

# **Understanding your sleep study results**

*Sleep specialist suggest that there are more than 80 different sleep disorders that can play havoc with your ability to sleep normally. With the advancements in technology and in the medical field, most of these disorders can be diagnosed with an overnight sleep study in a sleep laboratory. An overnight sleep study produces large amounts of data about how your body functions and reacts during sleep. Once this data is analyzed and reviewed by a sleep specialist, the test results will help your physician choose the right treatment for your individual sleep problem(s). As a patient, you are entitled to a copy of your test results. The best time to get these is during your visit to your doctor to discuss the results of your test. The results can be confusing and a little intimidating if you don't have a basic understanding of some of the information that will be presented. You will find some simple definitions and terms below that will be helpful to you during your follow-up appointment with your physician..*

## **RESPIRATORY DISTURBANCE INDEX (RDI)**

*Sometimes called **apnea/hypopnea index** (AHI) is a measure of the average number of apneas or hypopneas occurring in one hour of sleep. It is important to remember that this is a measurement per hour of sleep, not hours in bed. An **apnea** is defined as total cessation of breathing and **hypopnea** is defined as a 30% reduction in breathing. Both of these respiratory events can cause a decrease in the oxygen saturation in your body. If your RDI or AHI indicates more than 40 events in 6 hours of sleep, your physician may diagnose you with sleep apnea and prescribe treatment with **Continuous Positive Airway Pressure (CPAP)** therapy. There are two different types of apnea: **obstructive sleep apnea (OSA)** is the most common and occurs when something is obstructing the flow of air through your airway. This can be due to collapse of the airway, nasal polyps, deviated septum or tonsils and adenoids. The second type of apnea is **central sleep apnea**. This is less common and is due to a central nervous system problem that causes the effort to breathe and the flow of air to completely stop. The severity of your sleep apnea is classified as follows: normal (0 to 5 events/hour); mild (6-20 events/hour); moderate (21-40 events/hour); and severe (>40 events/hour). Many times, but not always, respiratory events have an arousal associated with them. An arousal may not cause you to fully awaken from sleep, but can interrupt the quality of your sleep. It is possible that you may be awakening over and over, sometimes several hundreds times during a single night of sleep.*

## **SLEEP ARCHITECTURE**

*If sleep apnea is left untreated, the respiratory events will continue to interrupt your sleep. The results of your sleep study will discuss the sleep architecture of your night in the sleep lab. These results describe the sequence and duration of the sleep stages your body went through and any arousals that occurred while you were sleeping.*

*Your **sleep latency** will also be discussed. This is the amount of time that it took for you to fall asleep after the recording was started. Normal sleep latency is up to 20 minutes. Also described in the sleep architecture portion of the results is the **REM latency**. This is the amount of time that it takes for you to reach REM sleep after you have initially fallen asleep. Normal REM latency is approximately 70 minutes from sleep onset. A shortened REM latency may indicate sleep deprivation, depression, or narcolepsy.*

## **PERIODIC LEG MOVEMENTS OF SLEEP (PLMS)**

*Sometimes called **myoclonus**, this is the number of limb movements (usually legs) that occur during sleep. This index is measured per hour of sleep. The limb movements must occur in a series of 4 or more with approximately 4-120 seconds between each movement. These movements may also have arousals associated with them, causing chronic sleep deprivation. These leg movements may be caused by a central nervous system disorder or by respiratory events. If they are caused by respiratory events, your physician may want to treat any associated sleep apnea before treating the myoclonus. Treatment for PLMS is usually treated with medication taken each night before bedtime. If you have any questions about your sleep study results or treatment, contact a sleep specialist in the Area*