

# Sleepiness Handbook



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## Is Excessive Sleepiness Affecting You and Your Family?

**A positive answer to any of these questions may indicate excessive sleepiness.**

- Are you often sleepy when you should be awake?
- Are you relying on coffee and caffeinated soft drinks to get through the day?
- Are you or do you know of a teenager who has trouble falling asleep at night and struggles to get up in the morning?
- Are you or do you know of an older adult who gets sleepy early in the evening and awakens before sunrise?
- Do you snore or have trouble breathing during sleep?
- Do you have uncomfortable feelings in your legs that keep you from sleeping?
- Does someone in your family work at night and have difficulty getting to sleep during the day?
- Do you sleep long hours, but you just don't wake up feeling refreshed?



### Excessive Sleepiness Is a Serious Problem

- People with excessive sleepiness have trouble with memory and concentration.
- Students with excessive sleepiness get lower grades and have lower graduation rates than other students.
- Excessive sleepiness affects job performance. One survey reported that 46% of Americans say that they have missed work or made mistakes at work at least once in the previous 3 months because of excessive sleepiness.
- Excessive sleepiness is a major cause of traffic accidents. People with excessive sleepiness don't react as quickly and they have more accidents. The National Highway Traffic Safety Administration

estimates that at least 100,000 accidents per year are the direct result of driver fatigue. Drivers who fall asleep at the wheel are particularly dangerous because they crash head-on at full speed without trying to brake or turn.

- Excessive sleepiness affects family relationships. People with excessive sleepiness can be irritable and hard to live with. They may be too tired to enjoy their time with family and friends. They may have sleep disorders with snoring and movements during sleep that disturb their bed partner's sleep as well.
- Many medical and psychiatric disorders are associated with poor sleep, including high blood pressure, heart disease, obesity, diabetes, depression, and anxiety disorders.
- Excessive sleepiness is common. In one survey, 26% reported getting a good night's sleep only a few days per month, and 24% said that their sleep problems have some impact on their daily lives. Half of the respondents said that they were tired or fatigued at least one day per week, and 17% said this happens every day or almost every day.

# Clinical Practice Tool

## EPWORTH SLEEPINESS SCALE

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Age:** \_\_\_\_\_

How likely are you to doze off or fall asleep in the following situations, in contrast to just feeling tired? This refers to your usual behavior in recent times. Even if you have not done some of these things recently, consider how they would have affected you. Use the following scale to choose the *most appropriate number* for each situation:

- 0 = would **never** doze
- 1 = **slight** chance of dozing
- 2 = **moderate** chance of dozing
- 3 = **high** chance of dozing

<b>Situation</b>	<b>Chance of Dozing</b>
Sitting and reading	_____
Watching television	_____
Sitting inactive in a public place (eg, at a theater or meeting)	_____
As a passenger in a car for an hour without a break	_____
Lying down to rest in the afternoon when circumstances permit	_____
Sitting and talking to someone	_____
Sitting quietly after a lunch without alcohol consumption	_____
In a car while stopped for a few minutes in traffic	_____
<b>TOTAL:</b>	_____

### Interpreting Results

- 0-10      Average score; normal population
- 11 and up      Insufficient sleep; consider improving sleep hygiene; consultation with a sleep specialist recommended

Johns MW. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. *Sleep*. 1991;14:540-545.  
Johns MW, Hocking B. Daytime sleepiness and sleep habits of Australian workers. *Sleep*. 1997;20:844-849.



## What You Can Expect From Your Healthcare Provider if You Have Excessive Sleepiness?

When you visit your healthcare provider to discuss your excessive sleepiness, you will be providing him or her with detailed information about your sleep. Your primary care provider can often identify the cause of excessive sleepiness and offer help.

To identify and treat the cause of your excessive sleepiness, your healthcare provider will probably ask questions like these:

- When did this problem begin, and how often does it happen?
- When do you usually go to bed and when do you get up?
- How long does it take you to fall asleep?
- If you wake up during the night, how long does it take to fall back asleep?
- Do you snore? Do you ever wake up gasping for breath?
- Do you feel refreshed when you get up in the morning, or is it hard to get out of bed?
- Do you fall asleep during the day?
- Do you use tobacco or alcohol? When and how much?
- How much coffee, tea, and other caffeinated beverages do you drink?
- Do you ever use sleeping pills?
- Are you under stress? Has anything stressful happened recently, like a divorce or job loss?
- Do you find yourself worrying when you are trying to fall asleep?
- Do other family members have trouble sleeping?
- Do you travel often? Have you traveled recently?

