

# sleep

a guide for  
physician assistants  
and patients



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# Why We Need Sleep

Sleep is more important than most people think, but for many, it isn't always a priority. Despite growing evidence that adequate sleep, like adequate nutrition and physical activity, is vital to well-being, people are sleeping less. With busy, hectic lifestyles, people may try to stay awake as much as they can to do more work or fit other things into their daily schedules, thinking it won't be a problem. But lack of sleep—especially on a regular basis—is associated with long-term health consequences, both mental and physical.

Research shows that a number of vital tasks carried out during sleep help people stay healthy and function at their best. Getting enough sleep is increasingly being recognized as an essential aspect of chronic disease prevention and health promotion.

## Learning and Memory

During sleep, the brain is at work forming the pathways necessary for learning and creating memories and new insights. Studies show that a good night's sleep improves learning, and that sleep deficiency can lead to trouble making decisions, solving problems, controlling emotions and behavior, and coping with change.

## Restoration and Repair

During sleep, the cells of the body produce proteins that restore and repair damage that occurs from stress, u-v light exposure, exercise, pollutants and many other things. More sleep allows more time for repair and restoration.

Sleep supports healthy growth and development by triggering the body to release growth hormone, which promotes normal growth in children and teens and boosts muscle mass and the repair of cells and tissues in children and adults.

The immune system—which defends the body against foreign or harmful substances— also relies on sleep to stay healthy. Ongoing sleep deficiency can change the way the immune system responds, which can reduce the body's ability to fight off common infections. Research also shows that being sleep deprived can affect the body's response to the flu vaccine.

## Risk for Chronic Disease

Ongoing sleep deficiency is linked to an increased risk of heart disease, high blood pressure, stroke and kidney disease, diabetes, depression and obesity.

- Sleep is involved in healing and repair of the heart and blood vessels. Heart rate and blood pressure progressively fall as deeper sleep is entered. Lack of sleep may trigger the release of stress hormones, which prevents blood pressure from lowering during sleep, and certain proteins thought to play a role in heart disease.
- Sleep affects how the body reacts to insulin, the hormone that controls blood glucose (sugar) level. Sleep deficiency results in a higher than normal blood sugar level, which may increase the risk for diabetes.
- People who chronically suffer from a lack of sleep are at greater risk for depression.
- There is mounting evidence that people who get too little sleep have a higher risk of weight gain and obesity than people who get seven to eight hours of sleep a night.

### How much sleep do you really need?

Age	Sleep Needs
Newborns (0-2 months)	12-18 hours
Infants (3-11 months)	14-15 hours
Toddlers (1-3 years)	12-14 hours
Preschoolers (3-5 years)	11-13 hours
School-age Children (5-10 years)	10-11 hours
Pre-Teens & Teenagers (10-17 years)	8.5-9.25 hours
Adults	7-9 hours

*Source: National Sleep Foundation*

# What Prevents a Good Night's Sleep?

Many things can prevent a good night's sleep. These factors range from well-known stimulants — such as coffee — to certain over-the-counter and prescription medications, psychological problems and lifestyle factors.

## Stimulants

- Caffeine is a natural stimulant that interferes with a brain chemical (adenosine) that causes sleepiness. In this way, caffeine fools the body into thinking it isn't tired. It can take as long as 6–8 hours for the effects of caffeine to wear off completely. Drinking coffee or other caffeine-containing beverages in the late afternoon may prevent your falling asleep at night.
- Nicotine is another stimulant that can keep you awake. Nicotine also leads to lighter than normal sleep, and heavy smokers tend to wake up too early because of nicotine withdrawal.

## Medications

Certain commonly used prescription and over-the-counter medicines contain ingredients that can keep you awake. Many headache medications contain caffeine. Heart and blood pressure medications, known as beta blockers, can make it difficult to fall asleep and cause more awakenings during the night. People who have asthma or chronic bronchitis also have more problems falling asleep and staying asleep than healthy people, either because of their breathing difficulties or because of the medicines they take.

## Health Conditions

- Chronic painful or uncomfortable conditions — such as arthritis and congestive heart failure — can disrupt sleep.
- A number of psychological disorders — including schizophrenia, bipolar disorder, and anxiety disorders — are well known for disrupting sleep. Depression often leads to insomnia, and insomnia can cause depression.

