

Understanding Sleep

A Practical Guide to Sleep Quality, Daily Habits, and Common Sleep Problems



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About This Guide

Sleep is not simply time away from the day. It supports the attention, learning, emotional regulation, and physical recovery that make daily life possible. Yet advice about sleep often swings between two extremes: treating it as an obstacle to productivity or turning it into another performance target to perfect.

This handbook takes a more practical approach. It explains what healthy sleep involves, how everyday habits can help or hinder it, and when a persistent problem deserves professional attention. It also offers a measured way to interpret sleep data and assess claims about sleep aids.

The guide is intended for adult general readers. It is an educational resource, not a diagnostic tool or a personalized treatment plan. Children, pregnant or breastfeeding people, and people with complex medical conditions need advice tailored to their circumstances.

Safety first: Do not drive or operate dangerous equipment when sleepy. Seek urgent medical help for severe breathing difficulty, an inability to wake normally, or a suspected overdose. Persistent sleep problems should be assessed rather than dismissed as a lack of willpower or an inevitable part of aging.

Contents

1. The Foundations of Healthy Sleep
2. Making Sense of Sleep Tracking
3. Food, Drink, and Sleep
4. Sleep, Work, and Sustainable Productivity
5. Sleeping Well as We Age
6. Recognizing Common Sleep Disorders
7. Understanding Sleep Aids
8. Practical Tools and Reference Pages
9. Selected Sources

1. The Foundations of Healthy Sleep

Key points

- Healthy sleep depends on sufficient duration, suitable timing, reasonable regularity, and quality.
- Better sleep quality does not remove the need for enough sleep.
- Daytime functioning matters, but feeling accustomed to short sleep does not prove that it is sufficient.

More Than a Number of Hours

Sleep quantity describes how long you sleep. Sleep quality describes the experience and continuity of that sleep: whether you have difficulty falling asleep, spend long periods awake during the night, or feel unrefreshed afterward. Timing and regularity matter too. An adequate sleep opportunity can still be difficult to use if it conflicts with your body clock or changes unpredictably from day to day.

Most adults should allow enough time for approximately seven to nine hours of sleep per night. Individual needs vary, and some people need additional sleep during illness or recovery from sleep loss. The joint American Academy of Sleep Medicine and Sleep Research Society recommendation is for adults aged 18–60 to obtain at least seven hours regularly. These are population-level recommendations, not a reason to ignore persistent symptoms in someone whose sleep duration appears adequate. [1, 2]

Poor quality and insufficient quantity can overlap, but they are not interchangeable. Six uninterrupted hours do not necessarily provide the same benefit as a sufficient night of sleep. Nor does spending nine hours in bed guarantee nine hours asleep.

How Sleep Is Organized

Two processes help regulate sleep. Sleep pressure builds while you are awake and eases during sleep. The circadian system provides an approximately 24-hour timing signal that influences alertness and the tendency to sleep. Light is an important cue for this internal clock.

During the night, the brain cycles through non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep. NREM includes lighter stages and deeper, slow-wave sleep. REM is associated with vivid dreaming, although dreams can occur in other stages as well. These stages perform overlapping functions; none should be treated as the only sleep worth having.

Brief awakenings are common, and many are not remembered. Healthy sleep does not require a perfectly uninterrupted night. More useful questions are whether awakenings are prolonged or distressing and whether sleep supports normal daytime functioning.

Habits That Support Sleep

Good sleep habits (often called sleep hygiene) provide a foundation, but they are not a stand-alone cure for every sleep disorder. A useful starting point is to:

- Protect enough time for sleep rather than fitting it around whatever remains of the day.
- Keep wake-up time reasonably consistent, within the limits of work, care responsibilities, and health.
- Seek daylight during the day and reduce bright light during the wind-down period.
- Make the bedroom comfortably cool, quiet, and dark, while retaining lighting needed for safety.
- Choose a calming transition before bed rather than carrying demanding work directly into it.
- Review caffeine, nicotine, alcohol, and large late meals if they appear to disrupt sleep.
- Include regular physical activity suited to your abilities and health.

If you are clearly awake and becoming frustrated in bed, it may help to move to a safe, dimly lit space for a quiet activity and return when sleepy. Avoid repeatedly checking the clock. Anyone with mobility limitations

or a risk of falls should adapt this approach with professional advice. [3]

When Habits Are Not Enough

Persistent insomnia, breathing problems, uncomfortable leg sensations, or severe daytime sleepiness may require targeted assessment and treatment. Repeatedly trying more elaborate bedtime routines can delay appropriate help.

For chronic insomnia, cognitive behavioral therapy for insomnia (CBT-I) is generally the recommended first-line treatment. It addresses the thoughts and behaviors that perpetuate insomnia and is more structured than a list of sleep tips. Some programs adjust time in bed under guidance; this is not the same as deliberately cutting sleep to gain working hours. [3]

2. Making Sense of Sleep Tracking

Key points

- Sleep diaries and wearable devices can reveal patterns, but measurements have limits.
- Consumer sleep-stage estimates are not equivalent to laboratory measurements.
- Trends and symptoms are generally more useful than chasing a perfect nightly score.

What Tracking Can, and Cannot, Tell You

Sleep tracking can help answer practical questions. Does a late coffee coincide with a longer time to fall asleep? Does a rotating work schedule leave too little opportunity for rest? Are difficult nights isolated events or part of a recurring pattern?