Your healthcare provider may also ask you to fill out a questionnaire like the Epworth Sleepiness Scale on page 3 or keep a sleep diary like on page 6. If you can, you might fill out either of these forms to help you prepare for the office visit. Bring the diary and Epworth Sleepiness Scale with you and show them to your healthcare provider.

Your healthcare provider is likely to review your medications, including those prescribed by other providers, as well as over-the-counter medications and supplements. You might consider bringing all your medications with you.

Your healthcare provider may do a physical examination to rule out medical causes of excessive sleepiness.

Depending on the information you provide, your healthcare provider may want to do further testing. A blood test might be needed if there is a possible thyroid problem. If you might have a sleep-related breathing disorder, such as sleep apnea, you may be asked to spend a night in a sleep laboratory where tests are done as you sleep.

Your healthcare provider may need 2 or 3 visits to provide a specific diagnosis and treatment. Of course, treatment will depend on the diagnosis.

- Your healthcare provider may discuss a possible change in your medications to eliminate any that cause sleep problems.
- If you have sleep apnea, you may need an apparatus to help you breathe during the night.
- Circadian rhythm disorders, those caused by an internal clock that does not match your sleeping schedule, may be treated by exposure to bright lights at particular times of the day.
- Behavioral treatment, such as changing your habits and sleeping environment, can be very effective for some sleep disorders.
- Relaxation techniques may be helpful if anxiety keeps you from falling asleep.
- If your sleep problems are caused by depression or anxiety disorders, those underlying causes should be treated appropriately.
- Your healthcare provider may decide to prescribe medication to help you sleep.
- If necessary, if your problem persists after your treatments are in place, other medications that can help you stay alert during the day may be prescribed.

## Causes of Poor Sleep and Excessive Sleepiness

Caffeine, found in coffee, tea, chocolate, and many soft drinks, is a stimulant that may keep you awake or disturb your sleep.

Nicotine, from smoking or chewing tobacco, is another stimulant that can interfere with proper sleep.

### Certain medications\* can interfere with sleep. Some common examples:

- Albuterol or salbutamol (AccuNeb®, Proventil®, Ventolin®, Volmax, VoSpire ER®)
- Dextroamphetamine (Dexedrine®, DextroStat®)
- Methylphenidate or methylphenidylacetate hydrochloride (Concerta®, Metadate CD®, Methylin™, Methylin ER™, Ritalin®)
- Phenylephrine (Neo-Synephrine®, Ah-Chew D, Despec-SF®, Dimetapp Cold Drops®, Gilchew IR, Nasop®, Phenyl-T, Sudafed® PE, Sudogest® PE, Triaminic Thin Strips Cold, Wal-Phed PE®)
- Guaifenesin/phenylephrine/phenylpropanolamine (Ami-Tex, Banex, Dura-Gest, Duratex, Enomine®, Entex®, Fentex, Guaifenex®, Phenylfenesin, Quintex)
- Pseudoephedrine (Afrinol, Cenafed®, Chlor-Trimeton® Nasal Decongestant, Congestaclear®, Contac® Cold, Decofed Liquid, Dimetapp® 12-Hour Non-Drowsy Extentabs, Dimetapp® Decongestant, Drixoral® Non-Drowsy Formula, Efidac®, ElixSure® Decongestant, Entex®, Genaphed®, Myfedrine, Nasofed™, Pseudocot-T®, Pseudofed, Pseudotabs, Pseudoval, Q-Fed, Ridifed®, Seudotabs, Silfedrine, Sudafed®, Sudodrin, SudoGest, Sudrine, Superfed, Suphedrin, Triaminic® AM, Triaminic® Softchews Allergy Congestion, Tylenol® Simply Stuff, Uni-Sed, Unified, Wal-Phed®)
- Quinidine (Cardioquin®, Quinidine gluconate, Quinidine sulfate)
- Selective serotonin reuptake inhibitors: citalopram (Celexa®), escitalopram (Lexapro®), fluoxetine (Prozac®, Prozac® Weekly, Sarafem®), paroxetine (Paxil®, Paxil CR®, Pexeva®), sertraline (Zoloft®), fluoxetine combined with the atypical antipsychotic olanzapine (Symbyax®)
- Theophylline (Aerolate III®, Aerolate JR®, Aerolate Sr.®, Aquaphyllin®, Asmalix®, Bronkodyl®, Elixophyllin®, Quibron® T, Quibron® T/SR, Respbid®, Slo-Phyllin®, Slo Bid®, Slo-Bid® Gyrocaps, T-Phyl®, Theo-24®, Theo-Dur® Sprinkle, Theo-Time, Theo-X, Theobid®, TheoCap™, Theochron®, Theoclear®, Theoclear®-80, Theo-Dur®, Theolair®, Theosol-80, Theovent®, Truxophyllin, Uni-Dur®, Uniphyll®)

