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ACTUAL ARTICLE WITH IDENTIFYING INFORMATION CHANGED

The Sleep Center: Putting Sleep Disorders to Rest

About 70 million Americans, men and women of every race and socio-economic class, suffer from a sleep problem. Although sleeping seems simple, the process can actually be quite complicated.

However, the most common causes for lack of sleep are just that: common. They include stress, caffeine, late-night exercise, and trying to sleep in a room that is too noisy or bright. This type of sleep disturbance tends to clear up when the cause is eliminated. If it does not, it is time for the patient to talk with their physician about their sleep problems.

Many physicians refer patients experiencing sleep problems to The Sleep Center at Memorial Hospital of Stanton. The Center opened on October 4, 2004 after operating for three years at a smaller, temporary location on Solomon Avenue. The Sleep Center is quickly moving toward accreditation by the American Academy of Sleep Medicine and, once that goal is achieved, it will be the 27th accredited sleep center in the northwest.

"There are many factors that can keep people from getting a good night's sleep," says Gregory B. Hollis, M.D, Medical Director of The Sleep Center. Dr. Hollis is board certified in Internal Medicine, Pulmonary Disease, and Sleep Medicine and is a Fellow of the American College of Chest Physicians and the American Academy of Sleep Medicine. "One factor is aging. Among the natural changes that occur as people age is a

decrease in deep sleep. This decrease starts at age twenty and becomes more severe in old age."

For example, the time spent in stage one sleep (the lightest level, during which a person can easily be awakened) ranges from 5 percent in younger adults to between 12 percent and 15 percent in the elderly. In extreme old age, stages three and four (the deepest levels) may disappear completely.

Dr. Hollis says natural sleep schedules also change with age: "While the majority of adults get drowsy around ten or eleven at night and require eight hours of sleep, older adults get drowsy at six or seven in the evening and may require less sleep."

Many patients come to the Sleep Center complaining of insomnia, but Dr. Hollis stresses that insomnia is a symptom, not a diagnosis, and he uses the term "sleep hygiene" to describe the ongoing habits that people develop that either enhance or detract from quality sleep.

"Insomnia is the product of something else," he says. "Something precipitates it. Often, the patient has developed bad sleep hygiene habits before going to bed. These bad habits include consuming alcohol or caffeine, eating, exercising, or watching television. All of these activities can interfere with proper, restful sleep and result in insomnia."

The solution is often as simple as making lifestyle changes; however, in many cases, the inability to sleep can be related to a more serious sleep disorder.

WHAT IS A SLEEP DISORDER?

Sleep disorders are usually discussed in terms of the impact they can have on the person's life. Most often they experience fatigue and lack of mental focus, and these symptoms impact them during their daily activities, whether at work, at home, or in

social settings. Sometimes, though, the impact of sleep disorders is far more debilitating and the effects extend beyond those felt in daily activities.

"There are eighty-four recognized sleep disorders," Dr. Hollis notes, "but the most common ones are obstructive sleep apnea, narcolepsy, and Restless Leg Syndrome.

"Sleep apnea happens to people regardless of body size. While it's true that overweight people are more susceptible to developing it, the disorder is hereditary and can affect people of all body types. In fact, thirty percent of sleep apnea sufferers are skinny."

Sleep apnea develops from changes in the volume of the pharynx – the tube which connects the nose and mouth to the lungs.

"The pharynx has thirty muscles that keep it open," explains Dr. Hollis. "People with sleep apnea overrelax these muscles at night. The walls of this tube get floppy and snoring results. If the walls of the tube actually touch, airflow is obstructed and the person can't breathe for as long as ten seconds."

The lack of oxygen prompts an adrenaline burst that moves the person from deep sleep into light sleep, and they begin to breathe again. Eventually, they drift back into deep sleep. Soon, the tube closes again and the cycle repeats.

"I've seen patients who repeat this cycle twenty or thirty times an hour," relates Dr. Hollis. "As a result, they spend most of the night in stage one or stage two sleep, which is not sufficiently restful sleep. This causes them to experience problems at their job, anger management issues, and even signs of dementia."