A simple diary may answer these questions without a device. Wearables add convenience and can estimate sleep using movement, heart rate, and other signals. However, they may mistake quiet wakefulness for sleep, miss awakenings, or assign sleep stages inaccurately. Performance varies by device, software version, population, and measurement. [4]

Some devices have authorized medical features for specific purposes. Those functions should be distinguished from general wellness scores and used according to their stated indications. Neither a reassuring sleep score nor the absence of an alert rules out a sleep disorder.

The Most Useful Everyday Metrics

Metric	What it describes	How to use it sensibly
Total sleep time	Estimated time asleep, rather than simply time in bed	Look at patterns across several nights and consider naps separately
Sleep onset latency	Time taken to fall asleep after attempting sleep	Note persistent difficulty rather than treating one number as a diagnosis
Wake after sleep onset (WASO)	Time awake between initial sleep onset and the final awakening	Consider discomfort, breathing symptoms, stress, and environmental disturbance
Sleep efficiency	Proportion of time in bed spent asleep	Use as context, not as a target that justifies reducing needed sleep
Sleep timing	When sleep begins and ends	Compare with obligations, light exposure, and preferred timing
Sleep regularity	How much sleep and wake times vary across days	Identify avoidable disruption without demanding an identical schedule every day
Daytime sleepiness	The tendency to doze or struggle to stay awake	Take persistent or safety-relevant sleepiness seriously, regardless of device scores

Sleep efficiency example: If you spend eight hours in bed and sleep for seven, your estimated sleep efficiency is $7 \div 8 \times 100 = 87.5\%$. The calculation does not tell you whether seven hours meets your needs or whether a disorder is present.

Falling asleep quickly can occur after sleep loss, but a single short latency is not diagnostic. Equally, taking longer to settle on an occasional stressful night does not establish insomnia. Age, circumstances, distress, and daytime effects all influence interpretation.

Apps may describe timing variation as “variance,” “consistency,” or “regularity,” but their formulas can differ. Do not assume that similarly named scores are directly comparable.

Heart Rate and Heart Rate Variability

Resting heart rate and heart rate variability (HRV) can change with sleep, exercise, illness, alcohol, medication, and many other influences. HRV describes variation in the intervals between heartbeats; it is not simply another name for heart rate.

Neither value is a stand-alone measure of sleep quality or psychological stress. A higher HRV is not always better, and comparisons between people or devices can be misleading. If you use these measurements, consider trends under comparable conditions rather than reacting to isolated changes. Seek medical advice for symptoms or persistent unexpected changes rather than trying to correct a score yourself.

Clinical Measurements

A sleep study can collect information that ordinary consumer tracking cannot reliably provide. Depending on the test, this may include brain activity, breathing effort, airflow, oxygen levels, heart rhythm, and limb movements.

The **apnea-hypopnea index (AHI)** describes the number of apneas and hypopneas per hour of sleep. In adults, common severity bands are 5 to fewer than 15 events per hour for mild sleep apnea, 15 to fewer than 30 for moderate, and 30 or more for severe. These bands are only part of an assessment; symptoms, oxygen changes, medical history, and scoring rules also matter. Home testing may report a respiratory event index based on monitoring time rather than measured sleep time. [5]

The **oxygen desaturation index (ODI)** counts qualifying drops in oxygen saturation per hour. Its meaning depends on the size of the drop used, the recording method, and the clinical context. It is not interchangeable with AHI, and a consumer oxygen reading does not establish or exclude sleep apnea.

Arousals are brief changes toward wakefulness identified through brain-wave recording. They are different from the awakenings you remember and cannot be reliably counted by an ordinary activity tracker.

A Practical Way to Use Your Data

1. Record one to two weeks of typical sleep, including workdays and days off.
2. Note context: caffeine, alcohol, medication changes, pain, stress, naps, and work schedules.
3. Review broad patterns alongside how you feel and function.
4. Change one manageable habit at a time so that any effect is easier to interpret.
5. Bring relevant records to a healthcare appointment if problems persist.

If tracking increases anxiety, clock-watching, or pressure to achieve “perfect” sleep, simplify the process or take a break. The purpose is to support rest, not create another demand.

3. Food, Drink, and Sleep

Key points

- Sleep and eating habits influence each other.
- Overall dietary patterns are more useful than promises about individual “sleep foods.”
- Caffeine, alcohol, reflux, and meal timing are practical places to look for sleep disruption.

A Two-Way Relationship

Poor sleep can change appetite, food preferences, and the energy available for cooking or physical activity. Conversely, what and when you eat can affect comfort and alertness at bedtime. These relationships are influenced by health, stress, work schedules, and access to food; not simply individual discipline.

Insufficient sleep is associated with a higher risk of weight gain and metabolic problems. Appetite regulation and food reward may contribute, but the mechanisms are more complex than a single predictable change in two hunger hormones. Sleep can support a broader health plan; it is not a guaranteed weight-loss intervention.

Start With the Overall Pattern

A varied diet containing vegetables, fruit, whole grains, legumes, appropriate protein sources, and unsaturated fats supports general health. Mediterranean-style eating patterns have been associated with more favorable sleep outcomes, although much of this evidence is observational and cannot show that the diet itself caused better sleep. [6]

DASH-style eating may also support overall cardiovascular health. Neither pattern should be presented as a specific cure for insomnia. There is no need to start drinking wine to follow a Mediterranean-style diet; alcohol is not a sleep treatment.

Tryptophan, magnesium, calcium, and other nutrients participate in normal bodily processes, including those related to nervous-system function. That does not mean an extra serving or a supplement will reliably make someone sleep. Correcting a diagnosed deficiency is different from taking more of a nutrient when intake is already adequate.

