

News

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****Mysteries of sleep probed at sleep meeting

DALLAS -- "Many people think they can 'sup with the gods'--that is, sleep whenever they want," says Dr. Howard Roffwarg, professor of psychiatry at The University of Texas Southwestern Medical Center at Dallas and internationally known sleep researcher. He is director of sleep research at UT Southwestern and consulting director of the Presbyterian Hospital Sleep/Wake Disorders Center in Dallas.

However, sleep researchers report that approximately 33 percent of Americans will complain of insomnia at least once within a year's time while 17 percent say it is a problem. For those unfortunate insomniacs whose problem leads them to the doctor's office, the solution is usually a prescription. Yet drugs don't work for everyone and may cause serious side effects, such as addiction. And while insomnia is the most frequent sleep complaint voiced by patients, there is a whole spectrum of sleep disorders that affect men and women of all ages as well as infants and children.

Recently Roffwarg and other top researchers from around the country met in Dallas to discuss what is known today about sleep disorders--including insomnia--and how they are being treated, as well as advances on the horizon. The meeting was jointly sponsored by the Sleep/Wake Disorders Center at Presbyterian Hospital, where UT Southwestern faculty members see patients and conduct research and Southwestern's Department of Psychiatry.

Besides chronic insomnia, some of the areas to be covered include the physiology of sleep, sleep apnea, circadian rhythms of sleep, shift work and resulting sleep problems that affect job performance, narcolepsy, differentiating among problems associated with excessive daytime sleepiness, sleeping pills, using behavioral treatments with the patient with insomnia, arousal disorders, sleep and depression, sleep and seizures, sleep and the cardiovascular system, sleep and the elderly and pediatric sleep disorders.

Dr. Philip M. Becker said insomnia is the main complaint that plagues persons with sleep disorders nationally. Becker, a certified sleep specialist, is medical director of the Sleep/Wake Disorders Center. He is an assistant professor in the Department of Psychiatry at Southwestern.

While the lay person tends to think of insomnia simply as someone's having problems falling asleep, the UT researchers stress that it is much more complicated than that. Roffwarg said that in his experience about half of the patients suffering from chronic insomnia are having at least some problems with depression. "You must never forget depression when people have a sleep complaint," he stressed. Anxiety may also be a factor.

Somewhere between 10 percent and 20 percent of the people with chronic insomnia problems may have been occasional victims who got caught up in a vicious circle, said Roffwarg. They get so worried about not sleeping that they can't go to sleep. Some sleep no worse anywhere else than in their own bedrooms because they associate their surroundings with the inability to sleep, even if they are not aware of it. Such patients often report that paradoxically they sleep much better in a hotel or while spending the night away at the home of family or friends.

One of the most unusual cases concerns a young graduate student who had been suffering from insomnia. The man was in an Alpine climbing club and reported, after being forced to spend the night lashed to a small ledge because of a storm, that he had experienced an excellent night's sleep. "Sometimes this type of patient, whom we call a psychophysiologic insomniac, can sleep best when he's not expecting to sleep at all," said Roffwarg.

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Other insomniac conditions--about 40 percent--may be associated with physical problems such as sleep apnea, narcolepsy or restless leg syndrome, which are medical disorders. Five percent to 10 percent of people who believe they are insomniac obtain a lot of sleep but are unaware of being asleep much of the time. Usually, it is the spouse who drives the patient to the doctor. Often he or she complains of being kicked in the night. Sleep-related myoclonus, or "restless legs," results from muscles twitches in the lower legs that occur every 30 seconds for five minutes to two hours. Periods of normal sleep may alternate with the periodic leg movements.

Similar to "restless legs" is a condition called restless-legs syndrome that occurs while the patient is awake and relaxing. Becker characterizes the complaint of the patient with this syndrome as having a 'creepy, crawly' feeling in the muscles while feeling that the muscles won't be still.

Another unusual sleep disorder that brings patients to Presbyterian is narcolepsy. Often these patients complain that they simply can't stay awake during the day. When attacks of narcolepsy come, they suddenly drop off to sleep. An even more unfortunate 70 percent of the narcolepsy patients also have cataplexy, or sudden episodes of muscle weakness in which they simply collapse and fall to the ground. Triggers that bring on these cataplectic attacks include anger, surprise, laughter or almost any kind of strong emotion.

Becker said he has been told by a colleague of a narcoleptic patient who was a mechanic in Vietnam. While walking around the base, the man was surprised by a cobra that rose up in front of him out of the bush. Overcome with fear, the mechanic realized that "if he collapsed now he would be a goner," related Becker. The soldier began to use his will power to stay on his feet, but the snake didn't move. "With the last of his will, he slowly fell down to his knees until he was eye to eye with the cobra," Becker continued. Fortunately, the cobra collapsed into a heap and slithered away into the jungle at the same time the man hit the ground, so the soldier was unharmed. A buddy rushed the traumatized victim to the aid station.

