

Sleep Disorders

Involve difficulties related to sleep, including falling or staying asleep, falling asleep at inappropriate times or places, excessive total sleep time or abnormal behaviors associated with sleep that interferes with a person's mental ability affecting the person's work and social life.

Causes

Sleep disorders can be caused by either physical or psychological factors.

Types Of Sleep Disorders

Insomnia, Sleep Apnea, Restless Legs Syndrome (RLS), and Narcolepsy are the most common.

Sleep Apnea

Consists of episodes in which respiration ceases during sleep, stemming from the repeated collapse of the respiratory tube. The most common cause of this is the partial or complete stoppage of the flow of air due to the relaxation of the muscles which surround the throat and the tongue.

Symptoms can include:

- **Snoring**
- **Morning Headaches**
- **Difficulty staying awake during the day**
- **Waking up feeling tired and fatigued**
- **Depression, anxiety, confusion or lethargy**



Risks associated with Sleep Apnea:

- **Irregular heartbeat and heart attack**
- **Stroke**
- **Failure to lose weight**
- **Diabetes**
- **High Blood Pressure**
- **Accidents; Falling asleep at work or while driving**



Electroneurodiagnostics

Electroneurodiagnostic (END) technology is the study and recording of electrical activity of the brain and nervous system. Technologists record electrical activity arising from the brain, spinal cord, peripheral nerves, somatosensory or motor nerve systems using a variety of techniques and instruments. A neurologist interprets the test results and reports these findings to referring physicians as necessary.

Common electroneurodiagnostic procedures include the electroencephalogram (EEG), long-term monitoring, evoked potential studies, and nerve conduction studies.

Electroencephalogram (EEG)

The EEG is a recording of the on-going electrical activity of the brain. An EEG can assist in the diagnosis of a variety of neurological problems-from common headaches and dizziness to seizure disorders, strokes and degenerative brain disease. The EEG is also used to determine organic causes of psychiatric symptoms and disabilities in children.

Sleep-Deprived EEG

This test is similar to a regular EEG, as described above, except that you will be asked to stay awake for 24 hours prior to your exam time. Children under the age of 12 who take this test are asked to remain awake from midnight until exam time.

Ambulatory EEG

This test is similar to a regular EEG, as described above, except that the monitoring takes place over an extended period of time and in the comfort of your home.

Overnight Video EEG / Long Term Monitoring (LTM)

LTM An overnight video EEG is a prolonged EEG study where a video recording is taken at the same time. is a prolonged EEG, accompanied by continuous video monitoring, which can record both the clinical events and EEG recording to aid in the diagnosis of seizures and other neurological disorders. You will have electrodes placed with a water-soluble paste and be monitored during the afternoon and into the evening.

Evoked Potentials (EP)

The Evoked Potential is a recording of electrical activity from the brain, spinal nerves, or sensory receptors that occurs in direct response to external stimuli. EP waveforms require sophisticated computer equipment to extract data that will allow physicians to determine the functional state of these pathways. This test is commonly performed by the technologist during surgery on the spine to help the surgeon make sure nerves are not damaged during the operation. Evoked Potentials are also performed in a clinical END laboratory, using either earphones to stimulate the hearing pathway, a checkerboard pattern on a TV screen to stimulate the visual pathway, or a small electrical current to stimulate a nerve in the arm or leg.

Electromyography (EMG) & Nerve Conduction Studies

Electromyography (EMG) and nerve conduction studies are used to assess the health of the muscles and the nerves controlling the muscles. These studies measure and record electrical activity from the muscles and nerves. They are most often used to assess symptoms of pain, numbness, tingling, or weakness.

Part of the study may involve small needles that are inserted into the muscle. Mild electrical shocks are given to stimulate the nerve. You may experience some discomfort during the tests, but they generally are not painful. These tests take less than one hour.

