

From
A to
ZZZZZs

By Russell Rian

Sleep disorders disrupt the lives of 70 million Americans each year. The 100 or so distinct sleep disorders are among the most diverse of medical problems. They range from breathing disturbances and psychological stresses to rare disorders like narcolepsy.

Yet all share the power to make life a nightmare.

"Sleep disorders have the ability to disrupt nearly every aspect of a person's life," said Dr. Nilesh Davé, assistant professor of internal medicine and medical director of the UT Southwestern Sleep and Breathing Disorders Center. "Poor sleep not only affects performance and behavior at school, work and home, but it also has been tied to health issues such as obesity and high blood pressure."

Sleep problems also are associated with increased risk for diabetes, depression, stroke and heart attack, and they are linked with nearly 20 percent of all serious motor vehicle crashes. These disorders cost hundreds of billions of dollars annually in direct medical costs for doctor visits, hospital services and medications, according to the Institute of Medicine, which has identified sleep disorders as a major unmet public-health problem.

The wide range of factors causing the disorders can make diagnoses and treatment plans tricky. Some patients may need to tap pulmonologists like Dr. Davé, who specialize in sleep-related breathing problems; others may need a psychiatrist to address psychological factors. Once diagnosed, resolving problems may demand still more medical talent – from surgeons to neurologists.

So when UT Southwestern physicians banded together to examine the best strategies, they quickly concluded that patients' needs could best be met in a multidisciplinary center where patients with sleep disorders of all causes and diagnoses could access the broad base of medical expertise needed for that not-so-simple good night's sleep.

UT Southwestern assembled its dream team, a comprehensive collection of experts in pulmonary medicine, neurology, psychiatry, pediatrics, otolaryngology, and oral and maxillofacial surgery to work and consult with one another to launch the Sleep and Breathing Disorders Center.

The 6,000-square-foot center, located on the second floor of Professional Office Building 2 on the

West Campus, is among the most advanced in the nation and one of the first in the Southwest to encompass the management of all sleep problems – including sleep apnea, insomnia, restless leg syndrome, narcolepsy,

circadian rhythm disorders and parasomnias (which include sleepwalking and night terrors), snoring, and breathing difficulties due to neurological and musculoskeletal disorders such as amyotrophic lateral sclerosis (ALS) and muscular dystrophy.

Some sleep disorders are straightforward, but many are interrelated with other health issues and demand a coordinated review. Such was the case for Neil Kaden, a 54-year-old McKinney consultant.

Mr. Kaden, who advises start-up businesses, struggled to balance medications prescribed for issues ranging from allergies and Parkinson's disease to insomnia before being directed to the UT Southwestern sleep center.

"It got so bad that for several weeks, I couldn't fall asleep at all. Medications had me sleepwalking or didn't work at all. Sometimes I would get some sleep, but never restful sleep," said Mr. Kaden, who also lost, then gained, 30 pounds during that time. His lack of sleep also was triggering late-stage Parkinson's-related problems.

"I had no muscle tone," he said. "I had trouble getting in and out of chairs. I couldn't sit comfortably in most chairs. I was exhausted much of the time. I was in bad shape."

Dr. Davé ran a battery of tests and determined Mr. Kaden had a very treatable form of sleep apnea, which affects an estimated 18 million Americans.

"The great thing is that Dr. Davé really cared about me. He's not just a sleep doctor. He's a pulmonologist, which I needed," Mr. Kaden said.

Dr. Davé also conferred with Dr. Shilpa Chitnis, assistant professor of neurology at UT Southwestern, to coordinate Mr. Kaden's treatments for Parkinson's.

"He and Dr. Chitnis got me into physical therapy to recover my muscle tone and to improve my balance. They determined I didn't have asthma and began sorting through several of my medications to reduce interactions," Mr. Kaden said. "Dr. Davé looked at all the medications I was taking and figured out that some were likely interfering with others."

Dr. Davé placed him on a regimen involving a special breathing device, which allowed Mr. Kaden to stop taking sleep and asthma medications. After years of suffering, he responded quickly to the treatments.

"As a result of all this, there's a medication for my Parkinson's that has a chance of halting the progression of the disease. I can take that now because I got off some other medications," Mr. Kaden said.

Prevalent data suggest that 80 percent to 90 percent of adults with clinically significant sleep-disordered breathing remain undiagnosed, and there are estimates that as many as 40 million Americans suffer from some undiagnosed sleep disorder.

Dr. Davé said it is important to be focused on the individual and the complexity of issues each faces when diagnosing sleep-related problems. Strategies for care need to address the severity of symptoms, the patient's lifestyle and the specific goals for each patient's therapy.

"Our physicians can craft a specially tailored approach for each and every patient coming through the center, thanks to the diverse medical talent on hand," said Dr. Davé. "We especially want our neuromuscular patients with breathing problems to maintain their autonomy and reduce the number of times they have to return to the hospital due to respiratory failure. The goal is to empower patients and their families to lead as normal a life as possible."