## Exercise

Vigorous exercise just before bedtime can make it harder to fall asleep; however, exercise in the daytime is associated with improved nighttime sleep.

## Environment

The sleeping environment and potential sleep distractions — such as noises, bright lights, a TV, a cell phone, or computer — can also affect sleep.

# Sleep Disorders

While many people consider sleep a low priority, others can't sleep because of an underlying problem. Experts estimate that about one-third of adult Americans will experience some sort of sleep disorder in their life time. Although many sleep disorders can be treated, most of them go undiagnosed.

The four most common sleep disorders are **insomnia** (trouble falling or staying asleep), **sleep apnea** (pauses in breathing during sleep), **restless legs syndrome**, and **narcolepsy** (extreme daytime sleepiness). Additional sleep problems include **chronic insufficient sleep**, **circadian rhythm abnormalities**, and **parasomnias** (abnormal sleep behaviors), such as sleep walking, sleep paralysis, and night terrors.

## Common Signs of Sleep Disorder

It is common to experience occasional sleep problems, regardless of age. However, if you experience any of the following symptoms on a regular basis, you may be dealing with a sleep disorder.

- It takes you more than 30 minutes to fall asleep at night.
- You wake up frequently during the night and have trouble falling back to sleep again.
- You awaken too early in the morning.
- You often don't feel well rested in the morning even though you spend 7 to 8 hours or more asleep at night.
- You feel sleepy during the day, fall asleep in a few minutes if you have an opportunity to nap, or fall asleep unexpectedly or at inappropriate times during the day.
- According to your bed partner, you snore loudly, snort, gasp, or make choking sounds while you sleep or your breathing stops for short periods.
- You have creeping, tingling, or crawling feelings in your legs, especially in the evening and when you try to fall asleep, which are relieved by moving or massaging them.
- You have vivid, dreamlike experiences while falling asleep or dozing.
- You have episodes of sudden muscle weakness when you are angry or fearful, or when you laugh.
- You feel like you cannot move when you first wake up.
- Your bed partner notes that your legs or arms jerk often during sleep.
- You regularly need to use stimulants to stay awake during the day.

# Sleep and Older Adults

Older adults need about the same amount of sleep as young adults — 7 to 9 hours each night. For older adults, a good night's sleep is especially important, because it helps improve concentration and memory formation, allows the body to repair any cell damage that occurred during the day, and refreshes the immune system, which in turn helps to prevent disease.

The sleep-wake cycle changes as we age, so older adults tend to go to sleep earlier in the evening and wake up earlier in the morning than when they were younger. As we age, the body makes less of the chemicals and hormones (growth hormone and melatonin) that help us sleep well. Older adults tend to wake up more often during the night, which means they may have to spend longer in bed at night to get the hours of sleep needed or may have to make up the shortfall by taking a nap during the day. A daytime nap, if too long or too late in the day, can make it hard to fall asleep at night. Although these changes are a normal part of aging, disturbed sleep, waking up tired every day, and other symptoms of insomnia are not a normal part of aging.

Insomnia is the most common sleep complaint reported by adults age 60 and older, and insomnia is more prevalent in older persons when compared with younger individuals.

Older adults who don't sleep well are more likely to suffer from depression, attention and memory problems, and excessive daytime sleepiness; have increased sensitivity to pain; be at greater risk for nighttime falls; and use more prescription or over-the-counter sleep aids.

While emotional issues such as stress, anxiety, and depression can cause insomnia, the most common causes in older adults are a poor sleep environment and poor sleep and daytime habits. A recent study by the Feinberg School of Medicine at Northwestern University examined the effect of aerobic exercise on middle-aged and older adults with a diagnosis of insomnia. The aerobic exercise trial resulted in the most dramatic improvement in patients' reported quality of sleep, including sleep duration, compared to any other non-drug intervention.

## Talk to Your Physician Assistant about Sleep Problems

If you frequently experience excessive daytime sleepiness, have problems sleeping, or have signs of a sleep disorder three or more nights a week, talk to your physician assistant. Before your appointment, keep a **sleep diary** of when you usually go to bed, how long it takes to fall asleep, when and how many times you wake during the night, and when you wake in the morning. The diary should also include what you ate that day, drinks you had at night containing caffeine or alcohol, use of medicines, smoking and exercise. The sleep diary may show a pattern or give your physician assistant other clues to better diagnose your condition.

