanisms by which exercise affects sleep are complex. Nevertheless, exercise has tremendous general health benefits, and many of these can contribute to improved sleep.

For example, regular physical activity can reduce depression and anxiety, both of which can hinder sleep. Studies indicate that exercise can make it easier to fall asleep while also boosting sleep quantity and quality. These positive effects of exercise on sleep may be even greater for people with insomnia or other sleep disturbances.

## How Exercise Can Help You Sleep

Exercise can contribute to good sleep in several ways. The exact benefits and precisely how exercise has this effect are still not fully understood, but studies have consistently found that regular physical activity promotes healthy sleep and overall wellness. In this section, we'll review some of the specific ways that exercise can improve sleep.

### Reduce Stress, Anxiety, and Depression

Exercise can decrease stress and the symptoms and severity of both anxiety and depression. Frequent physical activity helps your body produce endorphins and proteins that encourage the growth of new nerve cells. These biological changes can improve emotional regulation and counteract anxiety and mood disorders. Exercise can also provide a sense of routine and confidence that may be empowering in the face of depression and anxiety.

Stress, depression, and anxiety can have significant negative consequences for sleep, so reducing their severity can make it easier to both feel better and to get better rest.

### Improve Sleep Quality and Quantity

When dealing with complex biological processes and systems, direct causality can be hard to pin down, and this is the case with exercise and sleep. But even though researchers can't state exactly why exercise improves sleep quality and quantity, multiple studies have recognized this effect.

As another way of testing this connection, one study took good sleepers who were also frequent exercisers and had them be mostly sedentary for a day. On the nights when they weren't active, these study participants had reduced slow-wave sleep. Slow-wave sleep, also known as deep sleep, is important for sleep quality and bodily recovery.

The benefits to sleep from exercise have been found in the elderly population as well, which is especially important because sleeping problems become increasingly common with aging.

### Helps Fall Asleep Faster

Sleep latency is a term that is used to describe how long it takes someone to fall asleep once the lights are off and they are trying to get to bed. Reviews of existing studies found reduced sleep

latency in people who exercise, and this effect has been noted especially in middle-aged and older adults. Reducing sleep latency can play a big role in kicking off a good night's sleep and fighting one of the most common causes of sleeping problems.

### Can Help With Sleep Disorders

Exercise may improve sleep the most in people who have sleep disorders such as chronic insomnia. Because exercise is non-pharmacological, low-cost, has minimal side effects, and has notable ancillary benefits, current evidence suggests that it is a compelling strategy for fighting chronic sleep disorders like insomnia. Exercise can also be incorporated into improvements to sleep hygiene or treatments with cognitive behavioural therapy for insomnia (CBT-I)

### Should You Exercise Before Bed?

For most people, there is no problem with exercise before bed as long as it is light or moderate. Only high-intensity exercise within an hour before going to bed has been shown to be problematic for sleep.

The long-standing conventional wisdom has been that exercise in the hours before bed could make it harder to sleep well. Several recent studies have debunked this thinking. In a survey of over 1,000 people conducted by the National Sleep Foundation, no negative impact was found on the sleep of people who exercised in the last four hours before bedtime.

In a large meta-analysis, which is a review of already conducted research, results pointed to no adverse effects of pre-bed exercise on the ability to fall asleep, stay asleep, or get deep sleep. It appears that the benefits of exercise for sleep are enough to overcome any of the previously held concerns about how night time exercise could complicate sleep.

The one exception is high-intensity training. If you're going to workout intensely, make sure to give yourself more than one hour to cool down before going to bed. With less time than this, the heart and body may not have enough time to settle down for sleep. Based on one study, though, even intense exercise improved sleep quality if it was done an hour and a half before bed.

Overall, exercise appears to be beneficial almost no matter when you do it. However, every individual is different, so if you notice that you have a harder time falling asleep when you exercise close to bedtime, then it makes sense for you to incorporate workouts into the earlier part of your day.

### Frequently Asked Questions About Exercise and Sleep

When trying to improve your habits related to exercise and sleep, it's natural to want to better understand the connection so that you can optimize your approach. In this section, we'll explore some of the frequently asked questions about sleep and exercise to cover what the research shows about getting the most out of your workouts and your nightly sleep.

What kind of exercise is best for sleep?

Unfortunately, there is limited evidence from high-quality research studies that directly compare the different types of exercise to determine which has the biggest impact on sleep.

From an overall health standpoint, both aerobic exercise and resistance training offer benefits, and incorporating both types can generate the best results. For sleep, many studies have focused on aerobic exercise, but it appears that benefits are not limited to this type of workout.

To date, we do not have enough data to state which type is optimal, but each individual can track their workouts and sleep to see if they note any difference between types of exercise and their sleep.

How much exercise should you get?

It is unclear how much exercise is needed to improve sleep. Many studies have approached this

in different ways, and there are so many variables that meta-analyses have been unable to draw evidence-based conclusions about the “dose” of exercise needed for sleep benefits.

In the absence of clear-cut evidence, many researchers point to the broader health guidelines related to exercise that recommend at least 150 minutes per week of moderate-intensity activity or 75 minutes or more of higher-intensity activity. Recommendations include a combination of both aerobic and resistance training to increase muscle strength.

It is important to note that garnering the benefits of exercise for sleep may require sticking with an exercise plan over time as these positive effects may not occur right off the bat.

When is the best time to exercise?

The best time to exercise is whenever you can incorporate it into your daily schedule. Some people feel energized by working out first thing in the morning while other people prefer to get their activity in the evening. Others find that it’s easiest to exercise during a lunch break.

No matter when you exercise, it has the potential to improve your sleep. The one exception, as discussed earlier in this guide, is that high-intensity exercise within the last hour before you go to bed may interfere with getting quality sleep.

Does a lack of sleep contribute to inactivity?

A lack of sleep can be a contributor to inactivity. In research studies, reduced sleep has been found to be correlated with decreased physical activity over both the short and long term. Sleep deprivation can cause physical and mental fatigue as well as worsened mood, and all of these factors may play a part in reducing a person’s desire or ability to exercise.

Is it bad to exercise without sleep?

Exercise can be beneficial even with limited sleep. Among people with exhaustion and chronic fatigue, low-intensity exercise has been found to confer benefits, including an increase in energy levels.

However, because of potential decreases to focus and energy, people who are sleep deprived or fatigued may want to avoid higher-intensity or higher-risk exercises. For example, lifting heavy weights or doing yoga can lead to injury if done without proper form and attention-to-detail. These types of workouts should be avoided if focus or strength is depleted to the extent that movements cannot be performed correctly.

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