

TREATMENT OPTIONS FOR SNORING AND SLEEP APNEA

If you have bothersome snoring or have been diagnosed with obstructive sleep apnea then you should be aware of the various treatment options that are available. Obstructive sleep apnea is a condition that is characterized by collapse of the airway during sleep so that your body makes an effort to breathe but you still do not get a good breath. Oxygen levels in your blood will drop until the brain senses the problem and is partially aroused. This prevents your brain from passing through the various stages of sleep that we need to feel rested. As a result, you may feel tired all the time. Importantly, sleep apnea is associated with high blood pressure, diabetes, obesity, heart disease, strokes, and accidents due to falling asleep while driving or operating machinery. Therefore, it is very important to diagnose and treat sleep apnea. The diagnosis is made with a sleep study in which you stay overnight in a sleep laboratory that can monitor you while you sleep. Some people have loud, bothersome snoring but do not have sleep apnea. There are treatment options for snoring as well.

ASSESSMENT OF YOUR AIRWAY

There can be several different anatomic areas of obstruction in patients with sleep apnea or snoring. By performing a careful examination of your airway, the important area(s) of obstruction can be determined. Typically, this is done with a careful physical exam of the nose, mouth, and throat. Following this, a fiberoptic endoscope is used to further assess the areas that are not easily visible during the initial physical exam. Once the area(s) of obstruction are identified, then treatment options should be considered.

CPAP

The most common initial treatment for obstructive sleep apnea is Continuous Positive Airway Pressure, or CPAP. This is a device that delivers positive air pressure through your nose via a nasal mask that is worn during sleep. The extra air pressure prevents the collapse of the airway and allows you to get good, full breaths. CPAP is a good non-invasive treatment that will help many people. However, many people will not tolerate CPAP for various reasons. If you have been prescribed CPAP but are not able to use it, then you should consider other treatment options.

Nasal Obstruction

Many people with snoring or sleep apnea do not breathe well through the nose. The nose is our primary breathing pathway so nasal obstruction is important to treat in anyone with snoring or sleep apnea. Nasal obstruction can have many causes, including allergies, sinus problems, nasal polyps, deviation of the septum, or collapse of the cartilages of the lower nose. All of these problems can be significantly improved and should be addressed with the proper medical or surgical treatment.

Palate Obstruction Treatment: UPPP and Pillar Procedure

The soft palate is the back part of the roof of your mouth. Sometimes the palate causes obstruction because it is long and floppy and it falls back and collapses against the back part of your throat. The uvula is the part of your palate that hangs down in the middle. The uvula can also be long and floppy and can contribute to the obstruction. Many

patients with snoring or sleep apnea will have a uvula that is chronically swollen because it is repeatedly traumatized with the vibrations of snoring each night.

For the last two decades, a surgical procedure called the *UPPP* has been popular for treatment of palate obstruction. This procedure involves trimming the back edge of the palate and uvula so that it is shortened and the airway is more open at this level. If the tonsils are present, they are removed at the same time. The procedure works well in patients who have palate obstruction. The risks with the procedure include a sore throat and a small chance of bleeding after surgery. Patients have to stay overnight in the hospital for one night. Pain medicine is given for the sore throat and antibiotics are given to prevent infection. Initially, the palate will be swollen so the sleep apnea will not improve immediately. Patients will typically notice improvement in about 2-4 weeks. The UPPP procedure is covered by insurance plans for the treatment of sleep apnea.

Another procedure that addresses palate obstruction is called the *Pillar Procedure*. This involves placement of three small implants in the soft palate. The body reacts to the implants in a way that leads to a stiffening of the soft palate. The extra stiffness of the palate prevents it from collapsing against the back of the throat. The procedure is done with topical and local anesthesia in the office setting. It is relatively painless and takes about 10-15 minutes. Recovery is much quicker than it is for the UPPP because there is less pain. The effects are not immediate. It takes several weeks or months for the full effect of the stiffening to take place. As of now, the procedure is not covered by insurance plans. The cost is \$2000 and financing is available in our clinic. The Pillar Procedure is done for treatment of mild/moderate sleep apnea or snoring without sleep apnea.

Tongue Obstruction Treatment: Hyoid Suspension

The back part of the tongue can also fall back against the throat and cause obstruction. Therefore, sleep apnea is often worse when lying flat on your back. There is a muscle that attaches the back part of the tongue to the lower jaw. This muscle relaxes during sleep and allows the tongue to fall back and cause obstruction. One effective way of treating this type of obstruction involves using a special suture technique to anchor the back part of the tongue to the lower jaw. The suture is passed along side the muscle that attaches the tongue to the jaw. Therefore, when the muscle relaxes during sleep the tongue does not fall back because the suture prevents it from doing so. This procedure is done in the operating room and requires an overnight stay in the hospital. The risks include infection, sore throat, and a small chance of difficulty swallowing.

Another way to address tongue obstruction is with a dental device. There are dental molds that will keep the lower jaw in a more forward position and this will help sleep apnea in some cases.

Weight Loss

Sleep apnea is often, but not always, associated with being overweight. In many people losing weight will effectively treat sleep apnea. Generally speaking, weight loss programs should be tried in all patients who are overweight and who have sleep apnea.