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### ACTUAL ARTICLE WITH IDENTIFYING INFORMATION CHANGED

Buxton Hospital Center's Sleep Lab Uncovers Causes of Poor Sleep

Sanja Mehta, M.D., FCCP, FAASM, is Medical Director of the Sleep Disorders Center at Buxton Hospital Center. He oversees a team of specialists who diagnose and treat a variety of sleep disorders in patients and often works with other specialists to treat concomitant medical issues.

"It was the 1950s when researchers at the University of Chicago first started describing various aspects of human sleep," says Sanja Mehta, M.D., FCCP, FAASM, a board-certified Internist who also has subspecialty certification in Pulmonology, Critical Care Medicine and Sleep Medicine. "Since then, there has been a steady explosion of knowledge in this field; however, it is only in the last two decades that those pioneering efforts have translated into clinical and real-life gains for humankind."

Dr. Mehta's interest in sleep medicine developed during that same pioneering period. "I'm a pulmonary critical care physician by training," he says, "and during my training I used to see a lot of patients that were clearly also suffering from sleep apnea disorders. About fifteen or twenty years ago there was really no good way to diagnose these because the equipment was bulky, the analysis was manual and one patient would take reams of data and weeks of time to analyze."

Advances in computer technology solved that problem, making data acquisition and analysis much easier. "About twelve or thirteen years ago, equipment came around so that I could diagnose these conditions, and that got me interested in sleep apnea. As I kept reading more and more, I realized that sleep apnea actually is only but a small portion of the entire field of sleep medicine, so I decided to go ahead and take formal training."

In 1994, Dr. Mehta received certification in the field of Sleep Medicine by the American Academy of Sleep Medicine. "I now practice the entire range of sleep medicine, not only the pulmonary-related disorders but also the other disorders that pertain to other fields, and I have a network of other specialists to whom I can refer the patient when needed."

### **SLEEP DISORDERS**

Sleep disorders can be broadly classified into: Insomnia (lack of sleep); Hypersomnia (too much sleep, such as narcolepsy); Circadian Rhythm Disorders (sleep at the wrong time, including shift work issues and jet lag); Sleep Disordered Breathing (of which sleep apnea is best known); Movement Disorders (such as restless leg syndrome and epilepsy), and Parasomnias (abnormal behavior that emerges only in sleep).

Like other medical disorders, some sleep disorders have predisposing factors. For sleep apnea, predisposing factors are being overweight, having a small neck or small jaw, being a heavy smoker, and having a family history of sleep disorders.

"In the other sleep disorders," notes Dr. Mehta, "there are no significant predisposing factors other than genetics, although in RLS certain medications, such as anti-depressants, can trigger it.

### TREATING SLEEP DISORDERS

"Today, there are well-defined parameters that enable doctors to diagnose sleep disorders with confidence," states Dr. Mehta. "Treatment is cause-based, not symptombased. Measures taken to ameliorate these conditions are fact-based, not opinion- and style-based. Most of these disorders can be diagnosed with examination in the doctor's office alone; only fifteen percent to twenty percent actually require overnight diagnostic tests in a sleep lab. Snoring is not even the most important symptom in this field; poor sleep is. Treatment is highly effective.

"I think in the field of sleep medicine, the biggest set of disorders is insomnias," says Dr. Mehta. "Traditionally, insomniacs have been dismissed as anxious or depressed people. That is no longer the case. About sixty percent of the time, another cause can be found and ameliorated. Of the forty percent that are associated with anxiety and depression, appropriate treatment can usually lead to a healthier life."

Dr. Mehta says that diagnosing insomnia does not need to be done in the sleep lab; it is usually established in the office, and usually does not involve testing. Treatment requires identifying the cause and using sleep hygiene techniques, sometimes medications, and techniques called cognitive behavior therapy.

"If you discuss only the patients who come to the sleep lab," says the specialist, "then probably the most common disorder we diagnose is sleep apnea and the second most common might be RLS, and maybe the third one is narcolepsy. Then there are REM behavior disorders or seizures that occasionally crop up.

"If the person has sleep apnea, then the person is asked to come in again and this time a positive pressure device is attached to the face which puts pressure inside the nostrils because that's where the obstruction is happening. Then one finds out what exact pressure this particular patient needs to alleviate the condition. "If someone has RLS, they can be given a certain medication at night which has a significant beneficial effect in curtailing the restlessness," notes Dr. Mehta. "People who have narcolepsy, on the other hand, require scheduled naps to take away the pressure to sleep and then there are certain medications to prevent them from going to sleep all of a sudden.

"People who have other disorders, like REM behavior disorders, have other sets of medications, so between certain lifestyle changes and certain medications and certain positive pressure devices, these disorders can really be taken care of."

# STATE-OF-THE-ART SLEEP LAB

Dr. Mehta is Medical Director of the Sleep Disorders Center at Buxton Hospital Center. The Center opened four years ago and it is accredited by the American Academy of Sleep Disorder Medicine. The Sleep Lab, located within the Sleep Disorders Center, is a state-of-the-art facility designed to make the performance of sleep studies as comfortable and convenient as possible for the patients while the expert technicians capture the relevant data. Information gathered allows Dr. Mehta and other specialists to diagnose the specific sleep disorder present and work with the patient to develop the treatment plan that best resolves it.