### Certain medications\* that might make you drowsy include:

- Chlorpheniramine
- Clonazepam (Klonopin®)
- Diphenhydramine (Benadryl®)
- Estazolam (ProSom™)

- Eszopiclone (Lunesta®)
- Flurazepam (Dalmane®, Dalmadorm®)
- Temazepam (Restoril®)
- Zolpidem (Ambien®)

### Sleep disorders often cause excessive sleepiness:

- Sleep apnea
- Circadian rhythm sleep disorders
- Periodic limb movement disorder
- Restless legs syndrome
- Narcolepsy

### Other medical conditions can interfere with sleep:

- Pain
- Drug or alcohol intoxication or withdrawal
- Thyroid disorders
- Shortness of breath from any cause

### Medical conditions can cause excessive sleepiness:

- Brain tumors
- Chronic obstructive pulmonary disease
- Chronic renal disease
- Congestive heart failure
- Encephalitis
- Endocrine disorders
- Genetic disorders affecting the central nervous system
- Head trauma
- Infections
- Inflammatory conditions
- Metabolic conditions
- Neurodegenerative diseases, such as Alzheimer disease
- Stroke
- Toxic conditions

### Psychological causes of poor sleep:

- Depression
- Anxiety disorders
- Stress
- Worrying
- Mania

### Environmental causes of poor sleep:

- Bedroom too hot or too cold
- Noise or light
- Eating, exercise, or caffeine or alcohol use before bedtime
- Jet lag
- Shift work
- Daytime napping

\*Do not stop or change your medications without consulting your healthcare provider.

Adapted from the American Academy of Family Physicians. Available at: <http://www.aafp.org/afp/990401ap/1911.html>

Adapted with permission from: Van Brunt DL, Riedel BW, Lichstein KL. Insomnia. In: Hasselt VB, Hersen M, eds. *Sourcebook of Psychological Treatment Manuals for Adult Disorders*. New York, NY: Plenum; 1996:539-556.

# National Sleep Foundation Sleep Diary

COMPLETE IN MORNING							COMPLETE AT END OF DAY					
<i>Fill out days 1-4 below and days 5-7 on page 2</i>	I went to bed last night at:	I got out of bed this morning at:	Last night, I fell asleep in:	I woke up during the night: <small>(Record number of times)</small>	When I woke up for the day, I felt: <small>(Check one)</small>	Last night I slept a total of: <small>(Record number of hours)</small>	My sleep was disturbed by: <small>(List any mental, emotional, physical or environmental factors that affected your sleep; e.g. stress, snoring, physical discomfort, temperature)</small>	I consumed caffeinated drinks in the: <small>(e.g. coffee, tea, cola)</small>	I exercised at least 20 minutes in the:	Approximate y 2-3 hours before going to bed, I consumed:	Medication(s) I took during the day: <small>(List name of medication/drug(s))</small>	About 1 hour before going to sleep, I did the following activity: <small>(List activity; e.g. watch TV, work, read)</small>
<b>DAY 1</b> DAY _____ DATE _____	_____ PM/AM	_____ PM/AM	_____ Minutes	_____ Times	<input type="checkbox"/> Refreshed <input type="checkbox"/> Somewhat refreshed <input type="checkbox"/> Fatigued	_____ Hours	_____	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Alcohol <input type="checkbox"/> A heavy meal <input type="checkbox"/> Not applicable	_____	_____
<b>DAY 2</b> DAY _____ DATE _____	_____ PM/AM	_____ PM/AM	_____ Minutes	_____ Times	<input type="checkbox"/> Refreshed <input type="checkbox"/> Somewhat refreshed <input type="checkbox"/> Fatigued	_____ Hours	_____	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Alcohol <input type="checkbox"/> A heavy meal <input type="checkbox"/> Not applicable	_____	_____
<b>DAY 3</b> DAY _____ DATE _____	_____ PM/AM	_____ PM/AM	_____ Minutes	_____ Times	<input type="checkbox"/> Refreshed <input type="checkbox"/> Somewhat refreshed <input type="checkbox"/> Fatigued	_____ Hours	_____	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Alcohol <input type="checkbox"/> A heavy meal <input type="checkbox"/> Not applicable	_____	_____
<b>DAY 4</b> DAY _____ DATE _____	_____ PM/AM	_____ PM/AM	_____ Minutes	_____ Times	<input type="checkbox"/> Refreshed <input type="checkbox"/> Somewhat refreshed <input type="checkbox"/> Fatigued	_____ Hours	_____	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Within several hours before going to bed <input type="checkbox"/> Not applicable	<input type="checkbox"/> Alcohol <input type="checkbox"/> A heavy meal <input type="checkbox"/> Not applicable	_____	_____



