

SLEEP, DIET & EXERCISE

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Sleep, diet, and exercise are three key pillars of good health, and they are closely interconnected.

Why is sleep important?

While you may experience sleep as “downtime,” your brain and body are actually quite active during sleep. It is a period during which your brain does the work to help you learn, remember, and create. Multiple systems in the body, including the circulatory and immune systems use sleep as a time for repair. Accordingly, inadequate or poor quality sleep can increase your risk for several diseases, including heart disease, diabetes, dementia, and obesity.

Sleep and Diet?

The relationship between sleep and diet is bidirectional, meaning that sleep affects your diet habits, and what you eat impacts your sleep.

Sleep loss is associated with reductions in insulin sensitivity, which may present a higher risk for developing type 2 diabetes.

Inadequate sleep has been linked with disruption of appetite hormones (leptin and ghrelin) such that you may feel hungrier when you don't get enough sleep. Over time, this can translate to overeating and weight gain.

Short sleep may also affect your food cravings, causing you to choose sweets (cookies, chocolate, ice cream), high-carbohydrate foods (bread and pasta), and salty snacks (potato chips and pretzels).

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Foods to avoid for better sleep:

Spicy foods can cause heartburn (acid reflux), which may cause discomfort when lying down and trying to fall asleep. In turn, heartburn may worsen the effects of obstructive sleep apnea (OSA), due to the accumulation of acid irritating the airway. Some spicy foods can raise your body temperature, which disrupts sleep.

Caffeine intake late in the day disrupts sleep for many people, since it's a stimulant. Caffeine is highest in coffee and tea but can be hidden in foods, such as chocolate, ice cream, and even some medications and supplements so check the ingredients.

Alcohol may initially aid in falling asleep, but it is often associated with wakefulness later in the night. Alcohol can also worsen OSA symptoms.

Foods that may improve sleep include tart cherry juice (to increase melatonin available in the body) and high-fiber carbohydrates such as oatmeal or whole grain bread (to boost serotonin). Eating meals around the same times each day is also associated with better quality sleep.

Sleep and Exercise:

Although it might seem counterintuitive, being more active improves sleep quality. Conversely, more sleep facilitates exercise recovery and performance.

Exercise can help stabilize mood and decompress the mind, both of which may contribute to more easily falling asleep.

Regular physical activity improves sleep patterns in those with OSA and insomnia.

Moderate aerobic exercise increases slow-wave sleep or deep non-REM sleep. It is during this period of sleep that growth hormone is released and initiates muscle tissue repair and growth.

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Sleep and Exercise:

Excess tiredness can result in impaired decision making and slower reaction times, which increase the likelihood of injury.

Aim for 150 minutes of moderate intensity exercise and two days of muscle-strengthening activity every week. You will get sleep benefits from exercise regardless of the time of day, but some may find that very intense workouts close to bedtime disrupt sleep due to increases in core body temperature and the release of stimulating endorphins.

Supplements for Sleep:

Many supplements are marketed for improving sleep, but few are supported by science. Ask your doctor before starting a supplement, and remember to use a brand that has been independently tested for safety.

- **CBD** - from hemp plants generates feelings of calmness in many, but there are not large-scale randomized, controlled trials to support its use to date.
- **Melatonin** - is produced by the body to induce sleep. Research suggests that it may help with circadian rhythm disorders but results are mixed for its benefit for managing insomnia.
- **Valerian** - from a grassland plant native to Europe and Asia has been shown to help with falling asleep and improving sleep quality, but recommended dosage is unclear.
- **Magnesium** - can relax muscles and improve symptoms of restless legs as well as affect melatonin levels in the body. Magnesium glycinate or citrate are the forms most suited to sleep symptoms. You can also increase your intake of high-magnesium foods such as nuts/seeds, legumes, and green leafy vegetables.