If you have insomnia, good communication between you and your physician assistant is crucial to helping you to get a better night's sleep. It is very important to understand the plan or next steps that your physician assistant recommends. Ask questions to make sure you understand what your physician assistant wants you to do. To get the most from your visit, be sure to ask your own questions about what may be causing your insomnia, as well as treatment options and lifestyle changes.

Asking questions is important but so is making sure you hear — and understand — the answers you get. Take notes. Or bring someone to your appointment to help you understand and remember what you heard. If you don't understand or are confused, ask your physician assistant to explain the answer again.

Here are some questions you can ask. Come prepared for your visit by jotting down your questions and concerns and anticipating the questions that your physician assistant might ask you.

- How do I know if I'm getting enough good sleep?
- How can I prevent insomnia?
- How do I know if I have insomnia?
- What is causing my insomnia?
- What can be done to make my sleep better?
- How can I manage my other health conditions so they don't contribute to my sleep problems?
- Can any of the medicines I take cause sleep problems? Are there alternatives that are less likely to cause insomnia? Can I change the times I take my medicine to improve my sleep?
- Where can I get help with depression, anxiety or psychological problems?
- How can I learn to reduce stress?
- How can I get help to quit smoking?

- Will my sleep improve if I lose weight?
- Is behavioral therapy an option for me?
- Is it all right to nap during the day?
- Can sleeping pills or other medications help my insomnia?
  - What are the benefits and risks or side effects of the drugs?
  - Are there any potential drug interactions with the medication?
- Can any complementary or alternative therapies help me?
- Tell me about the medications you prescribed for me:
  - What are the medications and when do I take them?
  - Are there any risks associated with these medications?
  - What side effects should I expect?
  - What should I do if I have side effects?
  - What if the medicine does not help?
  - How should I store and dispose of unused medicine?
- What is my treatment plan?
  - What are the goals for my treatment plan?
  - When will we evaluate the effectiveness of my treatment plan?
- Do I need to see a sleep doctor?

To learn about how to be more involved in your healthcare and what questions to ask your physician assistant, see the information from the Agency for Healthcare Research and Quality (AHRQ) at <http://www.ahrq.gov/patients-consumers/patient-involvement/index.html>.

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# Medications that May Contribute to Sleep Problems

Some common medications can make it difficult to fall asleep or stay asleep, including those taken for colds and allergies, high blood pressure, heart disease, thyroid disease, birth control, asthma, pain and depression.

Talk to your physician assistant about the medications you are taking and the chance that they might be causing your sleep problems. You may be able to take a different drug that doesn't cause insomnia or change the time of day you take your medication. Do not stop any medicines if you have not consulted with your physician assistant. Alcohol, caffeine and smoking also can make it harder to fall asleep. If you are having trouble sleeping, don't have caffeinated drinks after lunch, and don't drink alcohol or smoke close to bedtime.

## Drugs That May Cause Sleep Problems

Alcohol	Corticosteroids
Anticonvulsants	Diuretics (water pills)
Phenytoin (Dilantin)	Gastrointestinal drugs
Lamotrigine (Lamictal)	Cimetidine (Tagamet)
Antidepressants	Lipid and cholesterol-lowering agents
Selective serotonin reuptake inhibitors, such as Prozac and Zoloft	"Statins," such as Lipitor
Appetite suppressants	Niacin
Blood pressure and heart medicines	Nicotine
Alpha agonists	Oral contraceptives
Beta blockers	Parkinson's disease medicines
Calcium channel blockers	Dopamine agonists
Asthma and lung disease medicines	Levodopa
Beta agonists	Quinolone antibiotics
Bronchodilators	Stimulants and amphetamines
Theophylline	Methylphenidate (Ritalin)
Caffeine	Dextroamphetamine (Dextrostat)
Cold medicines	Thyroid hormone
Decongestants (ephedrine and pseudoephedrine)	

Source: Family Practice Notebook

<http://www.fpnotebook.com/Psych/Pharm/MdctnCsOfInsmn.htm>

# Tips for Getting a Good Night's Sleep

Some sleep problems may improve if you change a few sleep-related habits and establish a routine that helps get your body ready for sleep. In general, avoiding stimulants and engaging in relaxing activities before bedtime promotes better sleep. If you have trouble getting to sleep, staying asleep, or if you wake up feeling tired, these tips are a great first step toward preparing your body for restful sleep. If you still have sleep problems after making some of the changes listed below, discuss it with your physician assistant.

