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**SMH Opens New Sleep Lab**

PLYMOUTH, N.H. --- Can't sleep? According to Dr. Michele Gaier, neurologist and medical director at Speare Memorial Hospital's new Sleep Lab, you may be among the eight to 10 percent of the population—approximately 20 million Americans— who suffer from sleep apnea.



**Sleep Technologist Darcy Farina explains the use of a CPAP mask to a prospective sleep study patient.**

“Sleep apnea is significantly underreported,” notes Dr. Gaier, “but awareness of how good sleep can impact a person’s overall health has dramatically increased over the last 20 years. Sleep apnea has been linked to increased risks of high blood pressure, cardiac arrhythmias (irregular heartbeat), congestive heart failure and pulmonary hypertension.” She also says lack of sleep has been spotlighted as a major national safety issue, pointing to the need for work limits on truck

rial Hospital brings access to “better sleep” to the greater Plymouth area. “Locally we will now be able to provide early diagnosis and intervention of sleep apnea, which nationally accounts for more than \$42 million in hospital bills,” says Speare’s President and CEO Michelle McEwen, FACHE.

**Understanding and Diagnosing Sleep Apnea**

Dr. Gaier explains that obstructive sleep apnea, or blockage of the airway, is a common breathing disorder. While a person’s individual anatomy, such as a larger neck, large tonsils or a small airway, are the root cause of sleep apnea, age, weight, alcohol use and certain medications are also contributing factors. In sleep apnea, because of gravity when a person lies down, and the decrease in muscle tension when a person falls asleep, the airway becomes blocked in the back of the throat. Dr. Gaier notes, “The typical patient referred for a sleep study complains of daytime drowsiness, snoring, and often morning headache. More men than women are affected.”

So what exactly does a sleep study entail? Referred patients would first have a consultation with Dr. Gaier. Next the actual overnight sleep study would be scheduled at the Sleep Lab located on the lower level of

the hospital's northwest wing—below Plymouth OB/GYN adjacent to Avery Street—with Sleep Technologist Darcy Farina. Already a registered respiratory therapist, Farina brings solid knowledge and understanding of underlying respiratory issues that can be associated with sleep apnea.

Arriving at the Sleep Lab between 7:30 and 8:30 p.m., patients will be oriented to their room and the process for monitoring their sleep. Attaching the numerous electrodes and sensors used to monitor the patient's sleep takes approximately an hour and includes monitoring of: brain waves; stages of sleep; heart rate; the heart's electrical activity (EKG); blood oxygen levels; body movements including legs, abdomen, chest and chin; and air flow in and out of the nose and mouth. There is also a microphone sensor placed on the throat. "Nothing hurts," insists Dr. Gaier. "Most people sleep just fine."

According to Farina, she needs to capture data over six to seven hours of continuous monitoring. The results are given to Dr. Gaier to read and interpret. A sleep study can help diagnosis or rule out other chronic sleep disorders including periodic limb movement of sleep, REM sleep behavior disorder and narcolepsy. If she diagnoses sleep apnea, patients come back for a second sleep study and are fitted with a CPAP (continuous positive airway pressure) mask. CPAP masks provide a constant flow of pressurized air keeping the airway open so patients can breathe normally.

Admittedly, getting used to and regularly using a CPAP does take work. "But when you treat people and they sleep well it is life changing," says Dr. Gaier. And once a patient sees the benefits, it is not a hard sell. Combined with close patient relationships and follow-up, it is what has led to about an 85 percent compliance rate at her sleep lab while the national average is about 50 percent for continued usage of a prescribed CPAP says Dr. Gaier.

"The Sleep Lab is a dream realized," says McEwen. A dream realized in more ways than one. "When you give someone back the gift of sleep it is a wonderful thing," concludes Dr. Gaier.

For more information about the Sleep Lab at Speare Memorial Hospital call (603) 238-2232. Speare Memorial Hospital is a 24-hour, acute care, non-profit community hospital and health care provider serving Plymouth and the communities of central New Hampshire for more than a century. Visit online at [www.spearehospital.com](http://www.spearehospital.com) and join us on Facebook.

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