

## Perchance to Dream

The increasing prevalence of sleep disorders

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According to one estimate, some 70 million Americans suffer sleep disordered breathing, a category of sleep disorder, and many more are pushing their bodies to function with inadequate sleep. According to Jacob Teitelbaum, MD, medical director of the Fibromyalgia and Fatigue Centers and author of *From Fatigued to Fantastic!: A Manual for Moving Beyond Chronic Fatigue and Fibromyalgia* (Avery, 1996), many individuals are still suffering the ill effects of the Industrial Revolution and even the invention of candles.

Only one century ago, the average American slept nine hours each night, and 5,000 years ago, the average night sleep reached a booming 11 to 12 hours. The invention of candles, gaslight, electric light, radio, television, and computers have all contributed to the shortening of the night and the increase in possible work or play time at the expense of a good night's sleep.

Unfortunately, the consequences are more than just an extra-long workday. An individual who consistently gets inadequate sleep, either in duration or in quality, may not have enough time for their body to repair injuries or deal with pain. The result can be increased pain, weight gain, daytime sleepiness, or even, in the case of extreme sleep disorders, death.

### Obstructive Sleep Apnea

The most common type of sleep apnea is obstructive, meaning that the pharynx collapses during sleep (the other type, central sleep apnea, is caused by the brain and is much less common). "There are 30-plus muscles keeping the airway open," according to David Orloff, BS, RPSGT, RRT, head respiratory therapist at the Sleep for Life treatment program at the Somerville, N.J.-based Somerset Medical Center. In obstructive sleep apnea, these muscles cannot do their job, and the airway partially or totally collapses.

The body senses suffocation, produced adrenaline, and the person awakens enough for the airway to open. In some cases, these episodes can occur more than 100 times a night. In essence, says Orloff, "the quality of sleep is not there." The hallmark symptom of obstructive sleep apnea is snoring. "Snoring is a mild situation of lack of muscle tone," explains Orloff. Because of this, it is often the patient's bed partner who first notices a problem.

But, "If you don't snore, you don't have obstructive sleep apnea," declares Teitelbaum. Along with snoring, patients with a neck size of 16.5 inches to 17 inches or more are particularly at high risk, and those with the condition will likely notice daytime somnolence, even rising to falling asleep by driving. Diagnosing obstructive sleep apnea involves a sleep study.

Teitelbaum suggests that patients can gain a preliminary idea of their status by placing a video camera at the foot of the bed and videoing themselves as they sleep. If there are more than 15 episodes of waking up and shifting position to begin breathing again, it is likely sleep apnea. Within a sleep center, however, respiratory therapists and other healthcare experts can conduct a true all-night sleep study, monitoring the patient's breathing, blood oxygen levels, and other factors.



CPAPs deliver a stream of air of either a continuous strength or two

"We monitor throacically and abdominally," says Orloff. If a patient is diagnosed with obstructive sleep apnea, they may be asked to use continuous positive air pressure (CPAP) or bi-level positive air pressure (BiPAP) machine. These devices deliver a stream of air of either a continuous strength or of two different levels to the patient via a mask. (Various designs are available).

This stream of air holds the airway open so that patients can inhale and exhale without the constriction caused by the collapsed muscles. This, in turn, prevents the episodes of apnea. However, one of the main concerns

surrounding the use of these machines is patient compliance. Users may complain of being able to feel and hear the stream of air, and they may have difficulty adjusting to the feeling of the mask and the hose to which it is attached.

Additionally, patients must learn to breathe through their noses during sleep and may have to lie in different positions than the ones they prefer. According to various experts, all of these factors may cause the patient to discontinue use, causing the apnea to return. "Education is a large component of the therapy," says Orloff. His center follows up with patients regularly – especially over the first 90 days of treatment – troubleshooting any problems and discussing issues with patients.

A patient experiencing great difficulty with the machine may benefit from a desensitization session. This two-hour session allows the patient to try a variety of masks in sitting and lying positions, permitting them to select the most comfortable one in a setting that mimics actual usage. The best part: This session doesn't require an overnight stay. Furthermore, if consent is the standard by which success is measured, then Orloff's program is successful. He reports a compliance rate of 91 percent – well above the national average level of compliance.

### Restless Leg Syndrome

Another sleep disorder commonly affecting individuals is restless leg syndrome (RLS), a condition in which patients have the sensation that they need to move a limb – most commonly the leg – during sleep. Patients may also experience uncomfortable leg sensations and a sense of restlessness that can only be relieved by movement.



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As might be expected, this is another disorder that might first be noticed by a pair of tired bed partners – the patient, due to their desire to move constantly, and the bed partner because of the risk of being kicked and bounced all night. "If your sheets and blankets are kicked all over the place," you may have RLS, says Teitelbaum, pointing to an easy at-home measure of whether a problem is present.

A sleep study can also shed light on the condition, looking for leg muscle contractions that occur a couple of times per minute and last for up to five seconds each. What's more, this study can determine the exact point in the sleep cycle that these events occur. The important measure, however, is the effect that the condition has on the patient's quality of life. "If you're not tired, don't worry about it," Teitelbaum advises. Additionally, Teitelbaum

begins treatment of RLS by looking to natural treatments.

Since experts estimate that approximately 25 percent of RLS patients have low serum iron levels, Teitelbaum recommends a serum ferritin test as a first step. If this reveals a score under 50, he suggests the patient take an iron supplement. He finds this practice particularly important as the normal range for serum ferritin (like many nutritional ranges) encompasses levels that may not be healthy for all people. However, Teitelbaum stresses that some RLS sufferers still require prescription medication, such as Ambien, Klonopin or Gabitril.

### Upper Airway Resistance Syndrome

Upper airway resistance syndrome (UARS) is a less common sleep disorder that has been linked to and sometimes mistaken for chronic fatigue syndrome, fibromyalgia, and even attention deficit disorder. In UARS, the work of breathing is increased, which disturbs sleep during the night; unlike obstructive sleep apnea, there is not necessarily a decrease in airflow or a decrease in blood oxygen level.

The patient profile is also different: While obstructive sleep apnea patients tend to be overweight and have high blood pressure, UARS sufferers are often thin and have low blood pressure. The condition is also characterized by nasal congestion, such that Teitelbaum recommends an at-home "nose test" as a first-line diagnostic. The patient can be instructed to press the side of one nostril to close it, then breath in through the other nostril with the mouth closed.

If the nostril collapses and it is easier to breath when the nostril is held open with the flat side of a toothpick, it may be UARS. Although the condition can be diagnosed with a sleep study, patients should be sure to look for a facility that tests specifically for UARS. Treatment for UARS centers on addressing the nasal congestion that makes breathing such hard work for these patients.

Nasal dilators or nasal strips (i.e., the popular "Breathe Right" version) may be all that is required. However, if

these remedies are insufficient, the patient may need to look elsewhere. Other treatment options include a CPAP machine, an oral appliance to move the jaw position, soft-palate surgery, and – in the most extreme cases – an operation to widen the jawbones.

### Final Thoughts

The number and type of sleep disorders are quite varied, and they extend beyond the aforementioned conditions. Ultimately, the inability to get a good night's sleep is a problem affecting increasing numbers of Americans. The consequences of not sleeping well range from daytime sleepiness and shortness of temper, to the inability to drive safely or operate machinery, to chronic pain and weight gain. Perhaps, experts argue, it is time for the sleep-deprived individuals of the world to realize that the most productive person is a well-rested one, and take steps to get the sleep they need.

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