

## Sleep Tests at Children's Sleep Center

### *Information About Your Child's Stay*

Your primary care provider has asked for a sleep test to learn more about your child or teen's sleep. A sleep test or polysomnogram (poly-son-o-gram) 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.

Please review this information and discuss it with your child to help prepare them for the test.

#### **What is a sleep test (polysomnogram)?**

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 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.

#### **Why is my child being tested?**

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.

#### **How do I prepare my child for the PSG test?**

- Try to maintain your child's regular sleep schedule, including naps, for several days before the test.
- On the day of the test, do not let your child have any food or drink with caffeine such as chocolate, coffee, tea or soft drinks.
- Before coming to the Sleep Center, bathe your child and shampoo their hair. Do not use conditioner, hair spray, gel, body lotions or oils. These can disturb the sensor-to-skin contact needed to get accurate data.
- Pack a bag with any special toy, blanket, pillow or stuffed animal your child likes to sleep with. Bring along comfortable pajamas; two-piece sets work best. We ask that girls not wear gowns.
- You or another parent or caregiver who will be staying overnight should also pack an overnight bag, too.

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### What does sleep testing involve?

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. Painless, gel-filled sensors are attached to your child's skin on the head, chin, legs, chest and face with special tapes or mesh netting before they fall asleep.

### What happens during the test?

Your child will come to a private bedroom with a single bed. Special video cameras and microphones record all sounds and movements your child makes during sleep. A sleep technician, specially trained to work with children, will place lots of sensors on your child to help collect data. You will see lots of wires running to the sensors. The technician will place the following sensors on your child:

- A small sensor on the finger or toe that measures oxygen in the blood
- Sensors placed under the nose to measure carbon dioxide and airflow
- Patches on the chest to measure heartbeat
- Soft belts placed around the chest and tummy outside the pajamas that measure movements of the chest and abdomen
- Sensors on the face and scalp to measure brain waves and eye movements

### Will the "hook-up" hurt?

No, sleep tests do not hurt. The skin needs to be 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 and the gel is washed off with soap and water.

### 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 with VCR, VHS tapes and video games are provided for your child's use before going to bed. **We expect that you or another parent or caregiver will sleep in the testing room with your child. A pullout bed is here for you to sleep on in order to make your child more comfortable during the test.**

### What happens in the morning?

Your child will be awakened the morning after the test (usually between 6 and 7 a.m.) and the monitoring equipment will be gently disconnected. You will be able to leave the Sleep Center after 7 a.m.

### What is a multiple sleep latency test (MSLT)?

MSLTs are daytime nap studies. They are done right after a PSG if your primary care provider feels that more information about your child's daytime function or sleepiness is needed. In this test, your child will take a series of naps every two hours throughout the day. If your child is having these tests, some sensors from the PSG are left on to gather this data.

### What is a sleep study with continuous positive airway pressure (CPAP)?

If your child has been diagnosed with Obstructive Sleep Apnea, the next step may be a sleep study using a CPAP facemask. A CPAP mask allows your child to breathe normally during sleep, which will improve poor sleep as well as help his or her function and behavior during normal daytime activities.

During a CPAP sleep study, a facemask and a machine hooked up to the mask will give your child extra air pressure to support their breathing. Throughout the night, our special CPAP machine records the right amount of air pressure needed to fully treat your child's obstructive sleep apnea.

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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 him or her time to adjust to the CPAP equipment prior to the sleep study where we measure the air pressure your child needs to get a good night's sleep. 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.

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

### 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. Your primary care provider will then contact you to discuss the results. Most patients are scheduled for a follow-up Sleep Center appointment to discuss your child's testing results and lay out a treatment plan.

### Are sleep tests covered by insurance?

Yes. All or part of the charges for sleep tests (PSG) 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.

### About the Sleep Center

Children's Pediatric 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 Yemi Kifle, MD, a board-certified pediatric sleep disorders specialist.

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



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

Pediatric Sleep Disorders Center  
(877) 987-5072 (toll free)  
(206) 987-8943 (fax)  
[sleep.disorders@seattlechildrens.org](mailto:sleep.disorders@seattlechildrens.org)

#### TO LEARN MORE

- Sleep Disorders Center (877) 987-5072 (toll free)
- Your Child's Health-Care Provider

*Children's will make this information available in alternate formats upon request. Please call the Family Resource Center at (206) 987-2201.*

*This handout has been reviewed by clinical staff at Children's Hospital. However, your child's needs are unique. Before you act or rely upon this information, please talk with your child's health-care provider.*