## What You Can Do To Get Better Sleep

There are many things you can do on your own to improve your sleep. Try as many of these as you can.

- **Establish a bedtime routine.** Go to bed at the same time every night and get up at the same time every morning, even on weekends. This helps your brain set your internal clock so you will be more likely to be sleepy at bedtime and awake in the morning.
- **Allow enough time for sleeping.** The need for sleep varies from person to person, but most adults need 7 to 9 hours of sleep every night. Many people stay up later than they should and struggle to get up in the morning.
- **Enjoy quiet, relaxing activities just before bedtime.** Take a bath, read, pray, meditate, or listen to quiet music. Don't do anything that might make you anxious or excited right before bedtime like paying bills or playing video games. Bright lights signal your brain that it is time to wake up, so if you can, dim the lights before bedtime or use lower wattage bulbs in your bedroom.
- **Use your bed only for sleep and sex.** You want to associate your bedroom with relaxation and sleep. Do not eat, watch television, or play video games in bed. Keep your computer and work materials out of the bedroom.
- **Make your bedroom comfortable for sleeping.** It should be cool, dark, and quiet. Put blackout shades and lined curtains on your windows to block light from the street, or wear eyeshades. If it is noisy, wear ear plugs. You can also block noise by creating "white noise" with any appliance that makes a low humming sound, like a fan. It is also important to have a comfortable mattress and pillows. A good mattress lasts about 10 years, so it may be time to think about replacing yours.
- **Don't eat a big meal close to bedtime.** A full stomach can make you uncomfortable and disturb your sleep. Spicy foods may cause heartburn. If you drink too much liquid in the evening, you may need to wake up to use the bathroom during the night. Some people like to have a snack before bed, but it is best to keep it small.
- **Avoid caffeine in the evening.** Many of us enjoy the stimulating effects of caffeine, especially in our morning coffee or tea. However, the caffeine in coffee, tea, soda, and chocolate stays in your body and can keep you awake or make you wake up during the night. Even if you can fall asleep with caffeine in your body, you may find that you sleep more soundly and feel better in the morning if you skip the evening caffeine.
- **Avoid tobacco in the evening.** The nicotine in tobacco is a stimulant. Like caffeine, it can make it harder to fall asleep and can decrease the quality of sleep.
- **Avoid alcohol before bedtime.** Many people find that alcohol helps them fall asleep, but alcohol may disturb your sleep the rest of the night. You will probably sleep more soundly if you do not drink.
- **Set your worries aside.** Some people who worry when they try to fall asleep find that keeping a journal is helpful. Others make a list of concerns to think about tomorrow and set it aside at bedtime.
- **Keep naps short.** If you must nap during the day, try to limit it to 30 minutes. Longer naps may make it harder to fall asleep at bedtime.
- **Get regular exercise.** People who exercise fall asleep more easily and sleep more soundly. Exercise can make you more alert, however, so it is probably better to exercise at least 3 hours before bedtime. Exercising early in the day is preferred.

## Suggested Reading

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