

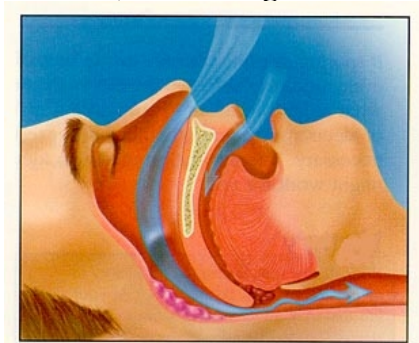
Sleep News & Treatment Options

At the practice of Dr. Zachary Hodgins, our team has researched and compiled information from leading organizations on the forefront of sleep conditions, such as snoring and sleep apnea.

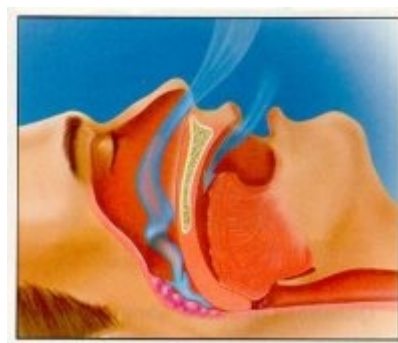
This information can help determine if you or someone you know is suffering from these disorders... and how to treat them for improved health and a good night of rest, night after night. We welcome you to contact our team to address learn more about these options.

NEWS ABOUT SLEEP

Snoring occurs when the airway or passage through which we breathe becomes partially blocked or occluded. An example would be a tongue that falls back as we drift off into deeper sleep. As the diameter or size of the airway passage is shrinking, the net result is a muffled sound secondary to vibrations in the throat, or snoring.



During snoring, air flow is partially blocked.



During sleep apnea, air flow is completely blocked.

In many situations, this compromise is minor and the body continues to get adequate amounts of oxygen to cause little or no harm. However, this is a red flag as it could also be one of the early signs or a part of sleep apnea. Most all sleep apnea sufferers snore in between bouts of apnea, or oxygen interruption. A sleep study should be done to determine the seriousness of one's condition.

Sleep apnea patients have a rough night and don't even know it is happening. In a given night, these apneic events (when a patient stops breathing) can occur anywhere from 30 – 50 times, and in some people as many as 60 - 100 times per hour! Obviously, these individuals awake exhausted and spent each morning, as they've been **fighting for oxygen all night**. Sleep should be a replenishing award for each of us.

Should you be worried? Well, to answer that, first analyze some signs and symptoms of sleep apnea sufferers. Common side effects of sleep apnea patients are:

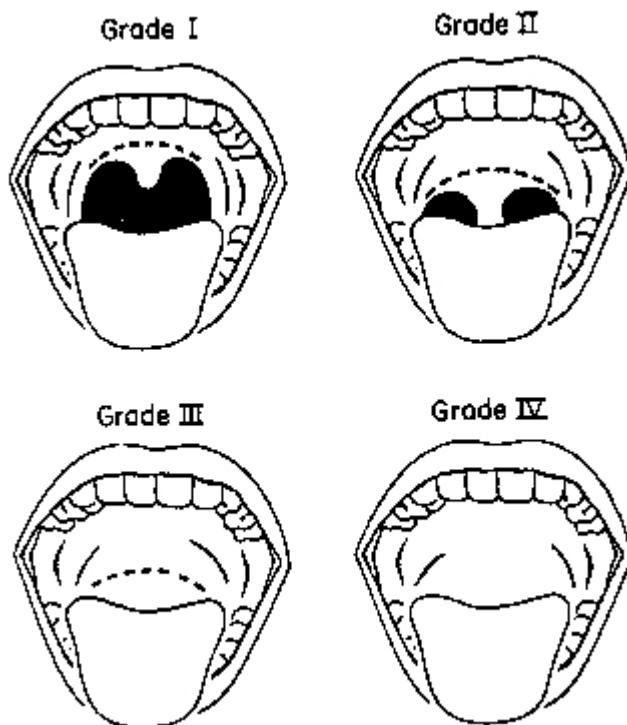
- **heart attacks or irregular heart beats**
- **impotence**
- **high blood pressure**
- [stroke](#)
- **heartburn**
- **morning headaches**
- **dry mouth**
- [gastroesophageal reflux disease \(GERD\)](#)
- **impaired concentration**
- **depression**

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- **decreased libido**
- **irritability**

... and the obvious one, **chronic sleepiness**. A simple test can be taken that will grade this last symptom called the [Epworth Sleepiness Scale](#). Additionally, a [Sleep Observers Questionnaire](#) should be filled out by anyone who regularly observes the potential sleep apneic. Not all apneics will score high, but if you do, it is a very good sign of OSA (obstructive sleep apnea).

It can also cause **learning or memory disabilities**, as well as periods of nodding off while on the phone or at work. Obviously, sleep apnea patients are at a much greater risk of having auto accidents. People most likely to have or develop sleep apnea include those we've mentioned already who snore, or who are also overweight, or have high blood pressure. Another concern would be people who have some physical abnormality in the nose (deviated septums), throat, or other parts of the upper airway. One thing we look at in our office is the **Mallampati score**. There are 4 "grades", and the higher the grade, the smaller the air passage, which is another indicator of sleep disordered breathing.



Another easy marker is neck-size. A study of professional football players in the [Super Bowl Study](#) turned up astonishing results, as 34% of linemen in that game were diagnosed with sleep disordered breathing, which is roughly 8 times the average. A neck size of 17" or larger is a good indicator of this disorder, and it doesn't matter if it's muscle or fat.