Caffeine: Consider Both Timing and Dose

Caffeine promotes alertness by blocking adenosine receptors. Its effects can persist for many hours, and sensitivity varies. A coffee that seems harmless to one person may interfere with another person’s sleep even when consumed well before bedtime. [7]

If settling at night is difficult, try moving caffeine earlier and reducing the total amount. Avoid assuming that its effects have ended simply because the initial energy boost has faded. Heavy regular users may prefer a gradual reduction to limit withdrawal symptoms such as headaches.

Check less obvious sources:

- Decaffeinated coffee, which can retain small amounts of caffeine.
- Tea, matcha, cocoa, and chocolate.
- Energy drinks, pre-workout products, and some sports gels.
- Certain soft drinks and caffeine-containing medicines.

Amounts vary widely by product and serving size. Labels and manufacturer information are more useful than assuming that every item in a category contains the same dose.

Alcohol: Sleepiness Is Not Restorative Sleep

Alcohol can make it easier to feel drowsy initially, but it can fragment sleep later in the night and alter sleep architecture. It may also worsen snoring and obstructive sleep apnea. Using it as a sleep aid can therefore work against the result you want. [3, 7]

Do not combine alcohol with sleep medicines or other sedating substances unless a clinician has specifically addressed the interaction. If you may be physically dependent on alcohol, seek medical advice before stopping abruptly, because withdrawal can be dangerous.

Meal Timing, Hunger, and Reflux

A large meal shortly before lying down can cause discomfort or worsen reflux. Spicy, fatty, or acidic foods can be triggers for some people, but a universal ban is unnecessary. Notice your own pattern.

If reflux is a concern, allowing roughly two to three hours between a substantial meal and lying down may help. A small snack may be reasonable if hunger keeps you awake. People managing diabetes, pregnancy, an eating disorder, or another condition may need a different eating schedule.

Stay adequately hydrated during the day. If frequent nighttime urination is a problem, discuss its possible causes and consider shifting some fluid intake earlier rather than sharply restricting fluids.

What About Cherries, Kiwi, Milk, and Herbal Tea?

Some small studies have explored particular foods and sleep, but evidence is not strong enough to prescribe a “sleep menu.” These foods can be part of an ordinary diet if you enjoy and tolerate them; they should not be expected to treat a sleep disorder.

A caffeine-free drink may be a pleasant part of a wind-down routine. Herbal products are not automatically safe, however, and can cause allergies or interact with medicines. Supplements and concentrated extracts require particular care. [8]

Mindful Eating Without Overpromising

Eating with fewer distractions and paying attention to comfort, hunger, and satisfaction can help you notice patterns. It does not reliably “balance sleep hormones,” replace medication, or resolve the underlying cause of every sleep problem.

A realistic experiment is to choose one change (such as moving the last caffeinated drink earlier) and observe the result over several days. Avoid turning every imperfect night into a judgment about what you ate.

4. Sleep, Work, and Sustainable Productivity

Key points

- More time awake does not necessarily mean more useful work.
- Fatigue is an organizational issue as well as an individual concern.
- Naps and caffeine may temporarily improve alertness, but they do not replace sufficient sleep.

How Work Interferes With Sleep

Long hours reduce the time available for rest. Shift work can place working hours in conflict with the circadian system. Stress, unpredictable schedules, after-hours messages, and long commutes can further squeeze sleep opportunity or make it difficult to switch off.

These pressures are not limited to one profession. Healthcare staff, transport workers, freelancers, founders, caregivers, and people holding multiple jobs may all face competing demands. Advice that focuses only on personal discipline misses the role of staffing, income, working conditions, and care responsibilities. [9]

What Sleep Loss Does to Work

Insufficient sleep can impair sustained attention, reaction time, learning, working memory, and decision-making. It can also make emotional regulation and communication more difficult. The practical result may be slower work, avoidable rework, missed information, or increased risk of injury.

Severe sleepiness can cause **microsleeps**: brief, involuntary episodes of sleep. These are particularly dangerous while driving, operating equipment, or performing safety-critical tasks. Motivation alone cannot reliably prevent them.

Fatigue and sleepiness overlap but are not identical. Sleepiness is the tendency to fall asleep; fatigue is a broader experience of weariness or reduced energy. Persistent fatigue has many possible causes. In particular, ME/CFS is a distinct illness and should not be treated as another name for ordinary tiredness or sleep deprivation.

“But I Get More Done When I Sleep Less”

A longer waking day may create more working time on paper while reducing the quality of the work done within it. Extra hours can be offset by mistakes, poorer judgment, slower learning, and the need to redo tasks.

Stories about famous people who sleep very little are not a useful basis for a personal sleep plan. They may be incomplete, inaccurate, or unrepresentative. Rare natural short sleepers have been described, including families with particular genetic variants, but most people cannot train themselves into that pattern. Feeling adapted to short sleep does not establish that attention and performance have recovered.

Do not gradually reduce sleep as a productivity experiment. Improving sleep quality is valuable, but it does not cancel the need for sufficient duration.

Practical Steps for Workers

- **Protect a realistic sleep window.** Include the time needed to wind down, not just the hours between work and the next alarm.
- **Separate urgency from importance.** Postpone, delegate, or remove lower-value tasks before sacrificing sleep.
- **Create a stopping point.** A short list of tomorrow's priorities may help contain unfinished work.
- **Agree on communication boundaries.** Clarify which messages genuinely require an out-of-hours

- response.
- **Use your more alert periods well.** Schedule demanding tasks accordingly, without treating a productive evening as a reason to work through the night.
- **Seek help when needed.** Persistent insomnia or sleepiness may require healthcare assessment, an occupational-health discussion, or both.

