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Sleep
One of the Most Powerful Foundations of Healthy Aging

Why restorative sleep matters for your brain, heart, energy, and long-term health

We spend approximately one-third of our lives sleeping, yet sleep is often the first thing we sacrifice when life becomes busy. Sleep is not simply a period of inactivity. While we rest, our brains and bodies carry out essential functions that support memory, learning, immune health, metabolism, physical recovery, and emotional well-being.

Along with good nutrition, regular exercise, and preventive medical care, healthy sleep is one of the most important foundations of HealthSpan—the years of life we enjoy in good health.

Why Sleep Is So Important

- Brain health: Supports learning, memory, concentration, and decision-making.
- Heart health: Supports healthy blood pressure and cardiovascular function.
- Metabolic health: Influences blood sugar regulation, insulin sensitivity, appetite, and body weight.
- Immune health: Helps the immune system function effectively.
- Physical recovery: Supports tissue repair, muscle recovery, and daily energy.
- Emotional well-being: Improves mood, resilience, and the ability to manage stress.

Regularly sleeping too little is associated with cardiovascular disease, obesity, type 2 diabetes, and cognitive difficulties. These associations do not always establish cause and effect, but the evidence strongly supports prioritizing sleep. [1–3]

Understanding How Sleep Works

Two biological systems help regulate sleep. Sleep pressure builds the longer we stay awake, partly through a substance called adenosine. Caffeine blocks its sleep-promoting effects, which is why afternoon coffee can interfere with sleep hours later.

Our circadian rhythm is the body's internal 24-hour clock. Our biological clock responds to predictable cycles of daylight and darkness, but artificial lighting, electronic devices, shift work, irregular schedules, and travel can interfere with its timing. Morning daylight and a consistent sleep schedule help synchronize this clock. Good sleep occurs when sleep pressure and the circadian clock work together.

Deep Sleep And REM Sleep: Both Matter

Deep sleep (also called slow-wave or N3 sleep) supports physical recovery, immune function, and memory. It is usually most abundant in the first part of the night.

REM (rapid eye movement) sleep, the stage often associated with vivid dreaming, contributes to learning, emotional regulation, and memory processing. It becomes more prominent later in the night.

The goal is not to maximize one stage of sleep but to obtain sufficient, reasonably uninterrupted, naturally structured sleep. Deep sleep typically declines with age, but persistent fatigue or excessive daytime sleepiness should not simply be dismissed as normal aging.

How Sleep Helps The Brain Clean Itself

Sleep is not simply a period of inactivity: while the body rests, the brain remains active in important maintenance processes. One is its nightly "housekeeping" function. Researchers are studying the glymphatic system, pathways that help move cerebrospinal fluid through brain tissue and clear metabolic waste. Animal studies suggest that some waste-clearing activity increases during sleep, and human studies have identified sleep-related changes in brain fluid movement. [4,5]

One substance of interest is amyloid-beta, a protein that can accumulate abnormally in Alzheimer's disease. Although sleep appears to play a role in brain waste clearance, scientists are still determining precisely how this process works in humans. Poor sleep is associated with changes in brain-health markers, but research has not established that improving sleep prevents Alzheimer's disease. Healthy sleep remains a sensible part of a long-term brain-health strategy. [6]

10 Practical Ways To Improve Your Sleep

1. Maintain a consistent schedule. Wake at approximately the same time each day and go to bed when sleepy, allowing adequate time for rest.
2. Get morning sunlight. Spend time outdoors shortly after waking to help set your body clock.
3. Exercise regularly. Aim for approximately 150 minutes of moderate activity weekly, with strength training twice weekly. An afternoon workout may suit some people, but moderate evening exercise is generally fine if it does not disrupt sleep.
4. Avoid late caffeine. Its effects can last six hours or more; people with sleep difficulties may benefit from avoiding it after noon.
5. Limit alcohol before bed. Alcohol can fragment sleep and worsen snoring or sleep apnea.
6. Make the bedroom comfortable. Keep it cool, dark, quiet, and free of televisions or computer distractions. Choose comfortable bedding, and turn the clock away if watching it increases anxiety.
7. Dim lights and reduce screen stimulation. Wind down during the 30–60 minutes before bed.
8. Create a relaxing routine. Try reading, stretching, quiet music, meditation, or slow breathing.
9. Be thoughtful about meals, fluids, and naps. Avoid heavy meals and reflux-triggering foods near bedtime; limit evening fluids if nighttime urination interrupts sleep. If you nap, aim for 20–30 minutes, preferably before 3 p.m.
10. Do not force sleep. If you are awake and frustrated for roughly 20 minutes, leave the bed for a quiet activity in dim light; return when sleepy. Avoid repeatedly checking the clock.

Additional helpful habits:

- Avoid nicotine, which is a stimulant.
- Review prescription and over-the-counter medications with your clinician for possible sleep-disrupting effects.
- Consider keeping a two-week sleep diary to identify patterns.

- Regular physical activity is associated with better sleep, although the amount of improvement varies by person. [10]

How Much Sleep Do You Need?

Most adults should aim for 7–9 hours per night; adults over 65 are often advised to aim for 7–8 hours. Your daytime alertness, energy, and functioning also matter. Wearable sleep trackers can show useful trends, but their estimates of deep sleep and REM sleep are less reliable than laboratory sleep studies. Do not become overly concerned about a single night's sleep-stage score. [1,2]

Common Sleep Problems and Their Underlying Causes

Medical Conditions To Rule Out

Recognizing the pattern of a sleep problem helps identify its cause and guide treatment.

