What to Expect At A Sleep Study

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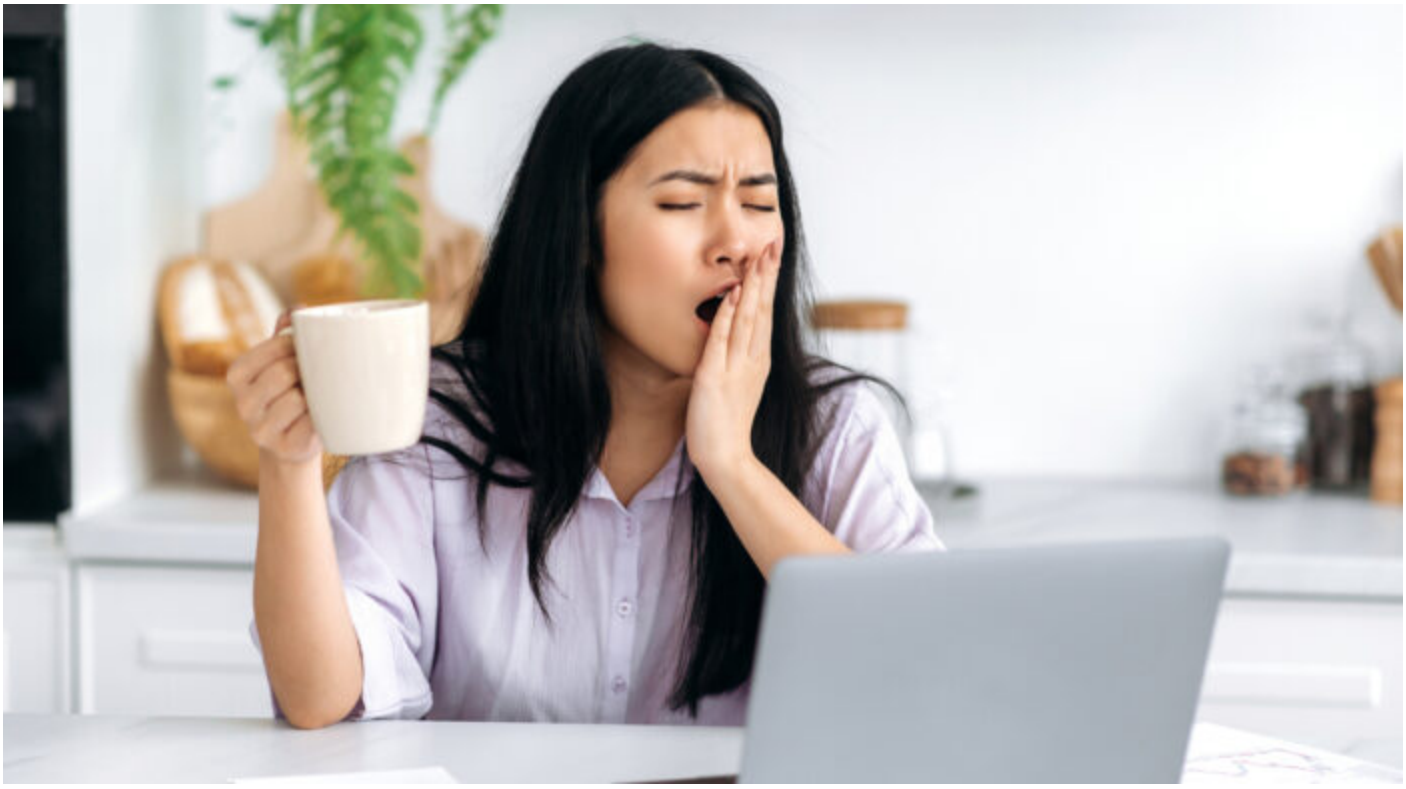

For some of us, being tired is a way of life. When you burn the candle at both ends, it's no mystery why you're tired all the time. Working long hours, raising kids, and sleeping only a few hours each night will wear most people out. In addition, poor diet and lack of exercise can also contribute to fatigue.

But if nothing in your lifestyle explains your constant lack of energy, you may be suffering from a sleep disorder. Fortunately, there are treatments that can help.

"Any kind of sleepiness or hypersomnia disorder, needs to be investigated by a sleep study. That would include things like narcolepsy, idiopathic hypersomnia, and just sleepiness in general," said Dr. Robert McCoy, Pulmonary and Sleep Physician at WWMG's Edmonds clinic.

Home Sleep Testing

The first step in diagnosing a sleep disorder is usually a home sleep test, which is more convenient than in-lab sleep tests, and only costs about 10% of an in-lab sleep study.

“Home sleep studies are useful to prove a patient has sleep apnea when you highly suspect it. I’d say about half the time they’re appropriate. Home studies are not designed to diagnose any other kind of sleep disorder relative to hypersomnia,” said McCoy. Hypersomnia is excessive sleepiness during the day, even after a full night’s rest.

Sleep apnea is by far the most commonly diagnosed sleep disorder, but a home test can fail to diagnose it if the patient doesn’t follow the directions properly or even if they have a stuffy nose when they take the test.

