Many people consider snoring a minor annoyance, but it can signal a potentially serious condition called sleep apnea (temporary interruptions in breathing during sleep). An article in the June 13, 2001, issue of JAMA reports an association between sleep-disordered breathing and a genetic marker called apolipoprotein E ε4. The authors speculate that this marker may be one of many genetic factors that make someone susceptible to developing sleep-disordered breathing.

**WHAT IS SLEEP APNEA?**

Sleep apnea is disturbed or interrupted breathing during sleep. For those affected by sleep apnea, there can be many temporary interruptions in breathing, each usually lasting about 10 seconds, throughout the sleep period. These interruptions in breathing can occur as often as 20 to 30 times per hour.

**SYMPTOMS OF SLEEP APNEA**

Because some of the symptoms of sleep apnea occur during sleep, they may be recognized first by people with whom one shares living quarters.

- Heavy snoring, although not everyone who snores has sleep apnea
- Struggling to breathe during sleep
- Interruption in breathing during sleep followed by a snort when breathing begins again
- Being excessively sleepy during the day
- Falling asleep during activities that require attention and concentration, such as driving, working, or talking

If you are experiencing these symptoms, see a doctor; you may have sleep apnea or some other condition that needs medical attention.

**TREATMENT**

For mild cases of sleep-disordered breathing one can

- Sleep on one’s side instead of back
- Avoid drinking alcohol before sleeping
- Avoid using sleeping pills
- Avoid smoking or using other tobacco products
- Lose weight, if overweight

The most common medical treatment for sleep apnea is continuous positive airway pressure (CPAP), which is a therapy that uses pressure from an air blower to circulate air through the nasal passages and upper airway. The patient wears a mask over the nose that is connected to the air pressure hose, and the air pressure is adjusted to keep the airway open during sleep. Other therapies include dental appliances that change the position of the jaw and tongue, and various surgeries to keep the airway open during sleep.

**CAUSES OF SLEEP APNEA**

- Obstructive—partial or complete obstruction of the airway, which can be caused by relaxation of the muscles of the throat, soft palate, and tongue during sleep
- Central—problems with signals from the brain that control breathing

Risk factors for sleep apnea include

- Being overweight
- Having a physical abnormality in the nose, throat, or other parts of the upper respiratory tract
- Having high blood pressure

**FOR MORE INFORMATION**

- National Institutes of Health
  National Center on Sleep Disorders Research
  Facts About Sleep Apnea
  301/435-0199
  www.nhlbi.nih.gov/about/ncsdr

**INFORM YOURSELF**

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA’s Web site at www.jama.com.

Sources: National Center on Sleep Disorders Research (National Heart, Lung, and Blood Institute), AMA Home Medical Library, AMA Family Medical Guide

**The JAMA Patient Page is a public service of JAMA. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA and the AMA suggest that you consult your physician. This page may be reproduced noncommercially by physicians and other health care professionals to share with patients. Any other reproduction is subject to AMA approval. To purchase bulk reprints, call 718/946-7424.**