Sleep Study Tests
at Seattle Children’s
Sleep Disorders Center Bellevue
Contents

Why Does My Child Need a Sleep Test? ................................. 5

Types of Sleep Tests ................................................................ 5

What Happens During the Test ............................................... 6

Preparing for the Test ............................................................ 8

Comfort While You’re Here .................................................... 9

On the Day of the Sleep Study ................................................. 11

About the Sleep Disorders Center ........................................... 11
**Why Does My Child Need a Sleep Test?**

Your primary care provider has asked for a sleep test to learn more about your child’s or teen’s sleep. A sleep test or polysomnogram can help find out if your child’s health problems are caused by poor sleep. When children don’t sleep well, it’s harder for them to concentrate, stay awake and function during normal daytime activities.

**Sleep apnea**

Your child’s health gave clues that they may have sleep problems. Snoring or always being tired are some of those clues. The most common sleep problem in children is a breathing disorder called obstructive sleep apnea. With this disorder, the child’s breathing passageway (airway) partially or fully closes during sleep.

This makes it hard for air to get into and out of the lungs. When your child gets less oxygen at night than they need, they are tired during the day. Some babies have sleep apnea because their breathing control center in the brain is not fully developed, and breathing stops during sleep.

**Types of Sleep Tests**

There are 3 basic types of sleep tests we do at the center. Most children get either the basic diagnostic, called a polysomnogram, or/and a continuous positive airway pressure (CPAP) study. Some children/teens will need to stay a second day (but not a second night) to have a multiple sleep latency test (MSLT).

**Basic diagnostic test: The polysomnogram (PSG)**

A polysomnogram (PSG) is a sleep test designed to find abnormalities during sleep. Often during sleep, the body acts differently than while awake.

A PSG records your child’s functions during natural sleep to uncover any unusual patterns. So, your child will be staying all night with us. A PSG monitors these body functions, including:

- Sleep stages
- Eye movements
- Brain waves
- Muscle activity
- Breathing
- Body positions
- Heartbeat

A PSG is the best way to make a correct diagnosis.
CPAP sleep study: continuous positive airway pressure

If your child has been diagnosed with obstructive sleep apnea, the next step may be a sleep study using a CPAP facemask. CPAP stands for continuous positive airway pressure. A CPAP mask allows your child to breathe normally during sleep, which will improve poor sleep as well as help their function and behavior during normal daytime activities.

During a CPAP sleep study, a face mask and a machine hooked up to the mask will give your child extra air to support their breathing. The air opens the space in the back of the throat so that the child can breathe better while sleeping. Throughout the night, our special CPAP machine records the right amount of air pressure needed to fully treat your child’s obstructive sleep apnea.

The results of the CPAP sleep study give us the correct “air pressure prescription” to set up a CPAP machine in your home, so your child will get a good night’s sleep every night.

Before the sleep study with CPAP, we may ask that your child go through a “CPAP Desensitization Program” to give them time to adjust to the CPAP equipment before the sleep study. Experienced pediatric staff members (including behavioral therapists) are often consulted and may work with you and your child during the desensitization process to help them adjust to the CPAP treatment.

Seattle Children’s also sponsors a quarterly support group for parents of children with obstructive sleep apnea. Ask your child’s nurse for more information.

Multiple Sleep Latency Test (MSLT)

The MSLT is designed to measure daytime sleepiness. An MSLT is a series of short naps, spaced two hours apart. The MSLT is done during the daytime immediately following a nighttime sleep study.

The first MSLT nap begins 1½ to 3 hours after waking up from the nighttime study. At least 4 naps are conducted during the day. A fifth nap may be necessary depending on what was seen during the first four nap times. The MSLT will be completed by 5:30 p.m. at the latest. The technologist will let you know the expected end time of your child’s study as soon as they know.

- It is very important your child stays awake between naps. Television with preloaded movies and a small selection of Xbox games are on hand to help keep your child awake.
- Breakfast and lunch are provided for your child. Sorry, but the family member who stays over during the testing needs to plan on getting breakfast and lunch on their own. You can feel free to bring in your own food. We have a small refrigerator.
What Happens During the Test

Hooking up the sensors

Your child will come to a private bedroom with a double bed. Special video cameras and microphones record all sounds and movements your child makes during sleep.

Before your child goes to sleep, a sleep technician, specially trained to work with children, will place sensors on several places on your child’s body. All these sensors help collect data. These paste-filled sensors are put on with special tapes or mesh netting. The technician will tape sensors:

• Partially in the nose to measure carbon dioxide and airflow
• On the chin
• On the chest to measure heartbeat
• On the face and scalp to measure brain waves and eye movements
• To each leg to assess leg movement

Soft belts are placed around the chest and tummy outside of the pajamas that measure movements of your child’s chest and abdomen.

