

What Is a Sleep Study?

Polysomnography Explained

A sleep study, or polysomnography (PSG), is an overnight test that records your brain waves, breathing, oxygen, heart rhythm and movements to diagnose sleep disorders such as sleep apnea.

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A sleep study, formally called **polysomnography (PSG)**, is the reference test for diagnosing sleep disorders. It records what your body does while you sleep so a sleep physician can see problems you can't notice yourself.

What a sleep study measures

During an attended in-lab study (CPT 95810), a technologist places sensors that record:

- **EEG** (brain waves), to stage light, deep and REM sleep
- **EOG** (eye movements), to identify REM sleep
- **Chin and leg EMG** (muscle activity), for REM behavior disorder and periodic limb movements
- **Airflow** at the nose and mouth
- **Chest and abdominal effort** belts
- **Pulse oximetry** (blood oxygen)
- **ECG** (heart rhythm), plus body position, snoring and often video

What it diagnoses

PSG is used for obstructive and central sleep apnea, periodic limb movement disorder, REM sleep behavior disorder, unexplained nighttime events and, combined with a next-day MSLT, narcolepsy.

How the night goes

You arrive in the evening, setup takes 45–60 minutes, and lights go out near your normal bedtime. The technologist watches from another room and can help if a sensor slips. You leave early the next morning.

In-lab vs home

A home sleep apnea test records fewer channels (usually airflow, effort and oxygen) and only looks for sleep apnea. It is cheaper and more convenient, but full PSG is needed for complex patients, children and non-apnea disorders.

Results

Your report will include the apnea-hypopnea index (AHI), oxygen levels, sleep stages and sleep efficiency. Ask your physician to walk through it, and request a copy for your records.

Frequently asked questions

Does a sleep study hurt?

No. Sensors are attached with paste, tape or elastic belts. Nothing breaks the skin, and most people find the main challenge is simply falling asleep in a new place.

What if I can't sleep during the study?

Most people sleep more than they expect. Labs generally need a few hours of recorded sleep; if you sleep too little, the physician may order a repeat night.

How long until I get results?

A technologist scores the recording and a board-certified sleep physician interprets it, which usually takes one to two weeks.