

Sleep Apnea

Sleep Apnea and the Obese Patient

By Randal S. Baker, MD, FACS

Loud snoring is a common sign of a breathing problem that can lead to other issues. According to the American Academy of Sleep Medicine, approximately 10 to 30 percent of adults snore. Loud snoring, however, is a sign of a serious disorder and affects about five in every 100 people.

When a person snores, it is because the breathing passages in the back of the throat are narrowed and not fully open, thus restricting the amount of air taken in while sleeping. It is like trying to breathe through a wet, sloppy noodle. When the body cannot get enough air, it signals the brain to breathe harder and force the air in (that terrible snoring sound), or if it cannot get any air in (and you stop breathing); it wakes the body up in order to correct the problem.

This can happen hundreds of times a night, and the cumulative effect can lead to chronic sleepiness, trouble concentrating and even depression. The body's repeated lack of restorative sleep over an extended period can also lead to more serious problems as well, including high blood pressure, heart attack and stroke.

Different Types of Sleep Apnea

Those who experience loud snoring and breathing difficulties while sleeping are generally suffering from Obstructive Sleep Apnea Syndrome (OSAS). OSAS has two basic types. In some patients, the narrowing of the breathing passage is slight and the body can continue breathing, but only with increased effort (loud snoring or loud breathing). These patients still experience sleep disruptions and repeated sleep and wake cycles through the night, although they may not remember any of

it. This type of sleep disturbance is called *hypopnea*.

In other patients, the breathing passage can narrow so much that no air can get through and the patient stops breathing. The brain then wakes them up so they will breathe, and the cycle begins again. This is called *apnea*. Some patients actually experience both types of the disorder through the night as the muscles in the throat continue to relax and narrow the breathing passage. Both types of abnormal breathing drop the levels of oxygen in the blood which cause a number of other symptoms.

OSAS is caused by the natural relaxation of the throat muscles that happens in everyone when they begin to sleep. OSAS sufferers, however, often have additional factors that complicate things such as being overweight, having a smaller than normal jaw, having enlarged tonsils or other soft tissues that may partially block the breathing passage, or having a large tongue.

Additionally, those who drink alcohol before sleep or take sleeping pills or tranquilizers are causing the muscles in the throat to further relax and narrow, and therefore make the breathing passage more likely to close. Many take sleeping pills or tranquilizers in order to get better and more continuous sleep, and in fact the remedy makes the problem worse.

Sleep quality problems usually appear slowly, and may progress over years, especially if weight also increases at the same time. The patient may not even recognize the symptoms, and most patients rarely remember the numerous times they sleep and wake over the course of a night. They often fail to recognize that a sleep problem even exists.

Obesity-Related Diseases

Sleep Apnea

Many times those who suffer from the effects of poor sleep attribute it to aging, stress, medication, an old bed, or other causes. While these may actually be factors in the sleep quality experienced, if the symptoms listed above are present, they are most likely the real culprit of the sleep deprivation. In such cases, a sleep specialist can diagnose and treat these disorders in order to improve quality of sleep and quality of life.

Treating Sleep Apnea

When a patient is referred to a sleep disorders clinic, or sleep lab, the medical professionals will inquire about the patient's medical history, and may talk with the patient's sleep partner or other members of the household about the patient's daytime and sleeping behaviors. Patients are often asked to spend a night or two in a sleep laboratory in order to monitor and evaluate the sleep behaviors. This study is called a polysomnograph. If asked to spend the night at the lab for evaluation, a patient will be fitted with tiny sensors placed in different positions on the body to record brain waves, leg and arm movements, heart rhythms, muscle activity, respiratory rates, oxygen levels, and other body functions during sleep. Other devices may be used to monitor and assess breathing patterns as well. Occasionally x-rays and direct examination of the breathing passage are conducted to provide a better understanding of the architecture of the throat. There are generally no needles involved, and the testing is not uncomfortable or painful.