A pulse oximeter probe is placed on one finger to assess the level of oxygen to the blood. A red light shines through the finger, which is completely painless. The technician may also place a sensor on your child’s upper chest or forearm to measure carbon dioxide. Some sensors will be placed on top of your child’s head using gauze and a sticky paste. Their head may be gently wrapped with gauze to help keep the sensors in place.

Will the hook-up hurt?

No, sleep tests do not hurt. The skin is not broken for any of these procedures and there are no needle pokes. The skin is cleaned before the sensors are put on, and most are taped in place on the skin with special “ouchless” tapes. The sensors are gently removed the morning after the test.

Can my child sleep with all these wires on?

Yes, most children sleep well. Our technicians will make your child as comfortable as possible. If a sensor is pulled or falls off, it is easily replaced. A TV is provided with preloaded movies and cable.

You or another parent or caregiver will need to stay the night with your child. This will make your child more comfortable during the test. The test room has a bed for you to sleep in next to your child. Separate parent sleep rooms are available upon request.
Preparing for the Test

Are sleep tests covered by insurance?
Yes. All or part of the charges for sleep tests (PSGs) are covered by most insurance companies. Check with your insurance company or managed care provider before you come in for your child’s test. You’ll want to find out about coverage, costs and whether or not a preauthorization is needed.

How do we prepare for the test?

• Read our book “What to Expect When You Get a Sleep Study at Seattle Children’s” with your child. The book explains a common patient experience and includes many photos to help children understand what the test will be like.
• Plan for one adult guardian to stay overnight with any child under 18 years. A pull-out bed with linens, blankets and pillow is provided.
• No other family members may stay.
• Avoid extra naps for your child on the day of the study. Usual routine naps are fine.
• Have your child avoid caffeine, tea or chocolate, as this may skew the results.
• Wash your child’s hair with shampoo and dry it right before you come in for the stay. Do not use any hair products. These can interfere with the sensor paste.
• Have your child take any usual medicines unless otherwise instructed.

What to pack

• Bring your own pillow if you want. Bring a toothbrush, toothpaste and other toiletries.
• Have your child bring two-piece pajamas to wear. No nightgowns, please.
• Feel free to bring favorite toys, pillows or blankets for the study.
• DVD players and Xbox game consoles are in each room. If you have a favorite DVD movie or Xbox game, please bring it with you. All electronic equipment will be turned off at the beginning of the study. NO EXCEPTIONS.

What to expect the night of the test

• Lights out will be no later than 10 p.m. so your child can begin to get sleepy. We need your child to sleep long enough to allow us enough time to collect sufficient data.
• Night lights are available.
• All electronic equipment will be turned off as soon as the study begins. NO EXCEPTIONS.

Cell phone usage is NOT ALLOWED in the sleep center by child or parents. You will be asked to turn off your cell phone while here and to step outside the study center for phone use. Thank you for your understanding. Our equipment is sensitive.
What to expect in the morning
Your child is awakened after the test – usually by 6 a.m. – and the monitoring equipment is gently disconnected. We will ask you to complete a couple pages of morning questionnaires and then you will be ready to leave the sleep center if you have no other study.

How do I find out the test results?
Allow up to one month for the test results. During this time, your child’s test data is gathered, tallied and reviewed by our sleep disorders doctor. A copy of the test results will be sent to your child’s primary care provider, and then they will contact you to discuss the results. Most often your child will be scheduled for a follow-up sleep center appointment to discuss the test results and lay out a treatment plan.

Comfort While You’re Here

Comfort items and snacks
For your convenience, if you forget to pack something, we have these toiletry items on hand. Let your technologist know if you would like any of these items:

- Shampoo, conditioner, lotion
- Toothbrush, toothpaste
- Comb
- Towels, face towels
- Extra blankets
- Night lights
- Electric fans
- Assortment of movies
- WiFi access, Xbox 360. We do not provide games so please bring your own.
- Cable TV

These snack items are in the Patient Kitchen Area near the entrance to the sleep lab. Please help yourself to any of these items:

- Juices: apple, orange
- Fruit cups
- Peanut butter
- Graham crackers and Saltines
- Muffins
- Freshly brewed coffee
- Tea: caffeinated/decaffeinated
- Cups, plates, forks, spoons, knives, napkins
- Sugar, coffee creamer

Food delivery
While we prefer that you eat before you arrive for the sleep study, you may have food delivered to the Sleep Disorders Center at your expense. We have a selection of restaurant menus from the area. Please ask your technician for the menu book.