"I compare it to a motel," says Dr. Mehta. "We have four bedrooms. Each one is self-contained and has an attached full bathroom. There is either a queen- or king-size bed in each one of them, and each room has a TV and a VCR so the patient can relax while they are being hooked up to the monitors.

"As far as equipment is concerned, there are computers and data recording devices in the technician's room, a microphone to monitor snoring, and an infrared

4

camera so when the lights are doused out, the patient can be on the camera because there are certain movements that have to be recorded to analyze the data. Finally, there is an intercom system so the patient can reach out to the technician at any time."

# **COLLECTING DATA**

Patients usually come in around 9:00pm. The technician explains the studies to them and then attaches monitoring leads that collect data from brainwaves, eye waves and certain muscle waves, as well as breathing patterns, heart rate and oxygen levels. It takes roughly 45 minutes to do that and during this time patients usually watch videos.

"We prefer the educational videos about sleep disorders," relates Dr. Mehta, "but many times I see patients prefer to see their favorite movies and we allow them to do that if that's what they want to do. They're asked to go to sleep usually around 10:00pm and all the patient has to do really is go to sleep. We like to collect six to eight hours of data and that data is acquired digitally and analyzed initially digitally under the supervision of a tech. Later, the doctor analyzes the data with the tech and sees what kinds of disorders are running."

Patients whose complaints suggest they are suffering from a narcolepsy disorder undergo a sleep study during the day. These patients are asked to go to sleep at scheduled two-hour intervals five times, and the number of minutes they take to go to sleep, and the type of sleep they go into, is determined. From that type of analysis, a narcolepsy disorder can be confirmed or ruled out.

### **HEALTH CONCERNS**

While the lack of consistent, quality sleep can affect a patient's life, it can also lead to additional health problems if left untreated. "People with sleep disorders, because of poor sleep, are not fully awake during the daytime," says Dr. Mehta, "so they can have car accidents and they can have industrial accidents if they work with heavy machinery. People with sleep apnea have a four to five times higher incidence of strokes, heart attacks and heart failure as they grow older, so undetected sleep apnea is really not just a social issue or a spousal issue of snoring; it does affect both the quality and safety of life in the immediate term and certainly in the long run."

He adds that a lack of sleep can eventually affect patients' health in other ways. Their longevity of life is affected, their immune systems are affected so they cannot fight off infections, they are more prone to developing diabetes and other endocrine disorders and they are often prone to developing depression.

The development of a psychological disorder, such as depression, is an example of how thoroughly treating a patient with a sleep disorder sometimes requires cooperation among two or more medical specialties. "The specialties that help out most often are pulmonology, cardiology, neurology, ENT, dental, weight loss and psychiatry," relates Dr. Mehta.

# **GROWING AWARENESS**

Dr. Mehta sees a growing awareness of sleep disorders among both physicians and the general public because of greater discussion in the media. He also sees patients specifically asking their doctors to study their sleep, and he believes that physicians should incorporate screening for sleep disorders into their regular patient exams.

"Just like physicians are trained to look out for diabetes, hypertension, and heart attack predisposing factors, I would ask physicians to incorporate screening for sleep disorders into their daily work," says the specialist. "I see the current medical students being trained in it but the current practicing doctors are not trained in it, so they need to incorporate screening for sleep disorders into their formats on a regular basis.

"Also, as it is with any other illnesses, a synthesis of the patient's complaint, the physical exam and the data acquired in the sleep lab has to be done to really help the patient in a proper fashion. To synthesize and integrate the sleep results into the actual evaluation of the patient is necessary. I think I would like to impart those two things to other physicians."

For more information about the Sleep Laboratory and the Sleep Disorders Center at Buxton Hospital Center, call (555) 757-7116, ext. 2457 or visit <u>www.Website.org</u>. Buxton Hospital is located on Rockarch Circle, Buxton, NY 11093.

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Sanja Mehta, M.D., FCCP, FAASM, received his medical degree from All India Institute of Medical Sciences in New Delhi, where he also completed his residency in Internal Medicine, serving as chief resident. His post-graduate medical training also included a residency in Internal Medicine at Lincoln Hospital in the Bronx, serving there as chief resident. This was followed by a pulmonary fellowship at New York Medical College in Valhalla. Dr. Mehta is board certified in Internal Medicine by the American Board of Internal Medicine and its Pulmonary and Critical Care Subspecialty Boards, the American Board of Sleep Medicine, and the American Board of Quality Assurance and Utilization Review Physicians. Dr. Mehta is a Fellow of the College of Chest Physicians and a member of the American College of Physician Executives. He is Senior Vice President of Medical Affairs at Buxton Hospital Center, where he is also the Medical Director of the Sleep Disorders Center. Dr. Mehta is an Assistant Clinical Professor of Medicine at New York Medical College, and a physician in private practice of Pulmonary and Critical Care Medicine, Sleep Medicine and Internal Medicine.

