

Comprehensive Sleep Disorders Clinic

Services Available:

Sleep Consultation

During an initial sleep consultation, Dr. Frank Arnal, will collect information about you and your sleep, or lack thereof. Blood pressure, height, weight and general physical characteristics are used to determine the general health of the individual. Additionally, Dr. Arnal will confidentially interview you in detail about your sleep habits. Dr. Arnal's interview will evaluate symptoms such as difficulty falling asleep, difficulty staying asleep, daytime sleepiness or fatigue, breathing problems during sleep, restless legs at night and other various troublesome behaviors. Based on your complaints and physical examination, Dr. Arnal will cater a diagnostic and treatment plan to your individual needs. He may recommend a diagnostic test known as an overnight sleep study known as a polysomnogram, to further evaluate your complaints.

Sleep Study

A sleep study, or polysomnogram (PSG), is an overnight (it can also be done during the day for shift workers) recording of sleep patterns and behaviors associated with sleep. It is performed in order to determine what stages of sleep an individual achieves and whether any sleep related abnormalities are present. A variety of sensors are applied with paste or tape to the body's surface to record brain waves, eye movements, muscle tone, body movements, heart rate and breathing patterns. Nothing painful (such as needles) is used during a PSG. Audiovisual recordings are also made, and the oxygen content of the blood is measured non-invasively with a simple clip on a finger. Although there are many connecting wires to the sensors, you are free to get up and walk around as needed. A trained sleep technologist is there for the entire duration of the study, to explain the procedure, operate the diagnostic equipment and is stationed all night in an adjacent control room to both monitor the sleep recording and ensure your comfort and well-being. Our sleep technologists are excellent at ensuring your comfort and answering any questions that may arise. During the sleep study, every attempt is made to allow for a normal comfy night's sleep. Some people typically sleep better or worse when away from home, but in either case this does not usually affect the quality of the sleep study. Our sleep center has a comfortable, quiet, safe, hotel-like atmosphere with a queen size bed, and recliner in each room. Also, cable TV and DVD players are provided for your use in each suite. You wear your own bed clothes, can bring your favorite pillow (however pillows are provided), a DVD or magazine/book. Each room is equipped with a private bathroom which includes a shower. Basic toiletries (shampoo, body wash, towels, combs, shaving gel, razors, toothbrush, toothpaste, deodorant, etc.) are available for your use in the morning. Refreshments (water, juices, coffee, muffins, danishes) are available throughout the night and in the morning.

Following the sleep study, Dr. Arnal interprets the recording. The findings are integrated with your sleep history to determine a diagnosis and make the appropriate treatment recommendations. A sleep study report is also sent to your referring physician, who should review the results with you at a follow up office visit. If further testing is necessary, your referring physician may make those arrangements on your behalf.

Positive Airway Pressure (PAP) Titration Study – CPAP (Continuous PAP) or BPAP (Bi-Level PAP)

As a result of a sleep study (polysomnogram or PSG), you may be diagnosed with Obstructive Sleep Apnea (OSA), and may be sent by back to the sleep center for another sleep study with CPAP (pronounced "see-pap") or BPAP (pronounced "bee-pap"). CPAP stands for continuous positive airway pressure, while BPAP stands for bi-level positive airway pressure. These forms of therapy are the most effective and widely used methods of treating sleep apnea.

While asleep, this system gently delivers air into your airway through a specially designed mask which fits over the nose or mouth, thereby creating enough pressure to keep the airway open and produce immediate relief from sleep

apnea and snoring. Most people find they get used to this apparatus after a few minutes and have little difficulty sleeping with it in place. It is important to note that the CPAP or BPAP does not breathe for the person, but instead allows the person to breathe on their own without having to fight any obstructions in the airway that were previously a barrier to normal breathing during sleep. At the beginning of a CPAP/BPAP study, sensors are applied to your body as they were for the polysomnogram and again brain waves, eye movements, muscle tone, breathing patterns and blood oxygen levels are monitored. Before you fall asleep, the sleep technologist will fit you with the nasal or oral PAP mask.

Split Night Study (½ PSG, ½ PAP)

In some cases, both diagnosis and treatment of a breathing problem while sleeping can be accomplished in a single night's study, rather than two separate studies. As with the polysomnogram (PSG), sensors measure your brain waves, eye movements, muscle tone, breathing patterns and blood oxygen levels. Once asleep, the technologist carefully monitors the sleep diagnostic equipment for any sign of disrupted breathing during sleep. If significant interruptions in your breathing (known as sleep apnea) are observed, the technologist will apply PAP during the second half of the sleep study.

Multiple Sleep Latency Test (MSLT) / Maintenance of Wakefulness Test (MWT)

Patients who experience excessive daytime sleepiness or who fall asleep at inappropriate times may be referred by their physician to a sleep center for an MSLT or MWT. The MSLT is designed to measure how long it takes a person to fall asleep during the course of a day. The MWT tests a person's ability to stay awake for a designated period of time, usually 20 minutes.

The MSLT is conducted on the day following an overnight polysomnogram (PSG). Some of the sensors applied to the skin for the PSG will be removed, while others remain to record sleep latency (the number of minutes required to fall asleep). The test consists of four to five 20-minute nap recordings scheduled two hours apart, the first of which is done two hours after waking from the PSG. During these naps, a sleep technologist monitors your sleep/wake patterns. The MSLT takes the entire day after a PSG to administer, and is usually completed before 7 p.m.

The MWT measures the ability of a person to resist sleep when instructed to remain awake for 20 minutes. It is most commonly done following an overnight polysomnogram (PSG), but doesn't necessarily have to follow a PSG. It is a daytime study which usually begins two hours after the normal rise time of the patient and uses sensors on the skin to monitor patients. Similar to the MSLT, the MWT involves a series of five naps conducted at two hour intervals throughout the day.

Actigraphy

In certain situations, such as insomnia or circadian rhythm (biological clock) abnormalities, detailed analysis of sleep patterns over several days/weeks is necessary. Actigraphy involves wearing a special device that resembles a wrist watch continuously for a designated time period (often one to two weeks). This study allows your sleep specialist to analyze your circadian rhythm (biological clock) and better understand your sleep patterns. This diagnostic tool is then used in conjunction with a comprehensive sleep history to formulate a treatment plan specific for your needs.

Light Therapy

Specific sleep disorders require the use of bright light therapy. If you are found to have a diagnosis which may benefit from this form of treatment, the Sleep Center can help facilitate such therapy.