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

Go to bed and get up at the same time every day, even on the weekend and holidays. Being consistent reinforces your body's sleep-wake cycle and helps promote better sleep at night. Most people get hungry at 7 a.m., noon, and 6 p.m. because they've eaten at those times for years. Going to bed at about the same time every night can make sleep as regular as hunger.

## **Exercise.**

Exercise at least 30 minutes every day but not later than 2 to 3 hours before bedtime. A recent study by the Feinberg School of Medicine at Northwestern University examined the effect of aerobic exercise on middle-aged and older adults with a diagnosis of insomnia. The aerobic exercise trial resulted in the most dramatic improvement in patients' reported quality of sleep, including sleep duration, compared to any other non-drug intervention.

## **Avoid caffeine and nicotine.**

Coffee, colas, certain teas, and chocolate contain the stimulant caffeine, and its effects can take as long as 8 hours to wear off. Don't have caffeinated drinks after lunch. Nicotine is also a stimulant, and smokers often wake up too early in the morning because of nicotine withdrawal.

## **Avoid alcoholic drinks before bed.**

Alcohol may initially help you fall asleep, but it also causes disturbances in sleep resulting in less restful sleep. You also tend to wake up in the middle of the night when the effects of the alcohol have worn off.

## **Eat right.**

Avoid heavy meals before bedtime. An over-full stomach can keep you up. Drinking too many fluids at night can cause frequent awakenings to urinate.

**Don't take naps after 3 p.m.**

Naps can help make up for lost sleep, but late afternoon naps can make it harder to fall asleep at night. Try not to take naps longer than 20 minutes.

**If possible, avoid medicines that may cause sleep problems.**

Some **common medications** (see page 9) can make it difficult to fall asleep or stay asleep, including those taken for colds and allergies, high blood pressure, heart disease, thyroid disease, birth control, asthma, pain, and depression. Talk to your physician assistant to see whether any drugs you're taking might be contributing to your sleep problem. You may be able to take a different drug that doesn't cause interfere with sleep, or change the time of day you take your medication. Do not stop any medicines if you have not consulted with your physician assistant.

**Have a relaxing bedtime routine.**

Schedule time at the end of the day to unwind. Turn off electronics (phone, computer, television) and quit other stimulating activities several hours before bedtime. Develop some kind of pre-sleep ritual to break the connection between all the day's stress and bedtime. Do the same things each night to tell your body it's time to wind down. A relaxing activity — such as reading, listening to soothing music, meditation or a hot bath — should be part of your bedtime ritual. Relaxing activities can promote better sleep by easing the transition between wakefulness and drowsiness.

Practicing **relaxation techniques** before bed is a great way to wind down, calm the mind, and prepare for sleep. Some simple relaxation techniques include:

**Deep breathing.** Close your eyes, and try taking deep, slow breaths, making each breath even deeper than the last.

**Progressive muscle relaxation.** Starting with your toes, tense all the muscles as tightly as you can, then completely relax. Work your way up from your feet to the top of your head.

**Visualizing a peaceful, restful place.** Close your eyes and imagine a place or activity that is calming and peaceful for you. Concentrate on how relaxed this place or activity makes you feel.

**Mindful meditation.** This practice may help you relax and relieve stress.

**Take a hot bath before bed.**

Your body temperature has a strong influence on how fast you fall asleep. The drop in body temperature after getting out of the bath tells your body to go to sleep. The bath can also help you relax and slow down so you're ready to sleep.

**Have a good sleeping environment.**

Make sure your bedroom is cool, dark and quiet, and that your mattress, bedding and pillows are comfortable.

**Use the toilet before going to bed.****Don't lie in bed awake.**

If you are having trouble sleeping after staying in bed for more than 20 minutes, get up out of bed and do some relaxing activity, like reading or listening to quiet music, until you feel sleepy.