Apnea, another major sleep disorder, is often confused with narcolepsy because the apnea sufferer also often falls asleep at inappropriate times during the day. "Apnea" means a pause in breathing. According to The Sleep Disorders by Peter Hari, breathing is more labored in all of us when we are asleep because the muscles in the upper airway passage shrink as they relax. However, the apnea victim will stop breathing for short period of time throughout the night, usually because of obstruction in the airway passage. Serious cases may have more than 500 episodes per night, each one lasting from 10 to 20 seconds. A man with the most severe case at Presbyterian had 867 apnea episodes and experienced abnormal breathing of 88 percent of the time he was asleep in one night.

Even more than excessive daytime sleepiness, snoring may be a clue to apnea. Often it is the spouse who is aware of the extent of the snoring--"loud, obnoxious snoring and snorts," as Becker says--and realizes that something must be wrong. Sometimes the victim has night sweats, blackouts, headaches in the morning and/or periods of confusion. Often the apnea patient is overweight, and he or she often has associated hypertension problems.

In the past, diet was the only hope of improving the condition without more serious measures, such as a permanent tracheotomy or surgery to remove excess tissue, such as the uvula, reduce the soft palate and tighten the pharynx. In some cases, especially with children, tonsils are removed.

Today, however, a new treatment called continuous positive airway pressure--C-PAP for short--is having exciting results. C-PAP involves a bedside blower that pushes in air to keep the airway from collapsing. Surgery is still an option for patients for whom the device does not work. However, Becker said that he has had no failures with the C-PAP if the patient keeps using it regularly. Also, the sleep expert said that since the Presbyterian facility has started a patient-education program for C-PAP users, between 80 percent and 85 percent continue using it at home nightly. In fact, the wife of one patient thanked Becker for "giving her back her husband" after the man used the C-PAP for only one night.

Dr. Andrew O. Jamieson, associate medical director at the Presbyterian sleep center and assistant professor at UT Southwestern, will discuss cardiovascular functions during sleep.

For years sleep has been regarded as a passive state with few disturbances of the heart and blood vessels. But Jamieson and other researchers are beginning to question this notion. If more can be learned about heart function during sleep,

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new insights may be gained into the causes of heart attacks, which often occur during sleep.

Jamieson pointed out that one line of evidence shows that sleep has a "quieting" effect on the heart by slowing its rate and in general reducing irregularities or "skipped beats." But there are important exceptions to the norm, he added.

One of these exceptions occurs with sleep apnea. In sleep apnea, there is a greater tendency for irregular heart beats and high blood pressure, both of which increase the risk of heart attack or stroke during sleep.

The exact cause of the link between sleep apnea and irregular heart rhythms is not clear. It may be related to reductions in oxygen or instability of the nervous system. Whatever in the cause, Jamieson stressed the importance of recognizing sleep apnea in people who are known to have cardiovascular disease.

Dr. John Herman, clinical associate professor in UT Southwestern's Department of Psychiatry, works with the special problems of children's sleep disorders. Herman, who is director of the Sleep Disorders Center for Children at Children's Medical Center of Dallas, also treats pediatric patients at Parkland Memorial Hospital.

Much of Herman's work is with infants weighing as little as one-and-one-half pounds who suffer from respiratory problems, including apparent life threatening events (ALTE), believed to be related to SIDS. "In the past few years we've become part of the team that identifies these problems and helps keep these babies alive while we search for the proper treatment for each infant," said Herman. These problems can include airway obstructions, apnea caused by a variety of problems, seizures, the contents of the stomach's moving into the airway passage or the lack of a mechanism to force the next breath. If the infant survives until the age of six or eight months, he or she will generally outgrow most of these conditions, he said.

Older children can suffer from almost any sleep disorder that plagues adults: apnea, narcolepsy, seizures, restless leg, sleepwalking and others. On the other hand, they are more likely to suffer disorders such as night terrors and bedwetting.

Often children with elusive problems are seen at the CMC Sleep Center, sometimes brought in from other hospitals in Dallas and throughout the Southwest. Recently a young boy was diagnosed with a rare condition--especially in sleep--called gelastic epilepsy, in which the patient has "laughing" seizures in the night.

The psychologist described the interdisciplinary team approach used in this pediatric center, which he believes is unusual. Pulmonary specialists, neonatologists, cardiologists, psychiatrists and other experts work with sleep-lab personnel on individual cases, and referring physicians--including faculty and doctors in private practice--are encouraged to attend staffings.

Another feature of the sleep center that Herman believes to be important is its educational role. Pediatric residents have extensive contact with the center and learn about sleep disorders by taking part in the diagnosis and care of the young patients there. In addition, neurology residents may also spend time in the center.

Like children, senior citizens may have any sleep disorder that other patients suffer from. However, their problems are usually more extreme. Often elderly people are having more emotional difficulties or reduced circumstances may lead to situational difficulties that may affect their sleep, Roffwarg said. However, some of the severity is associated with the aging process. Older persons are more susceptible to physical causes of sleep disorders.

Besides taking a look at sleep disorders, the seminar will also cover new knowledge about circadian sleep rhythms, their relationship to shift work and travel-related sleep problems, as well as experimental treatment with light.

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Note: The University of Texas Southwestern Medical Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and Southwestern Allied Health Sciences School.