



THE SLEEP GROUP
of Pulmonology Associates

HOME TESTING FOR SLEEP APNEA

What is home testing?

“Home testing” may also be referred to as “home sleep testing (HST)”, “home sleep apnea testing”, and “out of center sleep testing (OCST)”. This is a study performed with a portable device that the patient wears during the night to monitor them as they sleep at home.

What is monitored in home testing?

Equipment varies, but we usually measure airflow at the nose and mouth, breathing effort (chest belt), and oxygen level (oximetry) as well as heart rate. There are no direct measurements of sleep. Many monitors include a position sensor to look at body position during the night.

How is this different than in laboratory polysomnography?

Polysomnography that is performed in a sleep laboratory is monitored by a trained sleep technologist. The monitoring is more extensive and includes sensors for sleep (EEG, EOG and chin EMG), respiration (airflow, effort channels, oximetry), EKG and limb movement sensors. Additional monitoring may be used for specific patient needs (e.g., sleep behaviors such as sleepwalking or REM sleep behavior disorder). Treatment with CPAP (Continuous Positive Air Pressure) may also be initiated in the patient with severe sleep apnea during the same night recording. The staff will also correct for data loss by reconnecting loose sensors during the night.

Who is appropriate for home testing?

Since only breathing measures and oximetry are involved, these tests are appropriate for the patient who has a high likelihood of significant apnea. Patients should also have a low likelihood for any other/ additional sleep disorder (such as restless legs, periodic limb movements, sleep behaviors, insomnia or narcolepsy). Finally, patients should also be free of other confounding conditions such as active pulmonary or cardiac diseases, chronic pain as well as neurologic or psychiatric conditions. The devices have not been tested in children and are not approved for children.

How is a home test arranged?

There are 2 different paths for home testing:

1. After meeting with the physician, the home sleep test will be ordered through a company who will ship the device to the patient to use for one or two nights. The patient ships the

device back to the company and information is relayed to the physician. In this case the physician will review how to use the device at home.

2. The patient will have an appointment to meet with the home testing coordinator who will explain the device and instruct him or her on usage. The patient takes the device home to use that night and is requested to return the equipment the next morning.

A sleep physician from our group then reviews and interprets the data, and creates a report. The sleep physician then meets with the patient to discuss the findings of the study and a plan of care.

What role does insurance coverage play in this?

Many commercial insurance companies have adopted home testing programs. If a sleep test is ordered, and no other information provided (see, "Who is appropriate for home testing"), the patient will be automatically assigned to a home test. If a laboratory test (formal overnight polysomnography) is necessary, the ordering physician must complete the documentation for authorization for that study. While home testing may be arranged quickly with some insurers, the authorization process varies and may take 2-3 weeks. If denied, but still deemed necessary, the appeal process adds additional time.

What are the advantages and disadvantages of home testing?

The advantages include: testing in the home environment, generally lower out of pocket and insurance costs, potential quicker "turn around" from start to treatment. This can streamline the path to get the patient to appropriate treatment.

Disadvantages include: under-estimation of sleep apnea severity (particularly at the lower end of severity), lost data if the patient removes some of the equipment during the night, retest inconvenience if the study is not adequate and must be repeated, home environment influences that may confound test results. The biggest disadvantages is the possibility for missed diagnoses given the limited monitoring (see, "What is monitored") and possible health risks therein; and the false economy of a less expensive test if not done in the right situation, with uninterpretable results.

What else should I know about testing for sleep apnea?

Insurance regulations in this area are changing from month to month. Our group is positioned to stay on top of these changes. We welcome your questions and concerns and hope we can help coordinate testing and treatment for the sleep condition(s). Please contact us for updates or other questions not addressed in this document. Our contact information for each site is listed below.

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