

blood faster. This can cause irregular heartbeats, and after many years, it leads to elevated blood pressure and heart enlargement. The immediate effect of this oxygen starvation is that the person must sleep in a lighter state and tense his muscles enough to open his airway to get air into his lungs. Since snorers with severe sleep apnea are often unaware of having it, an overnight laboratory sleep study may be the only way to discover it.

Persons with obstructive sleep apnea may spend little of their nighttime hours in the deep-sleep stage (REM Sleep) that is essential for a good rest. Therefore, they awaken unrefreshed and stay sleepy much of the day, they may fall asleep while driving or while on the job,

### Summary

1. To differentiate between Sleep Apnea (OSA) and snoring is important. There are medical complications with OSA and not with snoring. Snoring is a social problem, OSA is a medical problem with complications that include hypertension, heart attack and stroke. To differentiate between the two: daytime sleepiness is often the only difference. Thus, we often will have the patient answer the EPWORTH QUESTIONNAIRE. The only definitive test is the overnight sleep study. If the Epworth score is high, then we will order a sleep study.
2. Snoring, as it is considered a social problem, is often not thought of as a medical problem, and its therapy is not covered by insurance. There are procedures that we can perform which will often help.
3. Obstructive Sleep Apnea (OSA) is known to have significant medical complications and is well recognized to require treatment. This may include: CPAP, Dental device, and/or surgery.
4. Some nonspecific measures may help, such as:
  - Weight loss, (Note we have many patients who have lost a significant amount of weight and no longer have obstructive sleep apnea).
  - Avoid alcohol/heavy meals within 3 hours of bedtime.
  - Avoid tranquilizers and sleeping pills - especially in the evening.
  - Sleep sideways. This can be helped with a "snore ball" (tennis ball in a sock pinned in to the middle (If the hack to a "T" shirt).

### Websites of Interest

- [www.MedLinePlus.gov](http://www.MedLinePlus.gov)
- [www.SleepEducation.com](http://www.SleepEducation.com)
- [www.ENT.org](http://www.ENT.org)
- [www.WebMD.com](http://www.WebMD.com)

### **About Our Group:**

Ear Nose and Throat Consultants of Nevada (ENTC) represents a state of the art practice dedicated to the diagnosis and treatment of diseases of the head and neck and related structures (the medical specialty of otolaryngology).

ENTC is the largest ear, nose and throat specialty practice in the entire southwest desert. ENTC provides a comprehensive and unique capability to evaluate and treat disorders in this field of health care.

The mission of ENTC, since its inception, has been to provide excellent care for patients and to accomplish this within a friendly, caring atmosphere. The physicians of ENTC comprise a group of dedicated and highly trained specialists with a tradition of service excellence in Nevada for the last five decades. Additionally, difficult cases are frequently discussed at regular group meetings so that these patients receive the benefit of opinions from 8 or 9 physicians.

Finally, ENTC is a dynamic organization keeping pace with technological and informational progress in otolaryngology for the benefit of its patients and referring physicians.

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# SNORING AND OBSTRUCTIVE SLEEP APNEA

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An anonymous wit has said

“Laugh and the world laughs with you.

Snore and you sleep alone.”

**Some 45 percent of normal adults snore at least occasionally, and 25 percent are habitual snorers. Problem snoring is more frequent in males and overweight persons, and it usually grows worse with age.**

More than 300 devices are registered in the U.S. Patent and Trademark Office as cures for snoring. Some are variations on the old idea of sewing a tennis ball on the pajama back - to force the snorer to sleep on his side. (Snoring is often worse when the person sleeps on his back.) Chin and head straps, neck collars, and devices inserted in the mouth are usually disappointing as snoring cures. Many electrical devices have been designed to produce painful or unpleasant stimuli when the patient snores. The presumption was that a person could be trained or conditioned not to snore. Unfortunately, snoring is not under the person's control whatsoever, and if these devices work, it is probably because they keep the snorer awake.

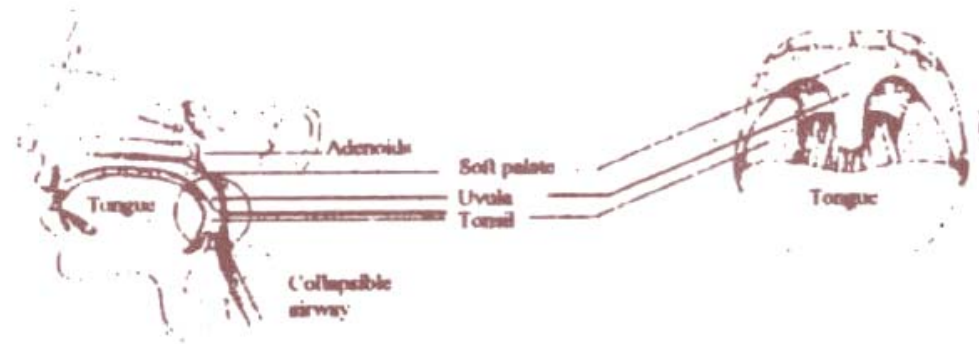
### What Causes Snoring?

The noisy sounds of snoring occur when there is an obstruction to the free flow of air through the passages at the back of the mouth and nose. This is the collapsible part of the airway (see illustration) where the tongue and upper throat meet the soft palate and uvula (the fleshy structure that dangles from the roof of the mouth back into the throat). When these structures strike against each other and vibrate during breathing, this is snoring. Persons who snore have at least one of the following problems:

1. Poor muscle tone (lack of tightness) in the muscles of the tongue and throat. Flabby muscles allow the tongue to fall backwards into the airway or allow the throat muscles to be drawn in from the sides into the airway. This occurs when the person's muscular control is too relaxed from alcohol or from drugs which cause sleepiness.
2. Excessive bulkiness of tissues of the throat. Large tonsils and adenoids, for example, commonly cause snoring in children. Overweight persons also have bulky neck tissues. Cysts or tumors could be present,

however, they are rare.

3. Excessive length of the soft palate and uvula. A long palate may narrow the opening from the nose into the throat. As it dangles in the airway, it acts as a flutter valve during relaxed breathing, and contributes to the noise of snoring. A long uvula makes matters even worse.
4. Obstructed nasal airways. When a person has a stuffy or blocked up nose, he must pull hard to inhale air through it. This creates an exaggerated vacuum in his throat, in the collapsible part of the airway, and it pulls together the floppy tissues of the throat. So snoring occurs even in persons who would not snore if they could breathe through the nose properly. This explains why some people snore only during the hay fever season, or when they have a cold or sinus infection. Also, deformities in the nose or nasal septum frequently cause such obstruction.



### Is Snoring Serious?

Socially -yes. Medically -no. It is disruptive to family life. It makes the snorer an object of ridicule and causes other household members sleepless nights and resentfulness. Snorers become unwelcome roommates on vacations or business, trips. There are no serious medical consequences due to snoring.

### Obstructive Sleep Apnea

The most exaggerated form of snoring is known as obstructive sleep apnea, when loud snoring is interrupted by frequent episodes of totally obstructed breathing. This is serious if the episodes last over 10 seconds each and occur more than 4 times per hour. Your physician may recommend a laboratory sleep study as a way of evaluating your symptoms. Apnea patients may experience 30 to 300 obstructed events per night and may spend as much as half their sleep time with blood oxygen levels below normal. During their obstructive episodes, the heart must pump harder to circulate the

**Snoring:  
Not funny, not  
hopeless**