“Home sleep testing is a misnomer because it doesn’t measure sleep. It just measures breathing through the nose,” said McCoy.

In-Lab Sleep Studies

In contrast to a home study, an overnight in-lab sleep study includes a full EEG (electroencephalogram) to measure brain activity.

“An EEG is the best way to measure sleep,” said McCoy. In-lab sleep testing captures a total of 23 different measurements to create a complete picture of what is happening in the body while a person is sleeping (or trying to sleep).

During the sleep study, “Nasal and oral monitors [indicate the level of] air flow because air flows measure apnea. When you stop breathing there’s no air flow,” said McCoy.

“When people [have obstructive sleep apnea] they have higher degrees of respiratory effort because their airway is blocked when they try to breathe. Whereas people with central sleep apnea have no effort at all because that’s coming from the brain.”

A pulse oximeter placed on the tip of a finger measures the patient’s blood oxygen level and pulse rate during the sleep study. Chest and abdominal belts measure respiratory effort.

Leg sensors, and sometimes arm sensors, measure movement. Combined with other data, these movements are identified with different parts of the sleep cycle and can indicate sleepwalking, parasomnias, and other movement disorders like REM sleep behavior in which sleepers act out their dreams.

What the Patient Can Expect During a Sleep Study

For overnight sleep studies, WWMG patients go to the Providence sleep lab in Everett. Patients are encouraged to stay up late the night before the test.

On the day of the study, it's recommended that patients get additional exercise and avoid caffeine. Patients should bring pajamas, a favorite pillow, and "all the things a person is used to at home" to help ensure sufficient sleep.

The sleep lab looks like a hotel room, with an attached bathroom and a TV on the wall, but the patient is hooked up to a lot of sensors – it takes an hour to fully set them up.

The sensors may limit some of the patient's movements, but they are all connected to a central point so the patient can easily detach from them when nature calls during the night.

"It's a strange environment. A person's not going to sleep like they normally would," said McCoy. Fortunately, a normal night's sleep isn't necessary for a diagnosis. Only a few hours are needed for a patient to complete enough sleep cycles to measure the indicators of a sleep disorder.

Throughout the night, a technician monitors the sleeper from another room using an infrared camera. When it's quickly obvious that sleep apnea is the problem, the technician may perform a split study.

In those cases, the technician will stop the diagnostic sleep test after two hours. They'll then set the patient up with a CPAP device, using the rest of the study time to find the correct CPAP pressure settings to appropriately treat the patient's apnea.

Other Types of Sleep Tests

When a patient has been diagnosed with sleep apnea, but CPAP treatment at home has been ineffective, they may come into the lab for a titration sleep study to determine the correct pressure settings for their CPAP setup.

Or, when a sleep study does not indicate sleep apnea, the patient may be recommended to do another overnight test called the multiple sleep latency test (MSLT). During an MSLT, a nighttime sleep study is followed by the patient taking a series of naps the next day.

The MSLT measures the patient's natural tendency to fall asleep, and is useful for diagnosing narcolepsy. If "People are falling asleep when they are supposed to be awake, the naps tell us why," explained McCoy.

Another tool, the maintenance of wakefulness test (MWT), places people in a dark and quiet room during the daytime and asks them to sit still and stay awake. "That measures a person's ability to stay awake over the course of the day," and can help a doctor determine the severity of a patient's symptoms.

Treatments for Sleep Disorders

There are a variety of treatments available, depending on the type and severity of your sleep disorder. They include:

CPAP Therapy

"Obstructive sleep apnea is by far the most common diagnosis, and the standard of care is still CPAP [therapy]," said McCoy. "But you don't have to do CPAP if you don't want to."

Mask-free Solutions

Patients can also try mouthguards, nasal valves, tongue stimulators or Inspire, a mask-free solution that requires surgery (and can be very expensive, often in the tens of thousands of dollars).

Weight Loss

"With weight gain, your tongue gets bigger and your upper airway gets crowded. When you go to sleep, that weight gain in our mouth falls back and obstructs our airway," said McCoy. Weight loss, for patients who are able to achieve it, can help with obstructive sleep apnea.

Medications

Most sleep disorders, including narcolepsy and restless leg syndrome, can be effectively treated with medication. And the FDA has approved Zepbound as the first medication to treat obstructive sleep apnea.

Until a sleep disorder is under control, a patient will be restricted from driving. “We are very concerned about public safety, and we don’t want people falling asleep on the road. We try to make them fit to drive,” said McCoy.

Where to Get Help for Sleep Problems

“[A sleep study is] a useful test. We usually find information and we usually act on it. I think anybody who is sleepy or anybody who has difficulty getting to sleep are candidates for evaluation in the sleep lab,” said McCoy.

If you or your child feel tired all the time, or have difficulty getting or staying asleep, request an appointment with a WWMG Sleep Medicine specialist to evaluate your condition and determine if you need an at home or overnight sleep study. We offer appointments in Everett, Edmonds, and Bellingham.

All, Pulmonary, Sleep Disorders

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