See your physician assistant if you continue to have trouble sleeping. If you consistently find it difficult to fall or stay asleep or feel tired during the day despite spending enough time in bed at night, you may have a sleep disorder. Your physician assistant should be able to help you.

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# Insomnia Treatment

Most cases of insomnia can be cured with changes in lifestyle or behaviors — without relying on prescription or over-the-counter sleeping medications. Emotional issues — such as stress, anxiety, and depression — cause half of all insomnia cases; daytime habits, sleep routine, and physical health may also play a role. The first step is to identify all possible causes of your insomnia; once the cause is identified, treatment can be tailored accordingly.

If you've tried the [tips to improve your sleep](#) (see pages 10-12) and are still having problems sleeping, you may have a sleep disorder that requires treatment. The main focus of treatment for insomnia is directed towards finding the cause. Your physician assistant will ask about your sleep experience, your sleep schedule, and your daily routine. A thorough medical history and physical examination may be called for. If you have a medical problem, such as chronic pain, or an emotional problem, such as stress or depression, treating that problem may help you sleep better.

Before you seek treatment, keep a [sleep diary](#) of when you usually go to bed, how long it takes to fall asleep, when and how many times you wake during the night, and when you wake in the morning. The diary should also include what you ate that day, drinks you had at night containing caffeine or alcohol, use of medicines, smoking and exercise. The sleep diary may show a pattern or give your physician assistant other clues to better diagnose your condition.

Treatment options for insomnia include behavior and lifestyle changes (non-drug treatment), nonprescription and prescription medications.

## Non-Drug Treatment for Insomnia

### Behavior and Lifestyle Changes

There are many factors that affect how well you sleep. Behavior and lifestyle changes improve overall sleep quality and the time it takes to fall asleep, without the side effects of sleep medicines.

**Lifestyle changes** are simple things you can do that may help you sleep better, including changing your sleep schedule, developing a sleep routine, watching what and when you eat and drink, and being more active. For more information see [Tips for Getting a Good Night's Sleep](#) (pages 10-12).

Practicing **relaxation techniques** before bed is a great way to wind down, calm the mind, and prepare for sleep.

**Exercise**, done early in the day, can also be helpful in reducing stress and promoting deeper sleep. In a recent study of middle-aged and older adults with insomnia, aerobic exercise resulted in the most dramatic improvement in reported quality of sleep, including sleep duration, compared to any other non-drug intervention.

**Behavioral therapy** is often part of treatment for insomnia. It is aimed at changing sleep habits and routine, as well as misconceptions about sleep and insomnia that perpetuate sleep problems. A combination of several behavioral treatments is typically the most effective approach. Some examples of **behavioral treatments** are:

- Stimulus Control Therapy: creating a sleep environment that promotes sleep.
- Cognitive Therapy: learning to develop positive thoughts and beliefs about sleep.
- Sleep Restriction: following a program that limits time in bed in order to get to sleep and stay asleep throughout the night.

## Medication Treatment Options

Sleeping pills don't cure the underlying cause of insomnia. In some cases, taking medicines for sleep can help in the short term, while behavior and lifestyle changes can help over the long term. Sleep medications for the treatment of insomnia should only be used:

- After the cause of insomnia has been evaluated
- If the sleep problems are causing difficulties with daily activities
- In combination with good sleep practices and/or behavior approaches
- For short-term situations, if used nightly
- Intermittently, if used long-term
- At the lowest possible effective dose

Medications are not the first choice for treating chronic insomnia and they should be used with caution. Sleep medicines cause side effects, such as prolonged drowsiness the next day, confusion and forgetfulness. They also may become less effective when your body gets used to them (drug tolerance). You may come to rely on sleeping pills to sleep, and will be unable to sleep or have even worse sleep without them (drug dependence), and if you stop the medication abruptly, you may have withdrawal symptoms.

### **Nonprescription Medications**

The most commonly used nonprescription agents for sleep are the antihistamines diphenhydramine (Nytol, Sominex, Benadryl) and doxylamine (Unisom), which can induce drowsiness when taken at bedtime. Next-day drowsiness can be common and severe. Antihistamines are **potentially inappropriate for use in older adults** due to their strong anticholinergic effects, such as confusion and even delirium, oversedation, falls, urinary retention, constipation, and irregular heart rhythms.

