



Your Sleep Study **The Essential Facts**

Your sleep study
is scheduled for

Date: _____

Please arrive at ____:____ a.m. p.m.

OR

Please call us at the phone
number below to schedule
your overnight sleep study.

NORTH DAKOTA
Center for Sleep™
A Division of PDS Inc.

701.356.3000 • 1.877.757.2796

Your Sleep Study: The Essential Facts

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Scheduling

When you schedule your sleep study, please remember to disclose any necessary/pertinent medical information the sleep technologist may need.

IMPORTANT: If you cannot keep this scheduled appointment, please call us immediately at the phone number listed on the front cover.

Most overnight studies are completed by 7:00 a.m. Please make arrangements in your next day's schedule to allow for enough time to complete this study.

Depending upon the physician's orders, you may need to stay for a daytime study.

Complete the enclosed pre-study questionnaires before your appointment and bring them with you on the night of your sleep study.

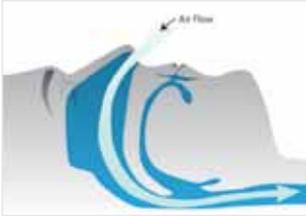
If you contacted the sleep center for problems related to excessive daytime sleepiness, please have someone drive you to and from the sleep center. Remember excessive sleepiness may be dangerous when you drive.

Before my sleep study and going on CPAP, I had a lot of problems with snoring and difficulty functioning throughout the day. While driving, I had to blast the radio and munch on snacks to stay awake. Today, my whole family loves my CPAP. I am able to share the bed with my husband after a long time apart, I'm more energetic, and even joined a health club and lost some weight

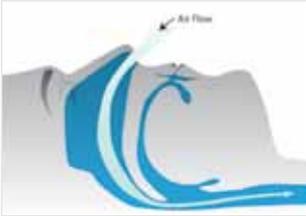
-Dana

B.

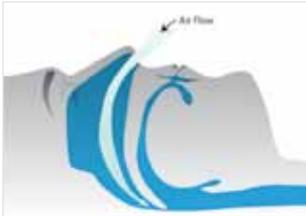
Sleep Disordered Breathing



Open Airway



Snoring - Partial obstruction



Apnea - Complete Obstruction

Simply Snoring or Something More?

If you snore, you may know about nightly jabs in the ribs and grumbling from your bed partner. Snoring may harm your sleep and the sleep of your bed partner, or people in other rooms. It can also be the first sign of a more serious health condition called sleep apnea, however snoring is just one of the indications of a sleep disorder.

Breathing During Sleep

When you breathe, air travels through passages in your nose and throat. When these air passages are wide enough to let air flow freely, you breathe normally. If the passages become narrowed, you may snore. If they become blocked and you can't breathe, this is called sleep apnea.

Snoring

If the structures in your throat are bulky or throat muscles relax too much, the airway may be partly blocked. Air flowing through the throat makes these structures vibrate. That vibration is what causes snoring. Snoring is a symptom of sleep apnea.

Sleep Apnea

When you experience an apnea, the brain tells the body to wake up just enough to tighten the muscles and open the airway. This cycle may repeat many times during the night. You most likely are not aware of waking up; it's often the bed partner who notices pauses in breathing.

Sleep Apnea Is Serious

If you have sleep apnea, your throat becomes blocked during sleep. To breathe, you are awakened just enough to inhale and resume breathing, often without being aware of the sleep disruption. The cycle repeats many times throughout the night.

Signs and Symptoms

- Loud snoring
- Gasps or snorts in your sleep
- Pauses in your breathing
- Wake up tired after a full night's sleep
- Wake up with a headache
- Feel very sleepy during the day
- Low energy levels
- Fall asleep easily without meaning to
- Problems with memory or concentration
- High blood pressure and other cardiovascular complications
- Being cranky or short-tempered
- Reflux
- Waking during the night to go to the bathroom
- Impotence

Risk Factors

- Family history of sleep apnea
- Large neck
- Recessed chin
- Excess weight
- Being male
- Abnormalities in the structure of the upper airway
- Smoking
- Alcohol use

Get Help

Untreated sleep disorders have been linked to high blood pressure, heart disease, stroke, depression, diabetes and other chronic diseases. In addition to these health risks, regularly disrupted sleep can affect daily performance, alertness and activities.