In addition, sleep apnea sufferers often become sleepy drivers. Those behind the wheel of a car tend to drive off the road, while truck drivers with sleep apnea tend to cause accidents involving themselves and several other vehicles.

Sleep apnea increases the chances that pilots, cab drivers, truck drivers and other shift workers will be involved in workplace accidents. Dr. Hollis and the staff of the Sleep Center work with employers to adjust employee shifts in a way that eases workers from one shift to another with a minimum of impact on the workers' health and sleep cycles.

"The American Heart Association lists sleep apnea as one of many cardiac risk factors," says Dr. Hollis. "Other risk factors include sedentary lifestyle, stress, hypertension, cholesterol, gout, diabetes, smoking, excessive weight, and too much alcohol consumption."

He explains why sleep apnea can have cardiac implications: "At night, the heart rests but the frequent adrenaline bursts triggered by sleep apnea can cause hypertension, cardiac disease, or stroke. In fact, strokes are more common at night."

THE NEED TO SLEEP

Narcolepsy is another of the most common sleep disorders. It is a chronic neurological disorder caused by the brain's inability to regulate sleep-wake cycles normally. People with narcolepsy experience fleeting urges to sleep at different times during the day. If the urge becomes overwhelming, people fall asleep for periods lasting from a few seconds to several minutes. In rare cases, some sufferers may remain asleep for an hour or longer.

"Narcoleptic sleep episodes can be very disabling," says Dr. Hollis. "People may involuntarily fall asleep at their job or at school, in the midst of a conversation, or while playing a game or eating a meal. The most serious situation is when a person falls asleep while driving a car or truck or while operating dangerous machinery."

In addition to EDS (Excessive Daytime Sleepiness), narcolepsy is characterized by three other major symptoms: cataplexy, or the sudden loss of voluntary muscle tone; vivid hallucinations during sleep onset or upon awakening; and brief episodes of total paralysis at the beginning or end of sleep.

"Most people experiencing narcolepsy also experience frequent awakenings during nighttime sleep," notes Dr. Hollis. "For these reasons, narcolepsy is considered to be a disorder of the normal boundaries between the sleeping and waking states."

"Narcolepsy is not rare but it often goes underrecognized and underdiagnosed. After obstructive sleep apnea and Restless Legs Syndrome, narcolepsy is the third most frequently diagnosed primary sleep disorder found in patients seeking treatment at sleep clinics."

Most cases of narcolepsy occur in individuals without strong evidence of being inherited, though familial clusters are known to occur. As much as 10 percent of patients diagnosed with narcolepsy with cataplexy report having a close relative with the same symptoms; however, genetic factors alone are not sufficient to cause narcolepsy. Other factors – such as infection, immune-system dysfunction, trauma, hormonal changes, and stress – may also be present before the disease develops.

In most cases of narcolepsy, symptoms first appear between the ages of 10 and 25 but many patients first experience symptoms between the ages of 35 and 45. A smaller

number develop symptoms at age 50 to 55. Regardless of when symptoms develop, they tend to get worse over the 20 or 30 years after they first appear.

The cause of narcolepsy is not known; however, scientists have made considerable progress during the past ten years in understanding its pathogenesis and in identifying genes strongly associated with the disorder. They have also discovered abnormalities in various parts of the brain involved in regulating REM sleep that appear to contribute to symptom development. Researchers now believe it is likely that – as with many other complex, chronic neurological diseases – narcolepsy involves several factors interacting to cause neurological dysfunction and disturbances in REM sleep.

Additional factors appear to be key in the development of narcolepsy, including infections, exposure to toxins, dietary factors, stress, hormonal changes such as those occurring during puberty or menopause, and alterations in a person's sleep schedule. In rare cases, narcolepsy is known to result from traumatic injuries to parts of the brain involved in REM sleep or from tumor growth and other disease processes in the same regions.

"The most common of all narcoleptic symptoms – EDS – can result from a wide range of medical conditions," says Dr. Hollis, "including other sleep disorders such as sleep apnea, various viral or bacterial infections, mood disorders such as depression, and painful chronic illnesses such as congestive heart failure and rheumatoid arthritis that disrupt normal sleep patterns. EDS can also result from the use of various medications or the consumption of caffeine, alcohol, or nicotine. Among Americans, sleep deprivation has become one of the most common causes of EDS."