When a Short Night Is Unavoidable

Sometimes illness, care responsibilities, or an emergency disrupts sleep despite good planning. The immediate goal is to reduce risk and restore adequate sleep, not to prove that you can function indefinitely without it.

Where possible, delay safety-critical tasks, arrange another way to travel, and reduce nonessential demands. A brief nap may temporarily improve alertness, but allow time afterward for grogginess, or sleep inertia, to clear before demanding activity. Caffeine may also provide temporary help, though late use can interfere with recovery sleep. Neither measure makes drowsy driving safe. [10]

Protect subsequent sleep opportunities. One long night or a weekend lie-in may not fully reverse the effects of repeated restriction. Recurrent short nights call for a more sustainable plan.

What Employers Can Change

A fatigue-aware workplace does more than distribute bedtime tips. It examines the conditions that make sufficient sleep difficult. [9]

Priority	Practical action
Scheduling	Review excessive hours, unpredictable shifts, and inadequate recovery time
Workload	Match staffing and deadlines to realistic capacity
Reporting	Allow workers to raise fatigue concerns without punishment or ridicule
Recovery	Provide suitable breaks and, where appropriate, planned nap arrangements
Access to care	Support confidential occupational-health and clinical referrals
Communication	Avoid making constant availability the default expectation
Learning	Review incidents and near misses for possible fatigue contributions

Nap facilities can be useful in some settings, especially shift work, but need policies covering timing, staffing, hygiene, and recovery from sleep inertia. They are not compensation for routinely unsafe schedules.

Sleep information is sensitive health information. Employers should not demand access to personal wearable scores or treat sleep tracking as a substitute for a safe work system. Any health assessment should have a legitimate purpose, appropriate consent, and suitable privacy safeguards.

5. Sleeping Well as We Age

Key points

- Sleep often becomes lighter and shifts earlier with age.
- Older adults still need sufficient sleep; persistent sleep problems are not something to dismiss.
- Medication review and a safer nighttime environment can be particularly important.

What Commonly Changes

Many older adults become sleepy earlier in the evening and wake earlier in the morning. Sleep may become lighter, with less deep sleep and more awakenings. These changes do not mean that chronic exhaustion, distressing insomnia, or severe daytime sleepiness should be accepted as normal. [11]

Older adults generally need about seven to nine hours of sleep, although individual recommendations may vary. Observing that someone sleeps less does not establish that they need less.

Daytime routines can also change after retirement, bereavement, illness, or reduced mobility. Less daylight, fewer social activities, and irregular schedules may weaken the cues that help organize sleep and wakefulness.

Look for Treatable Contributors

Pain, breathing difficulties, depression, anxiety, urinary symptoms, and other conditions can interrupt sleep. Sleep apnea, restless legs syndrome, and REM sleep behavior disorder also deserve consideration when relevant symptoms are present.

Medicines can affect alertness and sleep. Some have stimulating effects; others cause daytime sedation, confusion, or more frequent urination. Ask a clinician or pharmacist to review all prescriptions, nonprescription products, and supplements. Do not stop a medicine or change its timing independently.

Frequent nighttime urination is worth discussing rather than automatically responding by drinking too little. Its causes may include medical conditions, medication effects, or sleep problems themselves.

Adapt the Routine to the Person

Maintain a reasonably regular daily structure with meals, activity, social contact, and daylight exposure. Exercise should suit the person's mobility, health, and preferences.

A short nap may be helpful, but long or late naps can make nighttime sleep more difficult for some people. If insomnia is persistent, discuss napping within a broader treatment plan.

Light timing matters. Morning bright light can move sleep timing earlier, which may not help someone already falling asleep and waking too early. A clinician can advise on targeted light treatment; blanket advice to use bright light at both ends of the day is not appropriate.

Make Nighttime Movement Safer

- Keep a clear route between the bed, bathroom, and doorway.
- Remove loose rugs, trailing cords, and clutter.
- Use low-level lighting sufficient for safe movement.
- Keep a charged phone or suitable call system within reach.
- Place needed mobility aids where they can be reached safely.
- Discuss appropriate equipment with an occupational therapist or another qualified professional.

Do not add bed rails casually. They can create entrapment or climbing hazards and require an individualized

assessment. Bedroom safety should support independence without introducing new risks.

When to Ask for Help

Seek assessment for persistent insomnia, unintentional dozing, loud snoring with breathing pauses, distressing leg sensations, or dream-enacting behavior. New confusion, repeated falls, or marked changes in alertness also warrant medical attention.

Sleep treatment in later life should consider comfort, function, falls risk, and the person's wider medical care, not simply how quickly a tablet produces drowsiness.

6. Recognizing Common Sleep Disorders

Key points

- Different sleep disorders can produce overlapping symptoms.
- A diagnosis depends on history and, where appropriate, targeted testing.
- Treatment should match the disorder rather than simply suppress the symptom.

