

Practice Conductive to Good Sleep & Manage Insomnia

SLEEP HYGIENE:

- Minimize light, noise, and extremes in temperature in the bedroom. Avoid watching TV or the clock while in bed. Maintain a regular arise time, even on days off work and on weekends
- Use your bedroom only for sleep and intimacy.
- Avoid napping during the daytime. If daytime sleepiness becomes overwhelming, limit nap time to a single nap, less than one hour, before 3 PM
- Distract your mind. Lying in bed unable to sleep and frustrated needs to be avoided. Try reading or watching a videotape/DVD or listening to books on tape. It may be necessary to go into another room to do these things.
- Avoid caffeine within four to six hours of bedtime
- Avoid the use of nicotine close to bedtime or during the night.

STIMULUS CONTROL:

To re-associate the bed/bedroom with sleep and to re-establish a consistent sleep-wake schedule

- Try to sleep only when you are drowsy. Go to bed at the same time. You need at least 7 hours of sleep.
- If you are unable to fall asleep or stay asleep, leave your bedroom and engage in a quiet activity elsewhere. Do not permit yourself to fall asleep outside the bedroom. Return to bed when and only when you are sleepy. Repeat this process as often as necessary throughout the night.

SLEEP RESTRICTION:

A method designed to curtail time in bed to the actual amount of sleep time

- Limit time spent in bed to only time actually sleeping
- Wake up at the same time in the morning irrespective of sleep onset

SLEEP RELAXATION:

Clinical procedures aimed at:

- Reducing somatic tension (e.g., progressive muscle relaxation)
- Intrusive thoughts at bedtime (e.g., imagery training, meditation)

COGNITIVE BEHAVIOR THERAPY:

A combination of any of the above behavioral therapy (e.g., stimulus control, sleep restriction, relaxation) are to be followed regularly.



Ten Basic Rules for a Good Night's Sleep

- Sleep only as much as you need to feel rested
- Keep a regular sleep schedule
- Avoid forcing sleep
- Exercise regularly for at least 20 minutes, preferably 4 to 5 hours before bedtime
- Avoid caffeinated beverages after lunch
- Avoid alcohol near bedtime: no "night cap"
- Avoid smoking, especially in the evening
- Do not go to bed hungry
- Adjust bedroom environment
- Deal with your worries before bedtime

Important Precaution: (Please read this carefully)

If you have excessive sleepiness or have been prescribed a sedative medication, it may adversely affect your driving. People with sleep apnea often have three to four times increased number of motor vehicle crashes or other accidents. These accidents may cause serious injury or death to you or others. If you have an accident or frequent near accidents due to sleepiness or inattention, you should stop driving and operating dangerous machinery until your sleep disorder has been treated and you are no longer sleepy or inattentive while driving. It is your responsibility not to drive if you are inattentive while driving. If you drive or fly professionally, you must report your sleep disorder to the doctor who certifies you fit for this profession.



Sleep Studies

SLEEP MINI-SERIES #1

It can be normal to have trouble sleeping from time to time, but if you are having trouble sleeping most nights, you may have a sleep problem. Sleep problems can affect your quality of life, and some can pose a serious threat to your health if left untreated. If you think you might have a sleep problem, discuss your symptoms with your healthcare provider. After reviewing your sleep history, your healthcare provider may refer

you to a specialized sleep center/lab, where trained technicians will perform a sleep study. Sleep studies are tests that monitor your sleep, either overnight or during a series of naps during the day. These tests are painless and used to diagnose sleep problems such as insomnia, sleep apnea, or narcolepsy.

Why do I need a sleep study?

Your healthcare provider has determined that you are having health problems possibly related to poor sleep. Sleep studies will help your healthcare provider determine whether you have a sleep problem and the best treatment options for you.

What are some of the most common signs of sleep problems?

1. Snoring loudly during sleep
2. Stopping breathing during sleep
3. Sleeping in a fitful or restless manner
4. Feeling very sleepy during the day

If you have one or more of these signs, you may have a sleep problem. Examples of two common sleep problems are: obstructive sleep apnea, a condition in which you stop breathing during sleep due to a narrowed or closed airway, and narcolepsy, a condition in which you experience daytime sleepiness and may fall asleep at unexpected times, such as during work, school, or driving. These and other sleep conditions can cause serious health problems and poor quality of life and need to be properly diagnosed and treated.

What are the different types of sleep studies?

The evaluation of sleep problems is usually done in a specialized sleep center that can study your sleep during the day or at night. The sleep specialist will decide which



type of study is best to evaluate your sleep problem. Studies conducted at night, called "overnight studies," are:

- **Basic Polysomnography:** This study records several body functions during sleep including breathing, body movements, brain activity, and eye movements.
- **Continuous Positive Airway Pressure Trial:** This test is done to see how well you sleep while using nasal continuous positive airway pressure therapy (CPAP), a treatment for obstructive sleep apnea. As you sleep, CPAP delivers air to you through a mask placed over your mouth and nose or only over your nose. The air that flows into your lungs under slight pressure prevents the airways from narrowing or closing, allowing you to breathe normally and sleep well.
- **Split Night Study:** This study is a combination of the first and second studies listed above. In a split night study, you sleep part of the night without the CPAP to see what problems you may have. If you have sleep apnea, you will sleep with CPAP the rest of the night.