### **“Natural” and Herbal Remedies**

Melatonin is a hormone involved in the regulation of sleep and wakefulness. Taking melatonin before bedtime will help individuals fall asleep; however, there is no scientific data showing that melatonin is useful in maintaining sleep. Herbal products such as valerian, chamomile, kava kava, and others have been promoted as natural remedies for insomnia; however, the effectiveness and safety of these products has not been documented.

### **Prescription Medications**

Sleep medications for the treatment of insomnia are called hypnotics. Hypnotic medications reduce the length of time it takes to fall asleep and/or increase sleep duration, and include benzodiazepines and non-benzodiazepine hypnotics.

In March 2007, the US Food and Drug Administration (FDA) issued **a warning in regard to sedative-hypnotic drugs and their risks**, which “...include severe allergic reactions and complex sleep-related behaviors, which may include sleep driving. Sleep driving is defined as driving while not fully awake after ingestion of a sedative-hypnotic product, with no memory of the event.”

In January 2013, the FDA notified the public of **new information about zolpidem**, a widely prescribed insomnia drug. FDA recommends that the bedtime dose be lowered, because new data show that blood levels in some patients may be high enough the morning after use to impair activities that require alertness, including driving.

**Non-benzodiazepine hypnotics.** Short-acting non-benzodiazepines can induce sleep with fewer side effects than benzodiazepines.

- zolpidem (Ambien®)
- zaleplon (Sonata®)
- eszopiclone (Lunesta®)

**Melatonin receptor agonists.** Works similarly to melatonin; does not cause drug dependence.

- ramelteon (Rozerem®)

**Benzodiazepines hypnotics.** The risk of tolerance and dependence is higher with benzodiazepines than with non-benzodiazepine hypnotics.

- flurazepam (Dalmane®) Long-acting
- quazepam (Doral®) Long-acting
- triazolam (Halcion®) Short-acting
- estazolam (Prosom®) Intermediate-acting
- temazepam (Restoril®) Intermediate-acting

Long-acting benzodiazepines are not appropriate for use in older adults, because they cause prolonged sedation, confusion, and increased risk for falls. All benzodiazepines may cause memory problems, impairments in movement, and “hangover” effect.

**Sedating Antidepressants.** If you have depression as well as insomnia, your physician assistant may prescribe an antidepressant with a sedative effect, such as trazodone, doxepin or mirtazapine (Remeron).

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# Resources

American Academy of Sleep Medicine

<http://www.aasmnet.org>

Advances sleep health care by setting clinical standards and advocating for recognition, diagnosis and treatment of sleep disorders

American Sleep Apnea Association

<http://www.sleepapnea.org/index.html>

Non-profit organization dedicated to educating people about sleep apnea, providing sleep resources and a network of sleep apnea support groups

eMedicineHealth.com – Insomnia

[http://www.emedicinehealth.com/insomnia/article\\_em.htm](http://www.emedicinehealth.com/insomnia/article_em.htm)

A consumer health information site owned and operated by WebMD

Narcolepsy Network, Inc.

<http://www.narcolepsynetwork.org>

National patient support organization that provides narcolepsy sufferers and their families with education, information, emotional support and resources

National Institutes of Health – Insomnia

<http://www.nhlbi.nih.gov/health/health-topics/topics/inso>

National Heart, Lung and Blood Institute health information for the public

National Sleep Awareness Roundtable

<http://www.nsart.org>

National coalition of organizations whose mission is to raise awareness about, increase the understanding of, and reduce the public health and safety impact of sleep deprivation and sleep disorders

National Sleep Foundation

<http://www.sleepfoundation.org>

Dedicated to improving the quality of life for Americans who suffer from sleep problems and disorders

Restless Legs Syndrome Foundation (Willis-Ekbom Disease Foundation)

<http://www.rls.org>

A non-profit organization that provides the latest information on Restless Legs Syndrome, a message board, chat room, and information on support groups

### Sleep Education

<http://www.sleepeducation.com>

A sleep health information resource by the American Academy of Sleep Medicine

### Sleep for Kids

<http://www.sleepforkids.org>

Teaching kids the importance of sleep; a service of the National Sleep Foundation

### Your Sleep from the AASM

<http://yoursleep.aasmnet.org>

Sleep information and resources from the American Academy of Sleep Medicine

## Resource Links for Older Adults

### Sleep Changes in Older Adults

FamilyDoctor.org

<http://familydoctor.org/familydoctor/en/seniors/staying-healthy/sleep-changes-in-older-adults.html>

Health information from the American Academy of Family Physicians.