A Useful Classification

Clinicians use the International Classification of Sleep Disorders to organize diagnoses. Its third edition, text revision (ICSD-3-TR), was published in 2023. The major groups below provide a useful overview, but this chapter is not a complete diagnostic reference. [12]

Group	Main problem	Examples
Insomnia disorders	Difficulty initiating or maintaining sleep despite adequate opportunity, with daytime effects	Chronic insomnia disorder
Sleep-related breathing disorders	Abnormal airflow, breathing control, or ventilation during sleep	Obstructive and central sleep apnea
Central disorders of hypersomnolence	Excessive sleepiness not better explained by other causes	Narcolepsy, idiopathic hypersomnia
Circadian rhythm sleep-wake disorders	Sleep timing that conflicts with the required or desired schedule	Shift work disorder, delayed sleep-wake phase disorder
Parasomnias	Unwanted experiences or behaviors during sleep or transitions	Sleepwalking, nightmare disorder, REM sleep behavior disorder
Sleep-related movement disorders	Movements or related sensations that disturb sleep	Restless legs syndrome, periodic limb movement disorder

Insomnia

What it looks like: Difficulty falling asleep, repeated or prolonged awakenings, or waking earlier than intended, despite adequate opportunity to sleep. The difficulty causes daytime impairment or distress. Chronic insomnia generally involves symptoms at least three nights a week for at least three months.

What assessment considers: Sleep opportunity, schedule, stress, medical and mental health conditions, medicines, substance use, and other sleep disorders. A sleep diary is often useful. Not everyone with insomnia needs a laboratory sleep study.

How it is managed: CBT-I is generally the first-line treatment for chronic insomnia. Medication may be appropriate after discussion of benefits and risks, sometimes alongside CBT-I. Selection and duration depend on the individual; neither a blanket rejection of medication nor indefinite use without review is appropriate. [3]

Sleep Apnea

What it looks like: Loud habitual snoring, witnessed pauses in breathing, gasping, unrefreshing sleep, morning headaches, or daytime sleepiness. Some people have less obvious symptoms. Sleep apnea can occur at any body size.

Types: In obstructive sleep apnea, the upper airway repeatedly narrows or closes. In central sleep apnea, breathing effort decreases or stops because of altered respiratory control. Treatment-emergent central

sleep apnea describes central events that appear or persist when obstructive apnea is treated in particular circumstances.

How it is assessed and managed: A clinician may recommend an overnight laboratory study or, for suitable patients, a home sleep apnea test. A negative home test does not always exclude the disorder, especially when clinical suspicion remains high. [5]

Positive airway pressure (PAP) is a common treatment for obstructive sleep apnea. Options may include CPAP or auto-adjusting PAP; bilevel devices are used for selected needs. Custom oral appliances, positional approaches, weight-management support when appropriate, and surgery are options for some patients.

Central sleep apnea requires attention to its cause and specialist selection of treatment. Advanced ventilation, including adaptive servo-ventilation, is not suitable for everyone and needs careful assessment, particularly in people with heart failure. Do not choose or alter a breathing device independently.

Narcolepsy

What it looks like: Persistent excessive daytime sleepiness, sometimes with irresistible episodes of sleep. Other features can include disrupted nighttime sleep, sleep paralysis, and dreamlike experiences when falling asleep or waking.

Type 1 narcolepsy is associated with loss of orexin, also called hypocretin, signaling and often includes **cataplexy**: sudden muscle weakness triggered by emotion, usually with consciousness preserved. Type 2 lacks cataplexy, and its underlying biology is less clearly understood. A genetic association alone does not establish a diagnosis. [13]

How it is managed: Specialist assessment usually involves a detailed history and sleep testing. Treatment may combine wake-promoting medication, treatment for cataplexy or disrupted nighttime sleep, planned naps, and accommodations at school or work. Medication schedules and risks vary; these are not treatments to select from a general guide.

Driving and other safety-sensitive activities require explicit discussion with the treating team.

Restless Legs Syndrome

What it looks like: An urge to move the legs, usually with uncomfortable sensations, that begins or worsens during rest, is relieved by movement, and is worse in the evening or at night. Leg cramps and several other conditions can resemble it.

What assessment considers: Iron status, kidney disease, pregnancy, aggravating medicines, and other relevant conditions. Iron treatment requires appropriate testing and supervision; taking iron without an indication can cause harm.

How it is managed: Treatment may include addressing contributing factors, reviewing medicines, and selected drug therapy. Updated AASM guidance supports agents such as gabapentin, gabapentin enacarbil, and pregabalin for suitable adults. It advises against routine standard use of several dopamine-based treatments because of **augmentation**, a medication-related worsening in which symptoms may start earlier, become more intense, or spread. People already taking these medicines should seek a review rather than stopping abruptly. [14]

Parasomnias

What they look like: Unwanted events during sleep or transitions between sleep and wakefulness. NREM-related events include sleepwalking and confusional arousals. REM-related conditions include nightmare disorder and REM sleep behavior disorder, in which a person may act out dreams.

How they are managed: Safety comes first. Reduce injury hazards, protect others in the sleeping environment, and investigate possible triggers or coexisting disorders. Avoid forceful restraint or confrontation during a confused episode; gently redirect the person when it is safe to do so. Locks and alarms must not compromise emergency escape.

New dream-enacting behavior, injuries, episodes involving dangerous activities, or frequent distressing events need clinical assessment. Treatments vary substantially by the specific parasomnia; a general list of sedatives is not an appropriate treatment plan. [11, 15]

Shift Work Disorder

What it looks like: Insomnia and/or excessive sleepiness linked to a recurring work schedule that overlaps the usual sleep period. Not every shift worker has this disorder, and inadequate time allowed for sleep must also be considered.