Studies conducted during the day include:

- **Multiple sleep latency test (MSLT):** This study is done to see how sleepy you are during the day. The MSLT is used most often to diagnose narcolepsy (inability to stay awake during the day) and see what might be causing your excessive daytime sleepiness.
- **Maintenance of Wakefulness Test (MWT).** This study is done to see how well you can remain awake when you are in a situation that makes it easy to get sleepy.



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What can I expect during my sleep study?

When you arrive at the sleep lab, a sleep technician will show you to a (usually private) room. The technician will tape or gel small metal discs on your head and body. Needles are NOT used. These discs are called electrodes and will measure your brain activity, eye movement, heart rate and rhythm, breathing rate and rhythm, snoring, and muscle movements in your face, chest, belly, and legs. Your oxygen, carbon dioxide, and amount of air flowing through your mouth and nose will also be measured. If you are going to have a CPAP study, the technician will help you select a mask most comfortable for you to wear during the study. After the electrodes are placed, you can relax until the technician is ready to have you go to sleep.

Your sleep and breathing will be monitored for the entire study. If you need to get out of bed to go to the bathroom, you can alert the staff and they will help you. Most centers will wake you after the study is complete.

The sleep center will provide you with a list of things to bring, depending on whether the study will be held overnight or during the day. They will also give you a list of what to do and not do.

The following are some general examples of what you will need and what you should and should not do.

What should I bring with me to the sleep study?

1. Loose fitting sleepwear if you're having an overnight study, or comfortable loose clothes for a daytime study.
2. Something to read or work on while awaiting the start of the test. Most sleep centers have televisions in the rooms.
3. Personal toiletry items and a change of clothes for the next day if you are having an overnight study.
4. Any medications you need to take.

How Do I Prepare For A Sleep Study?

1. Eat your regularly scheduled meals the day of your sleep study.
2. No alcohol or caffeine (coffee, tea, soda pop, chocolate) for at least 24 hours before your study.
3. Ask your healthcare provider if you should stop any medications before having your sleep study.
4. The night before your sleep study, go to sleep at your normal bedtime. DO NOT take naps during the day of the study.
5. Shower and wash your hair prior to the study.

6. DO NOT use make-up, lotion, powders, perfume, and cologne or aftershave on your skin, or conditioners, hair spray or gels in your hair. Oils, gels and sprays can interfere with the recording by the electrodes.

What happens after my sleep study?

Your sleep study will be read by a sleep specialist and a final report will be sent to your healthcare provider after the study. You should schedule a follow-up visit with your healthcare provider to discuss the results of your study and any treatment that is needed. If the sleep study shows that you do need additional treatment, your healthcare provider will order the equipment you may need, arrange training on how to use the equipment, and schedule any more tests that may be needed.

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Additional Resources:

American Academy of Sleep Medicine
www.sleepeducation.com

National Sleep Foundation
www.sleepfoundation.org

American Sleep Apnea Association
www.sleepapnea.org

**American Thoracic Society
Public Advisory Roundtable**
www.thoracic.org/sections/about-ats/par/index.html

What to do...

- ✓ If you are having problems sleeping or staying awake, ask your healthcare provider if you should have a sleep study.
- ✓ Tell your healthcare provider if you have loud snoring, stop breathing while sleeping, have difficulty falling or staying asleep, or have trouble staying awake during the day.

Doctor's Office Telephone:



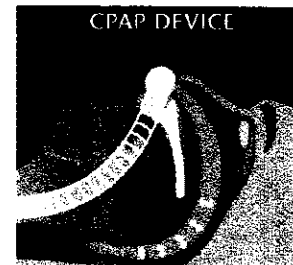
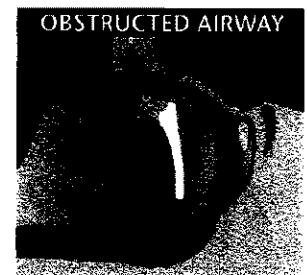
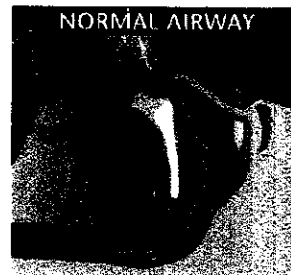
AMERICAN THORACIC SOCIETY

Patient Information Series

SLEEP MINI-SERIES #2

What Is Obstructive Sleep Apnea In Adults?

Obstructive sleep apnea (OSA) is a common problem that affects a person's breathing during sleep. A person with OSA has times during sleep in which air cannot flow normally into the lungs. The block in airflow (obstruction) is usually caused by the collapse of the soft tissues in the back of the throat (upper airway) and tongue during sleep.



