

Sleep Apnea, Special Concern for Little People

By Kate Feibusch, Registered Polysomnographic Technologist

Are you sleepy during the day? Do you have trouble staying awake to watch TV or read in the evening, despite a “full eight hours” of sleep? Do you snore, or know someone who does? Being sleepy during the day doesn't mean you are lazy, and snoring is not necessarily just an annoying habit. These things can be signs of very real, and very treatable medical problems.

While sleeping and breathing seem like fairly straightforward tasks, there are a great number of people who have trouble doing both simultaneously. These individuals have sleep apnea, a disorder characterized by periodic stoppage of breathing during sleep. The medical profession is now becoming aware of the fact that people with certain types of short stature, especially achondroplasia, may be more likely to develop sleep apnea.

Obstructive sleep apnea is by far the most common type of apnea. It is caused by a blockage in the upper airway that is only present during sleep. A partial blockage of the upper airway is also what causes snoring, so many individuals with obstructive sleep apnea started out as snorers. When a person with obstructive sleep apnea drifts off to sleep, the muscles in his airway relax, allowing the soft tissues in the throat to obstruct the airway. Despite the blockage, the person will still go through the motions of breathing, yet no air passes in or out. After a period of time, which can last up to minute or two, the person's body realizes that it is not receiving oxygen. The person wakes up enough to regain muscle tone in the upper airway, removing the blockage, and allowing air to come in. A person with severe sleep apnea remains aroused only long enough to gasp some air, then drifts back to sleep, allowing the blockage to form again. This cycle can repeat itself hundreds of times during the night. In the morning, the person with sleep apnea will be sleepy, because although he is in bed for eight or more hours, he is actually waking up to breath every minute or so.

An additional complication of sleep apnea relates to oxygen loss. Each time a person stops breathing for more than a few seconds, the oxygen level in his blood decreases. When he wakes up to breathe, the oxygen level goes back up to normal. This loss of oxygen during the night can severely affect the organs in the body. For example, the heart may develop irregular beats, and lack of oxygen in the brain may produce a gradual memory loss.

Children with sleep apnea, especially those with short stature, face an additional risk. According to Dr. German Nino-Murcia of the Stanford Sleep Disorders Clinic in Stanford, California, short statured children who have untreated sleep apnea may not develop to their full potential height because of a lack of oxygen during crucial growing periods.

So why do people with achondroplasia have a higher incidence of sleep apnea? Dr. Juan Ampuero Jr. of the Miami Children's Hospital says, “A short neck is the main problem,

but people with achondroplasia may also have micronapthia (a small chin) and microfacia (a small face). Their bones fuse prematurely, but their soft tissues keep growing.” A normal amount of soft tissue (including the tongue, palate, the tonsils and other tissues) contained in a smaller than normal space increases the risk of an obstruction occurring. Dr. Ampuero points out that, “A combination of these factors may cause sleep apnea. An average achondroplastic, without each of these structural irregularities, may not have a problem.” There are other factors not related to short stature that will increase the likelihood that an individual will have sleep apnea. Obesity is a major factor. Even a little excess weight can increase the severity of sleep apnea dramatically, because there is more tissue in the throat to create a blockage. Other breathing disorders, such as asthma and obstructive pulmonary disease, can play a part as well. If you have apnea, alcohol and other sedating drugs can make it much worse. Alcohol can even cause a “normal” snorer to develop apnea.

Sleep apnea is often easily diagnosed and readily treated. If you snore, then it is quite possible that you have a mild form of apnea now. If you don't have any other symptoms, such as sleepiness, loss of memory, morning headaches, or high blood pressure, then you probably don't have to do much of anything. It would be a good idea for you to keep your weight down and avoid alcohol at bedtime. If you have developed some of these symptoms already, check with your doctor. If he or she is knowledgeable about sleep disorders medicine, you may be referred to a sleep disorder clinic (there are more than 700 in the United States) for an overnight sleep study. This study will allow your doctor to diagnose the presence and severity of any sleep disorders.

Once you've been diagnosed, there are a number of options for treatment of sleep apnea. Dr. Jon Magee, Ph.D., director of the Sleep Disorders Center at the research Medical Center in Kansas City, Missouri, says that all the standard treatment methods can be used on achondroplastic individuals with sleep apnea. “The specific treatment would depend on the construction of the individual's upper airway.” The use of a breathing machine, called a nasal CPAP because it provides Continuous Positive Airway Pressure, is a common treatment. The advantage of CPAC is that it is immediately effective and doesn't involve surgery. The disadvantage of CPAC is that it's a treatment, not a cure. Many people use the CPAC machine to help them feel better while they work on losing weight. If weight is not a problem for you, then surgery may be a better option. There are a variety of surgeries available, depending on the cause of the blockage. Surgeries range from removing some soft tissue to moving the jaw forward to create more space in the back of the throat.

Chronic sleepiness can be terribly frustrating. It can affect the quality of your life by affecting your work, your relationships and your level of activity. Sleep apnea is only one of the sleep disorders that can trouble an individual. If you, or someone you know has a problem with sleep, you should see a sleep disorders specialist. Although it may sound a bit trite, it really can change your life.