How it is managed: A plan may combine schedule changes, protected sleep time, appropriately timed light and darkness, planned naps, and selected medication when indicated. A clinician can help tailor the approach to the actual shift pattern. Mistimed light or melatonin may move the body clock in an unhelpful direction. [3, 9, 10]

The commute matters. If you are too sleepy to drive safely after a shift, arrange another option. Do not use dark glasses in conditions where they compromise visibility.

Delayed Sleep–Wake Phase Disorder

What it looks like: A persistent delay in sleep and wake times that makes an earlier required schedule difficult. Sleep may be relatively normal when the person can follow their preferred later timing. Being a “night owl” alone is not a disorder; distress or functional impairment is important.

How it is managed: Treatment may involve a stable schedule, carefully timed morning light, reduced evening light, and appropriately timed melatonin under guidance. Later school or work start times may help where feasible.

Do not attempt around-the-clock bedtime-delay schedules on your own. Such chronotherapy can be difficult to sustain and may destabilize sleep timing. [3]

When to Seek an Assessment

Arrange professional advice when sleep difficulties persist, cause distress, or interfere with daily life. Seek help sooner for witnessed breathing pauses, dangerous sleepiness, repeated injuries during sleep, or sudden unexplained episodes of weakness or loss of alertness.

7. Understanding Sleep Aids

Key points

- “Natural,” “nonprescription,” and “safe” do not mean the same thing.
- Sleep medicines differ in purpose, evidence, interactions, and duration of use.
- Treatment decisions should include the cause of the sleep problem and a plan for review.

Start With the Problem, Not the Product

A sleep aid may make a person drowsy without addressing why sleep is difficult. Insomnia, circadian misalignment, pain, breathing disorders, and medication effects need different approaches.

Before adding a product, discuss the pattern of symptoms, current medicines, alcohol use, health conditions, and daytime risks with a clinician or pharmacist. For chronic insomnia, CBT-I remains an important first-line option. [3]

Prescription Options: A Brief Overview

Availability and approved indications vary by country. The examples below explain categories rather than recommend a particular medicine or provide an exhaustive list.

Category	Examples	Important considerations
Benzodiazepines	Temazepam, triazolam	Sedation, impaired coordination, dependence, and withdrawal; particular concerns in older adults
Nonbenzodiazepine hypnotics, often called Z-drugs	Zolpidem, zaleplon, eszopiclone	Next-day impairment, dependence concerns, and rare but serious complex sleep behaviors
Melatonin receptor agonists	Ramelteon	Used for selected sleep-onset difficulties; interactions and individual suitability still matter
Orexin receptor antagonists	Suvorexant, lemborexant, daridorexant	Can cause next-day sleepiness; not suitable for people with narcolepsy
Low-dose doxepin	Doxepin in an insomnia-specific low-dose formulation	Used for sleep-maintenance insomnia; distinct from higher antidepressant doses

Some other sedating antidepressants are prescribed off-label for sleep, but evidence and suitability differ. It is inaccurate to assume that all antidepressants are interchangeable sleep treatments or that they can be used only when depression is present.

Medicines for restless legs syndrome or narcolepsy treat those conditions; they should not be grouped with general sleeping pills.

Some hypnotics are intended for short-term use, while others may be continued longer in selected patients with regular monitoring. Decisions depend on the medicine, response, alternatives, and risks, not one universal time limit.

Over-the-Counter Medicines

In the United States, nonprescription medicines and dietary supplements are regulated under different

frameworks. OTC antihistamine sleep products are medicines, not dietary supplements. Rules differ internationally. [3]

Sedating antihistamines such as diphenhydramine and doxylamine can cause next-day drowsiness, dry mouth, constipation, blurred vision, urinary difficulties, or confusion. Older adults may be particularly vulnerable to adverse effects. These products are not a preferred long-term solution for chronic insomnia.

Check combination products carefully. A “nighttime” pain or cold remedy may contain several active ingredients, creating a risk of accidental duplication without any additional benefit for your particular sleep problem.

Supplements and Herbal Products

The FDA regulates dietary supplements, but does not review and approve them for safety and effectiveness before marketing in the same way as medicines. Product content and quality can vary. “Not approved before sale” is more accurate than saying supplements are completely unregulated. [3, 8]

Melatonin is a hormone involved in circadian signaling. It may help with certain timing-related problems, including jet lag and delayed sleep timing, but is not a universal treatment for chronic insomnia. Timing can be as important as dose. Long-term safety data are limited, and side effects and interactions are possible. [8]

Magnesium is an essential nutrient, but evidence that supplementation reliably treats insomnia is limited. Extra magnesium can cause adverse effects and may accumulate dangerously in people with impaired kidney function. Treat a suspected deficiency through an appropriate assessment rather than assuming it explains poor sleep. [8]

Valerian, passionflower, lavender, and similar products have limited or inconsistent evidence for sleep problems. Formulations differ, interactions are possible, and a soothing scent is not equivalent to evidence for an oral extract. Essential oils should not be swallowed unless supplied as a specifically appropriate medicinal formulation and used under qualified guidance.

This handbook intentionally does not provide supplement dosing instructions. A general dose range can conceal important differences in product, purpose, timing, age, and medical circumstances.

A Safer Medication Conversation

Before starting a sleep aid, establish:

1. The symptom or condition it is intended to treat.
2. The expected benefit and how quickly it should appear.
3. Side effects, interactions, and activities to avoid.
4. The required sleep opportunity after taking it.
5. The review date and what to do if it does not help.
6. Whether stopping requires a gradual reduction.