My wife and I both sleep so much better since I got my CPAP machine. She doesn't lay awake with my snoring or worrying about my apnea spells. I sleep so much deeper, awakening more rested and energized. Amazing!

-Harold



Sleep Study

A recent visit to your health care provider indicated a sleep study may be beneficial to your long-term health.

A sleep study gives the best picture of how you breathe when you sleep. Your breathing, heart rate, oxygen level, limb movements and other functions are measured and recorded.

The results of the study will help with diagnosing the quality, duration, and amount of sleep, as well as determining which possible treatments will best help you.

What to expect

When you spend a night in a sleep center, you will have a private bedroom.

You should be able to go to bed at your usual time, as long as processes in the sleep center are operating as they should. The next morning, the technician will typically awaken you between 6:00-6:30 a.m. so that you should be able to leave by 7:00 a.m.

During the hook up, a technician will attach many sensors to your body. This takes about an hour, including a break and an explanation of the test, sleep patterns, and CPAP (Continuous Positive Airway Pressure), which may or may not be applied. This is a good time to ask the technician any questions you may have.

You may wonder, "How can I sleep with all of these things attached to me?" Most patients are able to sleep quite well. Each sensor is applied so that rolling from side-to-side, standing-to-sitting, and walking to the restroom is all possible. After wearing the sensors for a short time, you may not even be aware of them.

The sleep center strives to make you as comfortable as the facility will allow, so be sure to let the technician know if there is anything they can do to help you be more comfortable. Be sure to relax. This test is not measuring your performance but only how you sleep.

After the hook-up, the technician will go into another room. As you sleep, your heart rate, breathing, oxygen level and other functions will be tracked. A microphone and video camera will record your breathing sounds and body movements. The technician will keep watch nearby.

If you need a CPAP device to help you breathe (see page 8), one will be available.

Sleep Aids

In most cases, medication is not given to help you sleep. If you are having trouble falling asleep, we may consider using a medication to help you fall and stay asleep. This would be under the direction of a physician.

The day of your study

Follow these instructions to prepare for your sleep study.

- Do not stop taking any medications, unless specifically requested by your physician. If your physician has ordered a nasal spray, use it before you come in or bring it with you.
- NO CAFFEINE or ALCOHOL after 2:00 p.m. unless a sleep center physician advises otherwise.
- Bathe and wash your hair before the sleep study. Do not use hair cream, moisturizers, rinses, oils sprays or makeup on your skin.
- Men: if you are usually clean-shaven, please shave before you come in.
- Women: Remove acrylic nails or dark fingernail polish
- Arrive at the sleep lab 15 minutes early, unless otherwise requested, to fill out additional paperwork

Remember to Bring

- Current insurance card
- Completed pre-study questionnaires
- All medications you need
- Comfortable sleepwear – sport shorts and t-shirt or cotton pajamas work well
- You're welcome to bring a pillow from home
- Something to read and anything else that will help you sleep well. A TV is usually available that you may watch before lights out.
- Bottled water if you prefer and a light snack if you need something before bed. Breakfast is not always available after your study.

D.

Your Sleep Study Results

For years, I thought I was allergic to everything because I woke up to morning headaches and stuffiness. Not anymore – thanks to the CPAP machine. My thinking and concentration are much clearer and focused now due to restful sleep.

-Greg

Your Sleep Study Results

The technician who performs your testing cannot provide you with a diagnosis. A sleep study consists of 800 to 1,000 pages of information. This information needs to be scored and then interpreted by a physician who is either board certified in sleep or has completed specialized training in sleep medicine.

Typically two to three weeks after your sleep study, the interpretation and recommendations will be sent to your referring physician for his/her review. Once your physician has this information, he/she can discuss the findings with you during a follow-up appointment. If two weeks have passed since the date of your sleep study and you have not been notified of the outcome, then please contact your referring physician.

The sleep study results will show whether you have sleep apnea, and if so, how severe. The findings help your physician know which treatment or treatments may be the right ones for you.

Approximately 30 percent of the patients visiting the sleep center will need to return for a second night of testing. This may be necessary for a number of reasons like:

- Poor sleep quality the first night.
- Not meeting specific insurance requirements.
- The technician places you on CPAP treatment, however, you had difficulty sleeping and/or the best treatment level was not achieved.

If you have questions about the results of your sleep study, contact your ordering physician.

Work with your physician to get the most out of your treatment plan. Sleep apnea can lead to serious health problems. Treatment can help prevent those problems. It can also help you and your partner get quiet, restful sleep. Treatment will allow you to wake up feeling alert, refreshed and ready to face the day.

A Range of Treatment Options

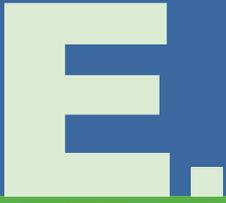
There are many treatment options and combinations. Your physician can discuss with you these various treatment options for snoring and sleep apnea to determine what is best for you.

Three main treatment options for sleep apnea:

- CPAP
- Surgery
- Oral Appliance

For many years, I have battled severe insomnia with many sleep interruptions, mainly associated to depression, anxiety, chronic pain, and very dry mouth. The only place I could get comfortable to sleep was a recliner. Then I started using CPAP. Originally the mask made me feel claustrophobic, but I was very motivated to improve my poor sleeping habits and disorder. With the support of my doctor and home health care assistants, I was able to get used to my CPAP and improve my insomnia significantly. I was even able to decrease my chronic pain medication, and my depression greatly improved.

-Susan



CPAP Treatment

CPAP Treatment

Continuous Positive Airway Pressure (CPAP) devices use steady, gentle air pressure to hold the airway open when you sleep. CPAP is often the most effective treatment for sleep apnea and severe snoring. It is a non-invasive treatment. CPAP works very well for many people, but keep in mind that it can take several adjustments before the setup is just right for you.

How CPAP Works

A small portable device beside the bed sends air through a hose, which is held over your nose by a mask. Air is gently pushed through your airway. The air pressure widens the collapsed airway so you can breathe better.

Your doctor prescribes the pressure needed to open your airway, which is what your device is set to deliver throughout the night. CPAP may be combined with other kinds of therapy for sleep apnea.

Types of Air Pressure Treatments

There are different types of CPAP devices. Your physician or CPAP technician will help you decide which type is best for you.

Basic CPAP keeps the pressure constant all night long.

Bi-Level or BiPap device gives out more pressure when you breathe in and less when you breathe out.

AutoCPAP device automatically adjusts pressure throughout the night in response to changes such as body position, sleep stage, and snoring.

What to expect

The CPAP provider will give you instructions for the safe operation, care and maintenance of your equipment. In addition, you will be contacted for follow-up:

- Most CPAP providers will contact you within the first few days of setting up your device to see how you are doing.
- If you are having difficulties, you may receive another contact the following day.
- After one month of use, your CPAP provider may check in with you to learn how your therapy is progressing.

Benefits of CPAP Treatment

You will need to use your CPAP every night while you sleep in order to receive benefit. When you wear your CPAP every night during sleep and optimum therapy (compliance) is achieved, you may experience the following benefits:

- Increased energy level and attentiveness during the day
- Fewer morning headaches
- Reduced irritability
- Improved memory
- Less waking during the night to go to the bathroom
- Increased ability to exercise
- Increased effectiveness at home and at work
- Improved overall quality of life

Get the Adjustments You Need

Any CPAP setup must be tailored to meet your needs and preferences. So expect several adjustments before the setup suits you. Don't get discouraged – give it some time. There is no side effect with CPAP that should prevent you from using it, as there is a solution for any problem you may experience. Talk about your needs and wants with your health care provider or your CPAP provider.