Six specially designed rooms are available for Sleep and Breathing Disorders Center physicians and staff to conduct in-house sleep studies in order to diagnose and evaluate disorders. The center features the latest, state-of-the-art diagnostic and treatment equipment and techniques, including:

- Polysomnograms – These devices are used for overnight sleep studies, in which sensors are attached to the head, face, chest and legs. These sensors chart brain waves, heart rhythms, breathing, eye and leg movements, even muscle tension.

- Continuous and Bilevel Positive Airway Pressure (CPAP and BPAP, respectively) machines – These devices are considered the initial and often best treatment for obstructive sleep apnea, a condition in which the patient awakens hundreds of times during the night due to inadequate air flow.

- Light therapy – This is used to help adjust the body's internal clock for a patient experiencing circadian rhythm problems and seasonal affective disorder.



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– Dr. Nilesh Davé

- Medications and behavioral therapies – These include changing dietary and nutritional habits or chronotherapy (altering bedtime) and are among treatments that can help people who are having trouble with insomnia.

- Surgeries – These are performed to widen a patient's airway by removing excess tissue in the throat or directly increasing its size.

Many of UT Southwestern's notable researchers are involved in sleep physiology and biology, Dr. Davé said. In other labs, UT Southwestern researchers are actively pursuing the genes that regulate the daily rhythms of life and tracking electrical and chemical activity in the brain during sleep.

"Very few institutions," Dr. Davé said, "can provide state-of-the-art care in this area as well as UT Southwestern can, while offering patients results from some of the field's best-known researchers."*

For more information on the Sleep and Breathing Disorders Center, please call 214-645-5337.

In
a
heartbeat

By Katherine Morales

Consider the complexity of a single heartbeat.

A signal is initiated in the upper part of the heart as an electrical impulse, which then spreads throughout the heart's four chambers, causing them to contract and pump blood through the body.

A cluster of medical conditions, however, can disrupt the heart's electrical current and cause havoc, even in otherwise healthy people. These disruptions, known as cardiac arrhythmias, cause the heart to beat wildly out of control, at more than 230 beats per minute, or slow to dangerous levels.

Other kinds of electrical discord can make the heart quiver in place rather than effectively pushing out blood to the body. Such changes can be deadly.

While cures for arrhythmias are often not possible, UT Southwestern physicians are at the vanguard of research into and treatment for these conditions.

The physicians and other health-care professionals who treat arrhythmias regard their work as analogous to electricians fixing electrical problems, by rewiring the heart, modifying its functions with medications or implanting devices to keep it beating normally.

Joel Thompson, a 26-year-old Utah native, said his heart began beating out of control 15 years ago.

He eventually was diagnosed with hypertrophic cardiomyopathy, a rare congenital condition that makes the heart muscle thicker and is a leading

cause of sudden cardiac death, particularly in young athletes. His physician prescribed medication, and that seemed to mitigate the symptoms for a while.

After moving to Dallas in August 2006 to attend UT Southwestern Graduate School of Biomedical Sciences, Mr. Thompson began having more trouble.

"I remember running to catch the train, and the next thing I

remember is waking up in the hospital," he said.

At UT Southwestern University Hospital, Dr. Jose Joglar, associate professor of internal medicine and holder of the Elizabeth Thaxton Page and Ellis

Batten Page Professorship in Cardiac Electrophysiology Research, took a closer look at Mr. Thompson's medical history and the regimen of medication he was taking.

"It turned out that my medicine could cause some serious side effects," he said.

Dr. Joglar changed Mr. Thompson's anti-arrhythmic medication and implanted a cardioverter-defibrillator. It resembles a pacemaker but is programmed to detect cardiac arrhythmia and correct it by delivering a jolt of electricity.

At UT Southwestern, Dr. Joglar and his team have dedicated electrophysiology labs, complete with computerized equipment that helps them gather data from within the heart. Because cardiac arrhythmias have different kinds of footprints, diagnosing and treating them can be complex.

"It's a very procedure-oriented specialty," said Dr. Charles Lampe, assistant professor of internal medicine. "This is also a very technologically advanced field, and I think we all like the challenges and the ability to provide definitive therapies."

In addition to surgery to implant devices, doctors in the center perform procedures, such as ablation, in which portions of the heart tissue that cause abnormal heart rhythm are destroyed. Such was the case for Nancy Cardona, 30, whose alarming symptoms began in 2007.

After visiting her cardiologist, the mother of three young children was referred to Dr. Richard Wu, associate professor of internal medicine who specializes in electrophysiology.

Dr. Wu put Mrs. Cardona on a 24-hour monitor that detects changes in the heartbeat. Eventually, her heart began beating well over 200 beats per minute.

After monitoring her heart for a month, Dr. Wu admitted her to the clinic for a cardiac ablation.

Mrs. Cardona still undergoes regular treatment at UT Southwestern because of the complexity of her heart arrhythmia. She also has had a second cardiac ablation.

"I really like Dr. Wu because he actually sits down with me and explains everything that is going on," she said.*

For more information on cardiac electrophysiology, please call 214-645-8000.

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