Do not combine sedating products or take extra doses because the first dose seems slow to work. Avoid alcohol with sleep medicines. Do not drive if impaired, even if you slept for the recommended interval.

The FDA warns that zolpidem, zaleplon, and eszopiclone can rarely cause serious complex sleep behaviors, including sleepwalking or sleep-driving, sometimes with injury or death. If this happens, stop the implicated medicine and contact a healthcare professional immediately, following the product’s safety instructions. This specific warning differs from routine discontinuation: some other medicines, particularly benzodiazepines, require supervised tapering to avoid dangerous withdrawal. [16]

Severe breathing difficulty, extreme unresponsiveness, or a suspected overdose requires emergency help.

People Who Need Particular Caution

- **Older adults:** Consider falls, confusion, interactions, and the effects of multiple medicines.
- **Pregnant or breastfeeding people:** Do not assume herbal or nonprescription products are safe; seek specific advice.
- **Children and adolescents:** Adult recommendations and doses do not apply. Persistent sleep problems need age-appropriate assessment.
- **People with breathing, liver, kidney, neurological, or mental health conditions:** Suitability depends on the particular condition and product.

8. Practical Tools and Reference Pages

A One-Week Sleep Diary

Complete this once each morning from memory. Estimates are sufficient; do not watch the clock throughout the night to make the diary more precise. Repeat for a second week if useful.

Day	Tried sleep at	to	Approx. time to fall asleep	Approx. time awake overnight	Final wake / out of bed	Naps	Daytime sleepiness and context
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							
Saturday							
Sunday							

In the context column, note relevant factors such as shift times, caffeine, alcohol, pain, stress, illness, or changes in medication. Distinguish feeling low in energy from struggling to stay awake.

A Two-Week Habits Experiment

Choose one manageable question. For example: “Does moving my last coffee earlier help me settle at night?”

Week one: observe. Record your usual pattern without trying to perfect it. Note sleep opportunity, estimated sleep, and daytime effects.

Week two: change one factor. Keep other routines reasonably similar. Look for a useful trend rather than demanding an immediate result.

Review: Was the change feasible? Did sleep or daytime functioning improve? Did the process increase worry? A diary can support a conversation with a professional even if no clear pattern emerges.

Do not use this experiment to test intentional sleep restriction, unsupervised medicine changes, or whether you can remain safe while driving sleepy.

Preparing for a Healthcare Appointment

Bring a concise account of:

- The main problem, when it began, and how often it occurs.
- Your usual sleep schedule and work or care responsibilities.
- Daytime sleepiness, fatigue, mood changes, or safety incidents.
- Snoring, breathing pauses, leg sensations, or unusual nighttime behavior.
- All medicines, supplements, caffeine, alcohol, and other relevant substances.
- A sleep diary and any useful observations from a bed partner.

Useful questions include:

- What conditions might explain this pattern?
- Could any of my medicines be contributing?
- Do I need testing, and what would it clarify?
- Would CBT-I or another nonmedication treatment be appropriate?
- What are the benefits and risks of the proposed treatment?

- How will we judge whether it is working?
- Are there driving or workplace safety precautions I should follow?
- When should I return for review?

A Quick Sleep-Environment Check

- Is there enough protected time for sleep?
- Is the room comfortable, quiet, and suitably dark?
- Is nighttime lighting sufficient for safe movement?
- Are work notifications and unnecessary interruptions controlled where possible?
- Is caffeine or alcohol masking a recurring problem?
- Are pain, breathing symptoms, reflux, or urinary symptoms being addressed?
- Is tracking helping, or adding pressure?

Common Claims, Reconsidered

Claim	A more accurate interpretation
"I can train myself to need much less sleep."	Most people cannot eliminate their biological sleep need through gradual reduction
"Deep sleep matters more than total sleep."	Sleep stages and sufficient duration both matter; a device estimate cannot establish that a short night was adequate
"A good sleep score means nothing is wrong."	Symptoms and clinical assessment can reveal problems a consumer device misses
"Older people naturally need very little sleep."	Aging can change sleep patterns without removing the need for sufficient rest
"Natural sleep aids have fewer risks."	Safety depends on the ingredient, product, dose, interactions, and person
"A nap makes up for any short night."	A nap may improve alertness temporarily but does not replace an adequate overall sleep pattern
"Every tired person just needs better sleep hygiene."	Fatigue and sleepiness have multiple causes, and some require targeted care

Glossary

AHI: Apnea–hypopnea index; the number of qualifying apneas and hypopneas per hour of sleep.

Cataplexy: A sudden episode of muscle weakness, commonly triggered by emotion, associated with type 1 narcolepsy.

CBT-I: Cognitive behavioral therapy for insomnia; a structured, multicomponent treatment.

Circadian rhythm: An approximately 24-hour biological rhythm that influences sleep, alertness, and other functions.

HRV: Heart rate variability; variation in the intervals between consecutive heartbeats.

Hypersomnolence: Excessive sleepiness, assessed in the context of sleep opportunity and other possible causes.

NREM / REM: Non-rapid eye movement and rapid eye movement sleep.

PAP: Positive airway pressure; an umbrella term for therapies that support breathing during sleep.

Sleep inertia: Temporary grogginess and impaired performance after waking.

Sleep latency: Time taken to fall asleep after attempting sleep.

WASO: Wake after sleep onset; time awake after initial sleep onset and before the final awakening.