Address for delivery:
Located in the Overlake Medical Office Tower of Overlake Hospital
1135 116th Avenue NE, Suite 400, Bellevue, WA 98004
Directions to the Overlake cafeteria from the Sleep Disorders Center:

- Take elevator to 1st floor.
- When you exit the elevator, turn toward glass windows, then take a left.
- Once you pass the Main Lobby Reception area, continue to your right.
- You will then see the Medical Imaging Admitting area. To your left are the West Elevators that you can take to the basement (B) where the cafeteria is located.

Directions to Starbucks from the Sleep Disorders Center:

- Take elevator to 1st floor.
- When you exit the elevator, turn toward glass windows, then take a left.
- When you arrive at the Main Lobby Reception desk, turn left toward the Main Entrance doors.
- Go through the double doors and across the driveway. Starbucks is straight ahead.
- Starbucks is open 5 a.m. to 8 p.m. weekdays and 5 a.m. to 6 p.m. weekends.
On the Day of the Sleep Study

Where do we go for the sleep study?

Children’s Sleep Disorders Center is on the Overlake Hospital Medical Center campus in downtown Bellevue. Go to Suite 400 of the Overlake Medical Office Tower, 1135 116th Ave. NE, Bellevue, WA 98004. (See directions and map on next page.)

Park in the North Parking Garage. Parking is free when we validate your ticket. At the end of your sleep tests, please ask your sleep technician for a parking validation.

What else do we need to know?

- Check-in time is at 7 p.m. Check-out time is between 6 and 7 a.m. the next day. Please plan for your rides to and from the center around these times.
- Bring all your home CPAP/BiPAP/ventilator equipment with you to the study (mask, tubing, machine, cord). We have oxygen here for your child if needed.
- Please call to reschedule the study if your child has:
  - A fever over 100 degrees F
  - Cold or cough symptoms
  - Vomiting or diarrhea
  - Any other sickness

If your child arrives for the sleep study with the above symptoms we may need to reschedule your study.

To reschedule for illness or any other reason, call 206-987-5072, option 2. It may be several weeks before we can get you in, but we will try to reschedule as soon as possible.

About the Sleep Disorders Center

Children’s Sleep Disorders Center is the only sleep center in the Pacific Northwest dedicated to diagnosing and treating patients from infancy through age 21. Our multidisciplinary team of pediatric sleep disorders specialists is directed by Maida Chen, MD and associate director Yemi Kifle, MD, board-certified pediatric sleep disorders specialists.

We are fully accredited by the American Academy of Sleep Medicine.

If you have any other questions about the sleep test or insurance coverage, or if you need help making arrangements, please call us!

Seattle Children’s Sleep Disorders Center
1-877-987-5072 (toll-free)
206-987-8943 (fax)
sleep.disorders@seattlechildrens.org
Seattle Children’s offers interpreter services for Deaf, hard of hearing or non-English speaking patients, family members and legal representatives free of charge. Seattle Children’s will make this information available in alternate formats upon request. Call the Family Resource Center at 206-987-2201.

This handout has been reviewed by clinical staff at Seattle Children’s. However, your child’s needs are unique. Before you act or rely upon this information, please talk with your child’s healthcare provider.

© 2012, 2014, 2015, 2016 Seattle Children’s, Seattle, Washington. All rights reserved.

**Free Interpreter Services**

- In the hospital, ask your child’s nurse.
- From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.

**Directions to Sleep Disorders Center**

1135 116th Ave. NE
Suite 400
Bellevue, WA 98004

**DIRECTIONS FROM I-405 SOUTHBOUND:**

- Take NE 8th Street eastbound exit.
- Merge to the left lane and turn left (north) at the first stoplight, onto 116th Ave. NE.
- Turn left into the campus of Overlake Hospital Medical Center at the North Parking Garage (first left after NE 10th).
- Turn right into the North Parking Garage for the Overlake Medical Office Tower. The tower is directly across from the parking garage.
- Take the garage elevator to the 1st floor. Walk south to the Medical Office Tower elevators and go to the 4th floor.

**DIRECTIONS FROM I-405 NORTHBOUND:**

- Take the NE 4th Street exit.
- Turn right onto NE 4th Street, then turn left onto 116th Avenue NE.
- Turn left into the campus of Overlake Hospital Medical Center at the North Parking Garage (first left after NE 10th).
- Turn right into the North Parking Garage for the Overlake Medical Office Tower. The tower is directly across from the parking garage.
- Take the garage elevator to the 1st floor. Walk south to the Medical Office Tower elevators and go to the 4th floor.