Common sleep patterns include:

- Difficulty falling asleep
- Frequent awakenings during the night
- Waking too early
- Feeling unrefreshed despite adequate time in bed
- Restless legs syndrome (RLS). An uncomfortable urge to move the legs—sometimes described as crawling, tingling, or aching—typically worsens during evening rest and improves temporarily with movement. It can make falling asleep difficult. Evaluation may include iron studies and a medication review. Learn more
- Obstructive sleep apnea (OSA). Repeated airway obstruction fragments sleep. Loud snoring witnessed breathing pauses, morning headaches, or excessive daytime sleepiness are reasons to seek evaluation. A home sleep apnea test may be appropriate for some patients; others need an overnight laboratory study. Learn more
- Anxiety disorders. Persistent worry, racing thoughts, or panic symptoms can delay sleep or cause repeated awakenings. Anxiety and poor sleep may reinforce one another; addressing both can help.Learn more
- Mood disorders. Depression can cause difficulty falling asleep, early awakening, or excessive sleepiness. Bipolar disorder may substantially change sleep need and timing. Treating the underlying condition is important.Learn more| Bipolar disorder

Other potential contributors include:

- Chronic pain
- Acid reflux
- Nighttime urination
- Medications that interfere with sleep
- Irregular sleep schedules

Discuss persistent symptoms with your clinician; treating the underlying cause often helps more than adding a sleeping pill.

Chronic Insomnia: A Treatment That Goes Beyond Sleep Tips

For some people, repeated sleepless nights lead to anxiety about bedtime. The harder they try to sleep, the more alert they become. This heightened state of arousal can sustain insomnia.

Anxiety and sleep can reinforce each other: worry makes it harder to fall asleep, and a poor night can increase worry about the next night. Relaxation techniques may help, but persistent insomnia often requires more than general sleep-hygiene advice.

Cognitive Behavioral Therapy for Insomnia (CBT-I) is the recommended first-line treatment for chronic insomnia. This structured therapy addresses sleep-related worry, strengthens the connection between bed and sleep, and builds more reliable sleep patterns. It offers lasting benefits without requiring ongoing

What About Sleep Medications?

Medication can help selected patients, but it should be matched to the particular sleep problem, age, medical conditions, and side-effect risks. Feeling sedated does not necessarily mean that sleep is more restorative. [8,12]

- Orexin receptor antagonists—Quviviq (daridorexant), Dayvigo (lemborexant), Belsomra (suvorexant)—reduce wakefulness signaling. They may help some patients but can still cause next-day impairment.
- Trazodone is sometimes prescribed off-label. Small studies suggest effects on deep sleep, but evidence of meaningful insomnia benefit is limited. Dizziness, low blood pressure, and morning grogginess are concerns, especially in older adults.
- Low-dose doxepin can help selected patients who have trouble staying asleep.
- Z-drugs—Ambien (zolpidem), Lunesta (eszopiclone)—can help some patients but carry risks including falls, impairment, and unusual sleep behaviors.
- Benzodiazepines generally require particular caution in older adults because of falls, cognitive effects, sedation, and dependence.

Over-the-counter “PM” sleep aids deserve caution. Products containing diphenhydramine (Benadryl) or doxylamine (some Unisom formulations) may cause dry mouth, constipation, urinary problems, confusion, and next-day drowsiness. They are generally poor choices for regular use, particularly in older adults.

The American Academy of Sleep Medicine guideline advises against routinely using trazodone for chronic insomnia because evidence of clinical benefit is insufficient. Drugs such as gabapentin or pregabalin may improve sleep when pain or related conditions coexist, but are not generally prescribed solely to increase deep sleep. [8]

Melatonin And Sleep Supplements

Prescription ramelteon (Rozerem) acts on melatonin receptors and may be considered for selected patients who have difficulty falling asleep. It is different from an over-the-counter melatonin supplement and should be chosen with a clinician.

Melatonin is primarily a biological timing signal rather than a strong sleeping pill. It may help with jet lag or certain circadian rhythm problems but is not a consistently effective treatment for chronic insomnia. Evidence for supplements such as magnesium, glycine, and ashwagandha is limited or inconsistent; interactions and side effects are possible. Review supplements with your clinician.

Sleep supplements vary in quality, and evidence of benefit is often limited:

- Product labels do not always reflect the actual amount or purity of ingredients. Look for independent verification, such as USP or NSF certification, when available.
- Glycine has limited evidence of modest sleep benefits.
- Magnesium may help some people, particularly when deficient, but research is inconsistent.
- Ashwagandha has shown small benefits in some studies but can have thyroid and liver safety concerns.

Sleep, HealthSpan, And Longevity

Healthy aging means not only living longer, but preserving vitality, mental clarity, and independence. Sleep is central to that goal. The greatest benefits usually come from consistent routines, exercise, morning daylight, stress management, and identifying treatable sleep disorders—not from chasing sleep-tracker numbers or relying on pills.

THE BOTTOM LINE: Good sleep is not a luxury. Protect your sleep, seek evaluation for persistent problems, and focus on waking refreshed and functioning well throughout the day.

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Educational information only. Individual sleep needs and treatment decisions should be discussed with your healthcare professional.