Final Perspective

Healthy sleep is not a contest to achieve the longest night, the highest score, or the fewest awakenings. It is a foundation for functioning safely and well.

Protect enough time for it, build habits that fit your circumstances, and treat persistent symptoms as information rather than failure. When a problem needs treatment, the right approach begins with understanding the cause, not simply finding something that makes you sleepy.

9. Selected Sources

The sources below support the principal educational statements in this handbook. They are not an exhaustive literature review. Treatment decisions should use current local guidance and individual clinical assessment. References to U.S. regulation apply to the United States, not automatically to other jurisdictions.

[1] National Heart, Lung, and Blood Institute. *How Sleep Works: How Much Sleep Is Enough?* General adult sleep-duration guidance and circumstances in which additional sleep may be appropriate. <https://www.nhlbi.nih.gov/health/sleep/how-much-sleep>

[2] Watson NF, Badr MS, Belenky G, et al. *Recommended Amount of Sleep for a Healthy Adult: A Joint Consensus Recommendation of the American Academy of Sleep Medicine and Sleep Research Society.* *Journal of Clinical Sleep Medicine.* 2015;11(6):591–592. <https://pmc.ncbi.nlm.nih.gov/articles/PMC4434546/>

[3] National Heart, Lung, and Blood Institute. *Sleep Disorder Treatments.* Overview of healthy habits, CBT-I, light therapy, medicines, supplements, PAP, and other interventions. <https://www.nhlbi.nih.gov/health/sleep-disorder-treatments>

[4] Khosla S, Deak MC, Gault D, et al. *Consumer Sleep Technology: An American Academy of Sleep Medicine Position Statement.* *Journal of Clinical Sleep Medicine.* 2018;14(5):877–880. This foundational statement explains the need for validation and the distinction between consumer information and clinical assessment; individual device capabilities and authorizations must be checked separately. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5940440/>

[5] National Heart, Lung, and Blood Institute. *Sleep Apnea.* Patient information on symptoms, diagnosis, and treatment, with related resources on sleep testing. <https://www.nhlbi.nih.gov/health/sleep-apnea>

****[6] Mediterranean Diet and Sleep Features: A Systematic Review of Current Evidence.** *** Nutrients.* 2024. Review of observational research on dietary patterns and sleep; associations should not be interpreted as proof of causation. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10821402/>

[7] National Heart, Lung, and Blood Institute. *Your Guide to Healthy Sleep.* Background on sleep, caffeine, alcohol, and everyday habits. This is a background resource rather than a current medication guideline. https://www.nhlbi.nih.gov/files/docs/public/sleep/healthy_sleep.pdf

[8] National Center for Complementary and Integrative Health. *Sleep Disorders and Complementary Health Approaches: Usefulness and Safety; Melatonin: What You Need To Know; and In the News: Magnesium Supplements for Sleep Disorders.* Evidence limitations, supplement safety, and melatonin considerations. <https://www.nccih.nih.gov/health/sleep-disorders-and-complementary-health-approaches> ; <https://www.nccih.nih.gov/health/melatonin-what-you-need-to-know> ; <https://www.nccih.nih.gov/health/in-the-news-magnesium-supplements-for-sleep-disorders>

[9] National Institute for Occupational Safety and Health. *Fatigue and Work.* Overview of workplace sources of fatigue and shared prevention responsibilities. <https://www.cdc.gov/niosh/fatigue/about/index.html>

[10] National Institute for Occupational Safety and Health. *Training for Nurses on Shift Work and Long Work Hours: Module 7—Napping, an Important Fatigue Countermeasure.* Planned naps, temporary alertness benefits, and the distinction between naps and sufficient main sleep. <https://www.cdc.gov/niosh/work-hour-training-for-nurses/longhours/mod7/01.html> ; <https://www.cdc.gov/niosh/work-hour-training-for-nurses/longhours/mod7/02.html>

[11] National Institute on Aging. *Sleep and Older Adults.* Age-related changes, common disorders, and practical advice. <https://www.nia.nih.gov/health/sleep/sleep-and-older-adults>

[12] American Academy of Sleep Medicine. *International Classification of Sleep Disorders, Third Edition, Text Revision (ICSD-3-TR).* 2023. Classification reference; specialist diagnostic criteria should be consulted directly when making a diagnosis.

[13] National Institute of Neurological Disorders and Stroke. *Narcolepsy.* Symptoms, biology,

assessment, treatment, and support. <https://www.ninds.nih.gov/health-information/disorders/narcolepsy>

[14] Winkelman JW, Berkowski JA, DelRosso LM, et al. *Treatment of Restless Legs Syndrome and Periodic Limb Movement Disorder: An American Academy of Sleep Medicine Clinical Practice Guideline*. Journal of Clinical Sleep Medicine. 2025;21(1):137–152. doi:10.5664/jcsm.11390. See also the AASM summary explaining changes in recommendations and augmentation risk: <https://aasm.org/summary-of-new-clinical-practice-guideline-for-rls-and-plmd/>

[15] Mayo Clinic. *Sleep Disorders: Symptoms and Causes*. Overview of disorder groups, contributing factors, and reasons to seek assessment. <https://www.mayoclinic.org/diseases-conditions/sleep-disorders/symptoms-causes/syc-20354018>

[16] U.S. Food and Drug Administration. *Taking Z-drugs for Insomnia? Know the Risks*. Safety information on complex sleep behaviors, interactions, and next-day impairment. <https://www.fda.gov/consumers/consumer-updates/taking-z-drugs-insomnia-know-risks>