

## Sleep Studies in Children

A sleep study is a test that records your child's sleeping patterns. This test is needed to diagnose sleep disorders. The medical name for a sleep study is a polysomnogram (pa-lee-SOM-no-gram). This study involves spending the night sleeping in the sleep laboratory.

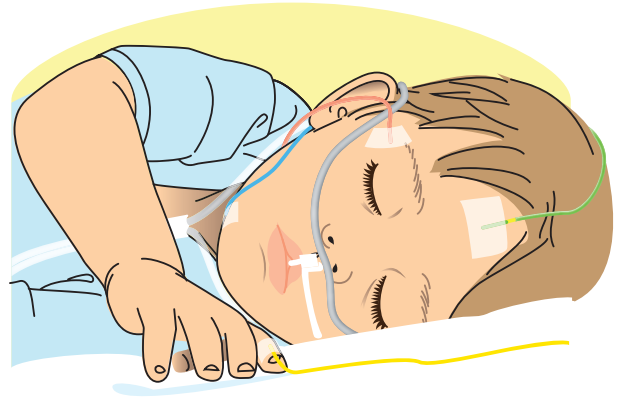
A sleep study records various things while your child is sleeping such as: brain activity, eye movement, heart rate, leg movement, chest movement and breathing pattern, oxygen and carbon dioxide levels, air movement through the nose and snoring. In order to collect this information, many different sensors (wires and connections like an EKG machine that evaluates the heart) are applied to your child's head, face, chest and legs.

### Who does the test?

A sleep technologist will perform the sleep study. They are specially trained in collecting and monitoring information while your child sleeps. The sleep physician is available for any problems.

### How can I help my child get ready for the sleep study?

On the day of the sleep study, try to keep your child's routine as normal as possible. Changing your child's routine will not help the test. For example, if your child usually takes a nap during the day, he or she should take a nap on the day of the study. They should avoid any sodas or drinks which may



contain caffeine. You will likely be asked to list all of your child's medication before the test is scheduled. If new medications are being taken or your child takes any kind of sleep medications, let the sleep laboratory know. Your child may be asked not to take these medications the night of the test.

### What can I and my child expect during the sleep study?

Upon arrival, you and your child will be assigned a room that has a bed for your child and a day bed for you or caregiver staying with the child. All bedtime routines can be done, such as breastfeeding, reading a book, watching TV, drinking and eating snacks.

The sleep technologist will place sensors on your child before he or she goes to sleep. Sensors are not needles. The sensors do not hurt and they are easy to remove. Placing the sensors can take about 60 minutes. Your child will usually have the following areas monitored:

- Sensors on the head and face to record brain waves and eye movements.
- Sensors on the chest to measure heart rate and on the legs to measure leg

movements.

- Belts around your child’s chest and tummy to record your child’s breathing pattern. These belts do not restrict your child’s breathing and are comfortable for most children.
- Sensors under the nose and mouth to measure air flow.
- A sticker attached to your child’s finger or toe to monitor oxygen levels (see the ATS patient series on Pulse Oximetry at (<http://patients.thoracic.org/information-series/en/resources/ats-patient-ed-pulse-oximetry.pdf>))
- Sensors on the chest to monitor carbon dioxide levels

All of these sensors will let your child move freely while he or she is asleep. Surprisingly, most children sleep well under these conditions. Your child may also be videotaped and monitored through the night on a closed circuit camera. This records your child’s sleeping patterns and allows staff to monitor whether they are having any problems with being in the room, attached to sensors etc. The goal is to monitor your child sleeping for 7 to 8 hours overnight.

The sleep technologist is always nearby. With the two way speakers, you can ask the technologist for help at any time. Sometimes the sleep technologist may enter your child’s room to make adjustments to the sensors. He or she will try not to disturb your child’s sleep. A doctor is on call at all times in case your child needs medical help.

The morning after the sleep study, the sleep technologist will wake your child up about 6 AM and remove all sensors. You are then free to leave the sleep laboratory. Your sleep

physician is the person trained to interpret the sleep study results and will provide the sleep study results at a later date.

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## Rx Action Plan

To make sure your child gets the best evaluation possible, there are several things you can do to prepare your child:

- ✓ Tell your child what to expect during the sleep test
- ✓ Tell the sleep center every medication your child is taking, even over the counter medication (medication that you can get without a prescription)
- ✓ If your child takes sleeping medication, ask the sleep specialist if you should give this medication the day of the test
- ✓ Bring everything your child needs for a good night sleep

**Health Care Provider’s Contact Numbers/  
E-mail Address:**

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### Additional Resources:

**Baylor University**

<http://www.youtube.com/watch?v=AWIsDEW8piA>

**University of Rochester**

<http://www.urmc.rochester.edu/childrens-hospital/sleep-center/sleep-study.aspx>