Apnea means not breathing. In OSA, you may stop breathing for short periods of time. Even when you are trying to breathe, there may be little or no airflow into the lungs. These pauses in airflow (obstructive apneas) can occur off and on during sleep, and cause you to wake up from a sound sleep. Frequent apneas can cause many problems. With time, if not treated, serious health problems may develop.

OSA is more common in men, women after menopause and people who are over the age of 65. OSA can also occur in children. There are several groups of people who are particularly at risk for developing OSA. People who are overweight are more likely to develop sleep apnea. OSA can occur in people who have large tonsils or adenoids. OSA can also run in families of people of normal size and in people with certain types of jaw problems. People with these jaw problems have difficulty keeping the back of their throat open. Some of these conditions are called micrognathia (a small jaw) and retrognathia (a pulled back jaw).

What are the symptoms of obstructive sleep apnea?

There are many clues that tell your provider that you may have OSA. You may not be aware that you have OSA, but these symptoms may be more obvious to a spouse, other family member, or close friend.

Common symptoms you may have during sleep

- Snoring that is usually loud and bothers other people trying to sleep near you. Snoring can come and go through the night.
- Gasping or choking sounds
- Breathing pauses observed by someone watching you sleep.
- Sudden or jerky body movements
- Restless tossing and turning
- Frequent awakenings from sleep

Common symptoms you may have while awake

- Wake up feeling like you have not had enough sleep, even after sleeping many hours
- Morning headache
- Dry or sore throat in the morning from breathing through your mouth during sleep
- Sleepiness during the day
- Fatigue or tiredness through the day
- Personality changes, such as mood swings and difficulty getting along with others
- Problems with poor memory or inability to concentrate

Can OSA be dangerous?

Lack of sleep can cause you to fall asleep while driving and result in car accidents. Periods of stopping breathing can, with time, cause high blood pressure (hypertension), heart disease, stroke or early death.

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How do I know I have OSA?

The signs of OSA described above should make you seek help for an evaluation. Discuss your problems with your health care provider. They can sort through some of the problems you are having and determine whether you should be evaluated further at a sleep center.

OSA is diagnosed by a sleep study (or polysomnogram). A sleep study is generally done at a sleep center where you will be scheduled to sleep overnight. During this time, your breathing, heart rate, sleep state and oxygen levels will be monitored.

How is obstructive sleep apnea treated?

Sleep apnea can be effectively treated, and there are a number of ways to do so. The type of treatment recommended will depend on the reason for and severity of the sleep apnea. If your OSA is from being overweight, weight loss may cause the apnea to go away completely. You can avoid alcohol for at least 4 hours before going to bed. If you sleep on your back, you can use a pillow or some other strategy to force yourself to sleep on your side. Some people sew a tennis ball into their pajama bottoms to remind them not to turn on their back.

Continuous Positive Airway Pressure (CPAP) is a common device ordered to treat most conditions of OSA. CPAP is delivered by a compressor that blows air (with or without oxygen) into a mask that is worn snugly over the nose and or mouth during sleep. The flow of air acts like a splint to keep the upper airway from collapsing. This helps prevent obstruction and the apnea from occurring. The air pressure is adjusted to a setting that best controls the apnea. Often a person will also notice much less snoring when wearing CPAP.

There are devices and surgeries which can be done to treat OSA. The type of device or surgery will depend on what has cause the apnea. Some appliances or devices (called oral devices) that are worn in the mouth during sleep may keep your airway open. Most oral devices work by either bringing the jaw forward or keeping the tongue from blocking the throat. Oral appliances are most likely to help a person who has mild sleep apnea and who is not overweight. These devices are usually custom-made and fitted under the supervision of a specialized dentist or oral surgeon who works with these problems.

Surgery may be recommended in some cases. When the tonsils or adenoids are causing the throat to be blocked, a tonsillectomy may be recommended. Surgery may also be helpful for patients with jaw problems. Other surgeries for OSA either clear out the tissue from the back of the throat or reposition the tongue forward. These surgeries are not, however, as effective as CPAP to control your OSA and are usually reserved for patients who fail CPAP.

Authors: Rowley JA, McGowen C, Lareau S, Fahy B, Garvey C, Sockrider M

For more information contact the following websites:

American Thoracic Society

<http://www.thoracic.org/sections/education/patient-education/patient-information-series/resources/en/sleep-studies.pdf>

American Academy of Sleep Medicine

http://www.sleepfoundation.org/site/c.huIXKJM0lx/b.2417141/k.27D9/Home_of_the_Sleep_in_America_Poll.htm

American Sleep Apnea Association

http://www.sleepapnea.org/info/index.html?gclid=Cj7_l-qby5cCFSJlagod1BNvRw

National Heart Lung and Blood Institute

<http://www.nhlbi.nih.gov/health/public/sleep/index.htm>

Action Steps

- ✓ Talk with your health care provider if you have symptoms of obstructive sleep apnea
- ✓ Ask people who are around you when you sleep if they have heard loud snoring or saw you have apnea spells
- ✓ Ask your health care provider if you need a sleep study
- ✓ Exercise regularly and work to lose weight if you are overweight
- ✓ Avoid alcohol, particularly just prior to sleep

Doctor's Office Telephone:
