

# Sleep Lab Studies

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## What is a sleep lab study?

In-lab sleep studies are tests performed in a sleep lab, usually overnight. These tests help your doctor diagnose sleep problems and figure out the best treatment.

The most common sleep study is called a **polysomnogram (PSG)**. During a PSG, sensors are attached to your body to measure and record detailed information while you sleep, including the following:

- Brain waves
- Heart rate and rhythm
- Breathing rate and effort
- Oxygen level
- Eye movements
- Muscle activity

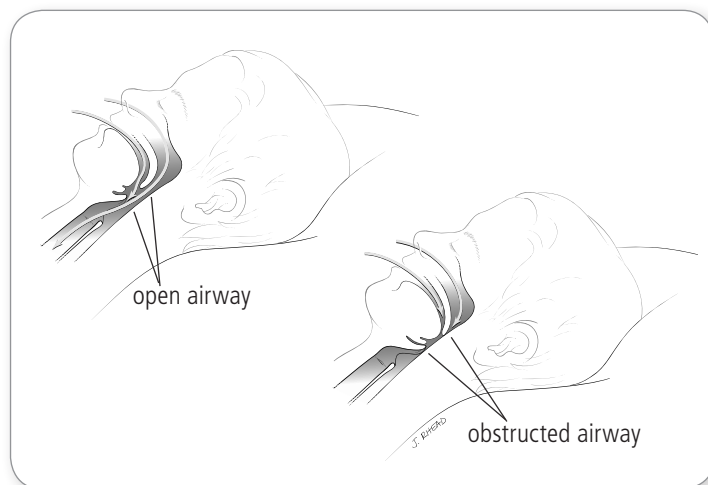
## Why do I need a sleep lab study?

Sleep studies are used to evaluate and diagnose a variety of sleep problems. The most common of these problems is **obstructive sleep apnea (OSA)**.

**Obstructive sleep apnea (OSA)** is a disorder in which your breathing repeatedly stops (**apnea**) or gets very shallow (**hypopnea**) while you sleep. This can happen up to 30 times each hour as you sleep, and can last for 10 to 30 seconds at a time. You don't usually wake up fully during these interruptions, but they keep you from getting the deep sleep you need.

A sleep study can detect these interruptions and record detailed information to help your doctor diagnose your problem and determine the best treatment.

Untreated OSA not only prevents you from getting enough sleep, but also can increase your risk for serious health problems such as high blood pressure, heart attack, and stroke.



Sleep lab studies can help evaluate and diagnose a variety of sleep problems. The most common is obstructive sleep apnea (OSA). With OSA, tissues in the back of your throat can block or obstruct air flow repeatedly while you sleep.

## Full-night or split-night studies?

Most often, you will have a sleep study one night to diagnose your sleep disorder (a **full-night study**) — and a follow-up study another night to determine and adjust your treatment. In some cases, if sleep apnea is diagnosed early the first night, a technician may enter your room to set you up with a trial treatment of positive airway pressure (PAP). When this happens, the study is called a **split-night study**. PAP treatment is described on the following page.

Keep in mind, however, that even if your doctor orders a split-night study, it can **ONLY** be done this way if you meet certain criteria during the first part of your test. You may still need to come back for a follow-up study to determine and adjust your treatment.

## Talking with your doctor

The table below lists the most common potential benefits, risks, and alternatives for sleep lab studies. Other benefits and risks may apply in your unique medical situation. Talking with your doctor is the most important part of learning about these. If you have questions, be sure to ask.

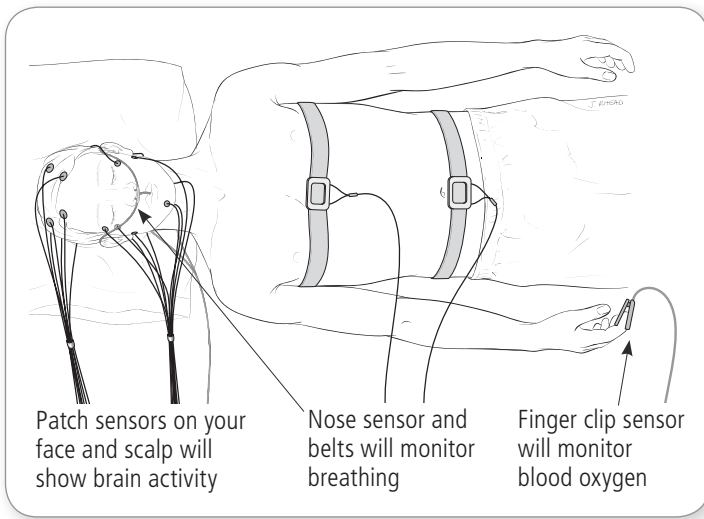
Potential benefits
A sleep study can give your doctor accurate information to diagnose your sleep problem. If your problem is obstructive sleep apnea, the sleep study can also help your healthcare providers determine and adjust your treatment.
Risks and potential complications
Sleep testing is safe. Some people may have minor skin irritation from the sticky patches used during the test. With biomedical equipment, there is a small risk of electric shock. In some cases, the sleep study may not detect the cause of your sleep problem.
Alternatives
Although polysomnography, in the sleep lab, is the gold standard for diagnosis of OSA, there are other tests that help evaluate sleep apnea. Talk with your doctor about the benefits and limitations of these other tests: <ul style="list-style-type: none"><li>• At-home sleep testing with a portable monitor</li><li>• Overnight home oximetry</li></ul> Note: Overnight home oximetry is easy and inexpensive, but it often misses OSA. If an oximetry test is normal, your doctor may still have you do an overnight sleep study.

## How do I prepare for a sleep study?

To get ready for your sleep study and help make it successful, follow the tips below. Your doctor may modify or add to these instructions. Always follow the specific instructions from your doctor.

- Check with your insurance company.** Make sure you call your insurance company to see what your financial responsibility will be. Some companies might require pre-authorization, or have specific tests they do or do not cover. Even though you will stay overnight, sleep studies are usually considered **outpatient procedures**.

- Take your usual medications, and bring them with you, including sleep aids.** It is important that you sleep during this test. If you usually require a sleep aid (such as Ambien), bring it with you and take it as usual. If you do not have a prescription sleep aid, your doctor may recommend you bring an over-the-counter product such as Tylenol PM.
- Don't drink alcohol** or take any stimulants or sedatives the day of the test.
- Don't drink or eat anything that contains caffeine** after 3:00 PM the day of the test.
- Avoid naps the day of the test.**
- Shower and shave before you come, as needed.** It's important to have clean, dry hair and skin so that electrodes and other sensors can be attached securely. Do not use cream rinse, conditioners, or oils in your hair. Clean all make-up and lotions off of your face. Shave as usual. Beards and mustaches are okay — just make sure they are also clean and dry.
- Bring or wear modest, 2-piece pajamas, or loose-fitting clothes like shorts and a t-shirt or sweats.** Not only are all studies videotaped, but also the technicians will need access to place electrodes on your chest and stomach.
- Bring whatever you usually use to unwind before bedtime.** This can be a book, a magazine, knitting, or crossword puzzles.
- Bring whatever else you need to get ready for bed,** such as your toothbrush. You will have access to a shower. Feel free to bring your own pillow. Also, bring clothes and anything else you need to get ready in the morning.
- Eat dinner before you arrive.**
- Bring your sleep diary, if you have one.** If your doctor gives you a sleep diary or log, use it to record your sleep times and other information. Bring it to the test.
- Other:** \_\_\_\_\_  
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While you sleep, sensors measure data that will help your doctor diagnose your sleep problem.

## What happens during the sleep study?

- 1 The technician will take initial readings from the sensors while you are awake.
- 2 You will try to fall asleep. If you usually read or watch TV to help you fall asleep, that's fine. But at some point the room will be darkened so you can sleep through the night. (You should get at least 6 hours of sleep for a good test.)
- 3 The sensors attached to your body send signals to equipment in another room. A technician monitors the signals in the other room. If the sensors show that you repeatedly stop breathing, this indicates you have sleep apnea.
- 4 If sleep apnea is confirmed early enough during the test, you may be given a trial of positive airway pressure (PAP) therapy. In this case, here's what will happen:
  - **Starting PAP.** The technician will enter your room to put a PAP mask over your nose or your nose and mouth and start PAP therapy. You will need to try to fall back asleep.
  - **Monitoring your response and adjusting the airflow.** Your response to PAP therapy will be monitored from another room. The technician will adjust the airflow coming from the mask, so it is just enough to keep your airway open without being too strong. This helps determine the best way to start treatment.

## What happens when I arrive at the sleep lab?

- 1 After you are admitted, you'll meet the sleep technician, who will explain the study to you and give you the opportunity to ask questions.
- 2 You'll then change into your sleepwear and get ready for bed following your usual routine.
- 3 Next, the sleep technician will hook up various sensors, including the following:
  - **Sticky patches (sensors)** on your face, scalp, chest, and legs will record your brain activity, heart activity, and movements. (Some patients think these sensors smell bad.)
  - **Sensors by your nose** will measure your breathing.
  - **Straps around your chest** and abdomen will measure the effort it takes to breathe.
  - **A finger clip** will record your blood oxygen.

The sensors will be securely attached and the wires will be bundled so you can sleep in any position and turn over as you sleep. If you might need to test CPAP therapy during the night, the technician will help you try on a CPAP mask. This way, if you put it on later you'll have a good fit.

## Commonly asked questions

- **Will it be hard to fall asleep?** For some people it may take a bit longer, but don't worry — just let nature take its course. People usually fall asleep pretty quickly.
- **What if I need to use the bathroom during the night?** Just let the technician know you need to get out of bed for any reason. Unplugging and reconnecting the sensors is fairly quick and easy.
- **What if I change positions a lot when I sleep?** You will be able to roll over and move around in bed during the study. In most cases, it does not disrupt the sensors.

- **Can family members stay overnight?** Usually not, unless there is a medical reason and arrangements have been made ahead of time with the sleep lab. The exception is for patients under 18, in which case a parent or guardian must stay with their child overnight.

## What happens after the sleep study?

- 1 You'll be awakened by a sleep technician in the morning.** In most cases, the technician will wake you at about 6:00 AM, sometimes earlier. You should be ready to leave the sleep lab by 7:00 AM. Most people are able to get to work by their usual time.
- 2 The technician will remove the sensors** after waking you up. This may irritate your skin and cause a little redness. The sensors will also leave some sticky gel in your hair, so you will need to wash your hair.
- 3 The sleep lab staff will let you know when to expect results.** Usually, results should be available within about two weeks. A copy will be sent to the doctor who ordered the test and to your primary care doctor, if you have one. You will need to make an appointment with your doctor and/or sleep specialist to review the results and discuss treatment options. If your follow-up is at the sleep lab, the lab will continue to report to your primary care doctor regarding your treatment.

## Follow-up appointments and contact information:

**Primary Care Physician:** \_\_\_\_\_

Phone: \_\_\_\_\_

Follow-up date: \_\_\_\_\_ Time: \_\_\_\_\_

**Sleep Specialist:** \_\_\_\_\_

Phone: \_\_\_\_\_

Follow-up date: \_\_\_\_\_ Time: \_\_\_\_\_

**Home Health (PAP equipment):** \_\_\_\_\_

Phone: \_\_\_\_\_

Follow-up date: \_\_\_\_\_ Time: \_\_\_\_\_

## Other instructions:

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