UNCONTROLLABLE URGES

"Restless Legs Syndrome (RLS) is a neurological disorder characterized by unpleasant sensations in the legs and an uncontrollable urge to move them for relief," Dr. Hollis says. "Affected individuals describe the sensations as burning, creeping, tugging, or like insects crawling inside the legs. The sensations range in severity from uncomfortable to irritating to painful. RLS is generally a life-long condition for which there is no cure. Symptoms may gradually worsen with age."

TREATMENT PROCESS

A sleep study to diagnose a sleep disorder begins with the patient staying at the Sleep Center overnight while they are monitored to see how they sleep, observe leg movements, track heart and lung function, and record their stages of sleep. A total of 22 measurements are taken during the eight-hour study.

"Our Sleep Center consists of a six-bed sleep lab," Dr. Hollis describes. "All rooms are private and equipped with the latest diagnostic equipment. In addition, each room contains a queen-size Select Comfort™ bed, twenty-seven-inch TV, and DVD player. The Sleep Center is open seven days a week, and we perform both daytime and nighttime studies."

He says that the information gathered during a sleep study reveals the cause of the patient's sleep disorder and allows him to work with the referring physician to design a treatment regimen.

"Sleep apnea, in most cases, can be cured through the use of a continuous positive airway pressure (CPAP) device which blows air into the pharynx to keep it open," Dr. Hollis states. "Other patients may require surgery."

While there is not yet a cure for narcolepsy, the most disabling symptoms of the disorder – EDS and cataplexy – can be controlled with drug therapy in most cases. As symptoms change, the treatment regimen is often modified.

Dr. Hollis explains that, for patients experiencing mild to moderate symptoms of RLS, many physicians suggest specific lifestyle changes and activities to reduce or eliminate those symptoms: "Decreased use of caffeine, alcohol, and tobacco may provide some relief. Physicians may suggest that certain patients take supplements to correct deficiencies in iron, folate, and magnesium. A number of patients find relief from symptoms by taking a hot bath, massaging the legs, or using a heating pad or ice pack.

"In some cases," Dr. Hollis continues, "physicians may prescribe medications – such as dopaminergics, benzodiazepines (central nervous system depressants), opioids, and anticonvulsants – to treat RLS. In 2005, ropinirole became the only drug approved by the U.S. Food and Drug Administration specifically for the treatment of moderate to severe RLS.

"Though there is no cure, current therapies can control the disorder, minimize symptoms, and increase periods of restful sleep. In addition, some patients experience remissions during which symptoms decrease or disappear for days, weeks, or months."

The importance of diagnosing and treating sleep disorders extends beyond the obvious goal of restoring proper, healthful sleep to the patient's life; it also important for revealing other health problems that may not be apparent.

"Sleep apnea, for example, tends to impact the patient's life to such an extent that it overshadows other problems they may have," explains Dr. Hollis. "As a result, those problems often go undiscovered until a diagnosis and treatment of sleep apnea uncovers

them. In fact, I have heard from a physician at a transplant center that she has seen patients who are facing heart transplantation be removed from the transplant list after it was discovered that their heart problems were the result of sleep apnea."

Dr. Hollis says that the sleep studies conducted at the Sleep Center at Memorial Hospital of Stanton are important tools for any physician with a patient who has reported problems sleeping: "The information we provide to the referring physician and the patient allows us to work with them not only to find the best solution to the patient's sleep problems and help that patient enjoy healthful, restorative sleep again but also to uncover any hidden health concerns and to help the patient avoid the cardiac problems and auto and workplace accidents that often result from untreated sleep disorders."

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Contacting the Sleep Center.

The Sleep Center at Memorial Hospital of Stanton is located at 3800 E. Fillmore Street, Stanton, WA 78425. Contact the Sleep Center by phone at (555) 779-8215. Visit www.Website.org for more information about the Sleep Center. Bilingual staff members can assist Spanish-speaking patients and their families. The Sleep Center is open seven days a week and performs both daytime and nighttime sleep studies.

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