Additional Treatment Options

There is nothing like waking up, feeling rested.

-Gerald

Surgical Treatment

Oral, Nasal and Jaw Surgery

The goal of most surgeries for breathing problems is to widen the airway. This is primarily done by taking out or shrinking excess tissue where the mouth meets the throat. Be sure to follow up with your physician after your procedure so that your specific questions can be answered.

Notes About Surgery

Whatever kind of surgery you have for snoring or apnea, keep in mind:

- There is no guarantee that surgery will solve the problem. Surgery may sometimes stop the snoring but not the apnea. So you will need a follow-up sleep study to check the effects of your surgery and to help decide what further treatment you might need.
- You may have blockage in more than one place. So you may need more than one procedure.
- Surgery may be combined with other kinds of treatment.
- Any surgery has a chance of complications, including bleeding and infection.

Oral Appliances

For simple snoring or mild to moderate apnea, a special oral appliance may help. A dental specialist works with your physician to build and fit an oral appliance just for you. Most oral appliances move the jaw and tongue forward preventing the tongue from blocking the airway. A follow-up sleep study checks how well the device is working for you.

Tips for Healthy Sleep

A comfortable bed in a dark, quiet room is the best setting for a good night's sleep.

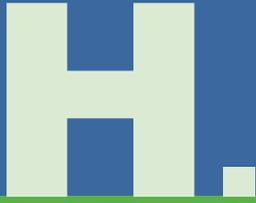
Tips for Healthy Sleep

- Keep a regular sleep schedule
- Establish relaxing pre-sleep routines like incorporating time to relax
- Avoid napping during the daytime
- Minimize light, noise and temperature extremes in the bedroom
- Exercise regularly although avoid strenuous exercise within three hours of bedtime
- Avoid caffeine (coffee, tea, soft drinks, chocolate), nicotine or other stimulants within four hours of bedtime
- Avoid large meals just before bedtime and finish eating within three hours of bedtime
- Remove the television from your bedroom

I was so physically exhausted and even a bit teary eyed. It's hard to function with no sleep. I thought my insomnia was only associated with my fibromyalgia. I had a sleep study and learned more about sleep schedules. Today I am much more active and alert. My family is also very happy that I no longer snore.

-Pamela

**For more information, please visit
www.sleepfoundation.org
for "No more sleepless nights."**



Notes to the Bed Partner

Prior to starting therapy, I felt wiped out as soon as 10:00 -11:00 a.m. – despite having had eight hours of sleep. I spent the rest of my day trying to survive until I could get a nap. Meetings were torture; I fought to stay awake. Now, my day flies by because I'm awake, alert and enjoying it rather than just counting down the minutes until I can sleep. My wife has also benefited – no more listening to me “honk and snort” all night. She is getting better rest, too.

- Keith

So your bed partner has a sleep disorder

Snoring and sleep apnea affect your life, too. You can help in the treatment. Be supportive. Encourage your partner to get treatment and to make adjustments to treatments that are needed.

You can help your partner make, and stick with, the change of habits: for instance, supporting a partners efforts – perhaps joining an exercise program together.

If your partner has CPAP, he or she may feel self-conscious at first. Your support can help. Remind your partner to expect adjustments to CPAP before it feels just right. And consider joining a sleep disorder support group together.

Other Resources

American Academy of Sleep Medicine
www.sleepeducation.com

American Sleep Apnea Association
202-293-3650
www.sleepapnea.org

National Sleep Foundation
www.sleepfoundation.org

The Region's Premier Sleep Diagnostic and Treatment Facility



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