Some patients are asked if they can be studied during the day as well, and if so, they are monitored through a series of 20 minute naps offered at two-hour intervals. This type of study is known as a Multiple Sleep Latency Test (MSLT), and it measures daytime sleepiness for reference to results from the night time studies. The MSLT is also used to evaluate other potential causes of sleepiness such as narcolepsy or similar physical disorders of brain function.

If a patient is diagnosed with OSAS, there are several options for treatment. The first of which is a reduction in weight if the patient is in fact overweight. Even small amounts of weight-loss can significantly improve OSAS. For example, if a man who should weigh 165 pounds, and currently weighs 200 pounds reduces his weight by just 20 pounds, he may see a more improved sleep experience at night, reduced snoring and have better quality of life during the day.

What To Do if You Think You Have Sleep Apnea



If you are experiencing any of the following symptoms more than twice a week, you should contact a medical professional who will refer you to a sleep disorders lab for evaluation:

- Excessively loud snoring which can be heard rooms away
- Mood swings, trouble concentrating or becoming forgetful, irritable, anxious or depressed
- Snoring that is interrupted by pauses, episodes of stopped breathing, gasps or a choking sensation
- Falling asleep at inappropriate times, such as at work or while driving
- Morning headaches, or unexplained nausea, and frequent trips to the bathroom to urinate at night
- Chronic dark circles under the eyes

Note: It is not normal for children to snore loudly every night, or to have difficulty or labored breathing, squeak or gasp when breathing on a regular basis. Poor sleep can cause daytime hyperactivity which can then be misdiagnosed as Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD). If you observe your child exhibiting these warning signs, seek the help of a medical professional immediately.

The second treatment option, almost always combined with losing weight, is the use of a Positive Airway Pressure (PAP) device when sleeping. This light mask is worn over the nose during sleep. A small, quiet air pump is attached to the mask with a long tube, and air under pressure enters the nasal passages and goes into the throat and onto the lungs. This gentle air pressure holds the breathing passages open and reduces the amount of effort the body has to put forth in order to breathe during sleep. The body receives more oxygen, works less, and thus experiences more restful and restorative sleep.

Other forms of treatment include oral appliances for those whose OSAS is affected by jaw shape, tongue size, or issues with the soft palate. Patients with mild to moderate OSAS generally have more benefit from this type of treatment than do severe sufferers. Surgery is a

rare option, and certainly a last resort, unless the problem is being caused by an actual abnormal physical obstruction such as enlarged adenoids or tonsils, polyps or other growths.

OSAS is something that can be managed and even cured with the help of appropriate medical professionals. You don't have to sacrifice quality of sleep or life because you have OSAS. If you believe you may be suffering from OSAS or any other type of sleep disorder, do yourself a favor and seek professional help – it doesn't hurt, and it is readily available. You deserve better sleep, and so do those who live with you!



About the Author:

Randal S. Baker, MD, FACS, is a Bariatric Surgeon at the Center for Health Excellence in Grand Rapids, Michigan. Dr. Baker served for several years as the Medical Director of the Surgical Intensive Care Units at Spectrum Hospital and is an Assistant Professor of Surgery at Michigan State University. He is a member of the American Society for Bariatric Surgery, the American Medical Association and the Society of Critical Care Medicine.

Patients with OSAS are encouraged to try the following to help in the treatment of their condition:

- Lose weight.
- Avoid alcohol within four hours of bedtime.
- Avoid sleeping pills as they relax the breathing passage too much. Talk to your healthcare professional if you are taking sleeping pills for any other sleep disruption other than those caused by OSAS.
- Consult a medical professional about all medication prescribed or taken for headaches, anxiety, and other common problems as they can affect sleeping and breathing.
- Sleep lying on one side or on the stomach. Some only suffer from OSAS when lying on their backs. Pinning a pillow or tennis ball to the back of the pajamas will prevent rolling over to the back during the night.
- Medications to reduce nasal stuffiness may be helpful in reducing snoring and may help OSAS slightly. Breathright® strips and other similar products can also be used to reduce nasal obstruction after consult with a medical professional.
- Avoid caffeine within four hours of bedtime. Caffeine is found in coffee, tea, soda, energy drinks, cocoa, chocolate and prescription and non-prescription medications. Excessive caffeine use during the day should be reduced.
- Stop smoking, or do not smoke within one hour of going to sleep.
- Regular exercise helps people sleep better, but do not exercise within six hours of bedtime. Consult a health care professional before beginning an exercise program.
- Maintain a comfortable sleeping environment including a quality bed appropriate for your body, constant comfortable temperature, and a dark, quiet room in which to sleep.
- Do not eat heavy meals before bedtime. Milk or other dairy products, or even a slice of turkey, are good before bedtime because they contain the natural sleep-promoting substance tryptophan.
- Manage stress during the day, and try engaging in a stress reducing activity for a half hour before bed such as reading, a warm bath, meditating, doing a crossword puzzle, etc.
- Maintain a regular sleeping and waking time, even on weekends and holidays.
- Maintain regular schedules for the other activities in your life such as taking medications, meals, chores and such.
- Use the bedroom only for sleeping, sex, and in times of illness.
- Do not permit yourself to fall asleep outside of the bedroom (i.e. the easy chair, the couch).
- Avoid napping during the daytime. If you must nap during the day, then do so at the same time.

The mission of the Obesity Action Coalition is to elevate and empower those affected by obesity through education, advocacy and support.



About the OAC

The Obesity Action Coalition is a non profit patient organization dedicated to educating and advocating on behalf of the millions of Americans affected by obesity. By strictly representing the interests and concerns of obese patients, the OAC is a unique organization with a patient-focused approach to obesity. To learn more about the OAC, visit www.obesityaction.org or contact the National Office at (800) 717-3117.

OAC Resources

Through education and advocacy, patients need to get involved to help drive change in the obesity community. The OAC provides several beneficial resources for patients, as well as professionals.

- OAC Introductory Brochure
- Obesity Action Alert
- OAC News
- State-specific Guides to Advocating for Improved Access to Obesity Treatments
- *Your Voice Makes a Difference. A Guide on How You Can Help Fellow Patients Affected by Obesity*
- *Working with Your Insurance Provider: A Guide to Seeking Weight-Loss Surgery*
- The OAC Web site: www.obesityaction.org

All OAC resources are complimentary and may be ordered in bulk. To request materials or an order form, please contact the OAC National Office at (800) 717-3117 or send an email to info@obesityaction.org.

OAC membership

Membership in the Obesity Action Coalition allows the patient voice to be heard in the fight against obesity. By building a coalition of members, consisting of patients, family members and professionals, the OAC strives to educate and advocate on behalf of the millions who are affected by obesity. Membership benefits include:

- Official charter membership card/certificate
- *Obesity Action Alert* - a monthly e-newsletter
- OAC News - the OAC's quarterly newsletter
- Representation through advocacy in addition to information on advocacy issues concerning patients

Membership Application

Name: _____

Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

E-mail: _____

Patient/Family Member: \$20

Allied Health Professional Member: \$50

Physician Member: \$100

Surgeon Member: \$150

Institutional Member: \$500 (Bariatric surgery centers, weight-loss management centers, etc.)*

Chairman's Council: \$1,000 and up*

* Different benefits apply. Contact the OAC National Office for more info.

Payment Information

Enclosed is my check made payable to the

Obesity Action Coalition for \$ _____.

Please charge my credit card for my membership fee of \$ _____.

Discover® Mastercard® Visa® American Express®

Credit Card #: _____

Expiration: _____ Name on Card: _____

Signature: _____

Please mail to: Obesity Action Coalition
4511 North Himes Ave, Suite 250
Tampa, FL 33614

Or fax to: (813) 873-7838

If you have questions about OAC membership, please contact the National Office at (800) 717-3117.