### Tips for Sleeping Better As We Age

HelpGuide.org

[http://www.helpguide.org/life/sleep\\_aging.htm](http://www.helpguide.org/life/sleep_aging.htm)

Non-profit resource for mental health information.

### Sleep and Aging

National Institutes of Health (NIH) Senior Health

<http://nihseniorhealth.gov/sleepandaging/aboutsleep/01.html>

An easy-to-understand guide to sleep for seniors. Includes illustrations and video clips.

### A Good Night's Sleep

Health & Aging Age Page

<http://www.nia.nih.gov/health/publication/good-nights-sleep>

Publication of the National Institute on Aging

### **Aging and Sleep**

National Sleep Foundation

<http://www.sleepfoundation.org/article/sleep-topics/aging-and-sleep>

Comprehensive series of articles covering sleep and aging topics including specific medical problems affecting sleep, dementia-related sleep problems, menopause and sleep, snoring and sleep apnea

### **Sleep Problems in the Elderly**

American Family Physician

<http://www.aafp.org/afp/1999/0501/p2551.html>

Journal article that provides a wealth of information on seniors and sleep problems

### **Insomnia in older adults: Tips for sleeping better as you age**

HelpGuide.org.

[http://www.helpguide.org/life/sleep\\_aging.htm](http://www.helpguide.org/life/sleep_aging.htm)

# Assessment Instruments

**Pittsburgh Sleep Quality Index** (PSQI) is a commonly used self-report measure of sleep quality that has been used for more than 20 years in the sleep literature. It is an effective instrument used to measure the quality and patterns of sleep in the older adult.

The copyright in the PSQI is owned by the University of Pittsburgh; it may be reprinted without charge only for non-commercial research and educational purposes. You may not make changes or modifications to the PSQI without prior written permission from the University of Pittsburgh.

The PSQI has been translated into 56 additional languages. For information on these languages, or for permission to use this instrument and scoring instructions, see the [University of Pittsburgh Sleep Medicine Institute](http://www.sleep.pitt.edu/content.asp?id=1484) website.

<http://www.sleep.pitt.edu/content.asp?id=1484>

## Citation

Buysse DJ, Reynolds CF, 3rd, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. *Psychiatry Res.* May 1989;28(2):193-213.

## Insomnia Severity Index

<http://www.pa-foundation.org/wp-content/uploads/Insomnia-Severity-Index-Form.pdf>

This short, simple, and frequently-used scale is designed to assess the nature, severity, and impact of insomnia and monitor treatment response in adults. See the original citation for how to score the measure and how to interpret scores. Also available in Spanish, French and Arabic.

For permission, contact:

Charles M. Morin, PhD

Université Laval

2325 rue des Bibliothèques

École de Psychologie, Pavillon F.A.S.

Quebec City, Quebec, Canada, G1V 0A6

Tel: (418) 656-3275; Fax: (418) 656-5152; E-mail: [cmorin@psy.ulaval.ca](mailto:cmorin@psy.ulaval.ca)

## Citations

Bastien CH, Vallieres A, Morin CM. Validation of the Insomnia Severity Index as an outcome measure for insomnia research. *Sleep Med* 2001; 2:297-307.

Morin C, Belleville G, Belanger L, Ivers H. The Insomnia Severity Index: Psychometric indicators to detect insomnia cases and evaluate treatment response.

*SLEEP* 2011;34(5):601-608.

# Sleep Diaries

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National Sleep Foundation Sleep Diary

<http://www.pa-foundation.org/wp-content/uploads/NSF-Sleep-Diary.pdf>

Older Adult Sleep Diary

<http://www.pa-foundation.org/wp-content/uploads/Older-Adult-Sleep-Diary.pdf>