Sleep apnea seems to run in some families, suggesting a possible genetic link. In fact, if you have children, you might keep this in mind, paying specific attention to whether or not they still have their [tonsils and adenoids](#).

Chances are that your spouse, other family members, or your coworkers, are keen to the problem. They either also suffer from your noisy snoring, or see the signs of a body which is not sleeping at

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night as it woefully attempts to navigate a given day. Recently, a condition known as "secondary snoring" has been researched, and has been shown to cost the bed partner of a snorer an average of 1.5 hours of sleep each night. Snoring, in fact, has also been shown to be a [leading cause of divorce](#).

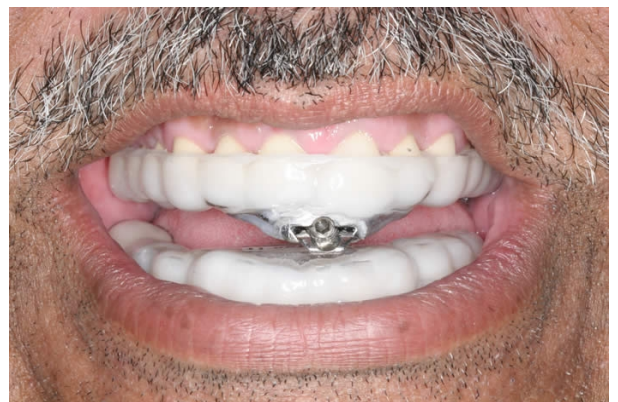
Nocturnal signs and symptoms associated with OSA include **drooling, dry mouth, sleep restlessness, witnessed apneas, choking or gasping and sweating.**

In our office, we treat snoring and sleep apnea with a unique approach. For example, we can provide you with a home monitor to help you (and us) assess whether or not sleep apnea should be a concern. The gold standard for treatment of sleep apnea is presently with the CPAP machine. However, only a minority of CPAP owners are still compliant after one year. If you are one of the non-compliant, we can fabricate an oral appliance that will help open your airway and reduce the severity of your sleep apnea.

These appliances reduce sleep apnea associated health risks without the need for surgery, medications, or other therapies. A custom oral appliance worn while sleeping, they hold the lower jaw forward and open, preventing the tongue and throat tissues from collapsing the critical airway. There is a 96% success rate (snoring) for people treated with these appliances.

One "mandibular-repositioning" appliance we use is called the **Thornton Adjustable Positioner (TAP®)** oral appliance, which is a mandibular advancement device composed of two separate arches (maxillary and mandibular) containing an advancing mechanism which permits unlimited advancement of the lower jaw. The arches are custom fit to a patient's models. The advancing mechanism is engaged and the screw mechanism in the upper tray is then turned to advance the mandible until the patient begins to feel any discomfort in the temporomandibular joint or in the facial muscles (maximum mechanical protrusion which is an average of 2.5mm beyond maximum protrusion). The advancing screw is then turned back until patient is comfortable.

Treatment Options:



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The **SomnoMed MAS™** is a Mandibular Advancement Splint (MAS) that treats both snoring and obstructive sleep apnea (OSA), by advancing the lower jaw forward. It is a custom-made device consisting of upper and lower dental plates with a unique patented fin-coupling mechanism.



If required, a component can be added to make the device adjustable. This feature provides incremental and adjustable levels of jaw advancement, which improves the effectiveness and comfort-level of treatment as the jaw is moved only as far as is required to alleviate snoring and reduce OSA.

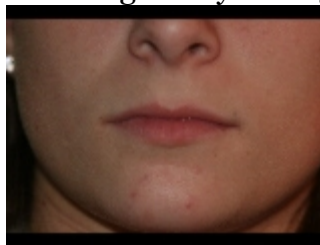
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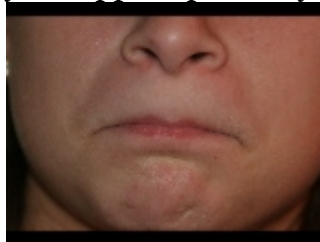
The SUAD appliance allows more lateral movement than most of the appliances, and is specially made for our patients who enjoy grinding their teeth at night (you know who you are) The thermoflex material usually requires heating in warm/hot water to soften it enough to place it every night. It also comes with a Morning Repositioner, used for isometric exercises (clenching on bicuspid area) for 15 minutes in morning to help the bite return to normal.



The **OASYS** Oral/Nasal Airway System is another, but is the first dental device to be reviewed by both the dental and ENT divisions of the FDA and to be approved as a dental device for treatment of snoring and sleep apnea through mandibular repositioning and also as a nasal dilator for reduction of nasal resistance and improved nasal breathing. To understand the way the dilator works, close your lips and hold your teeth together while breathing slowly through your nose for several breaths.



Now allow air to fill your upper lip and try the breathing again.

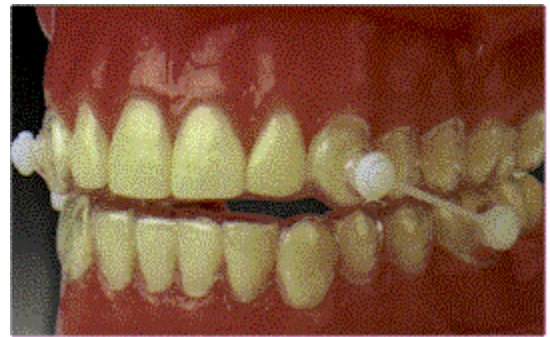
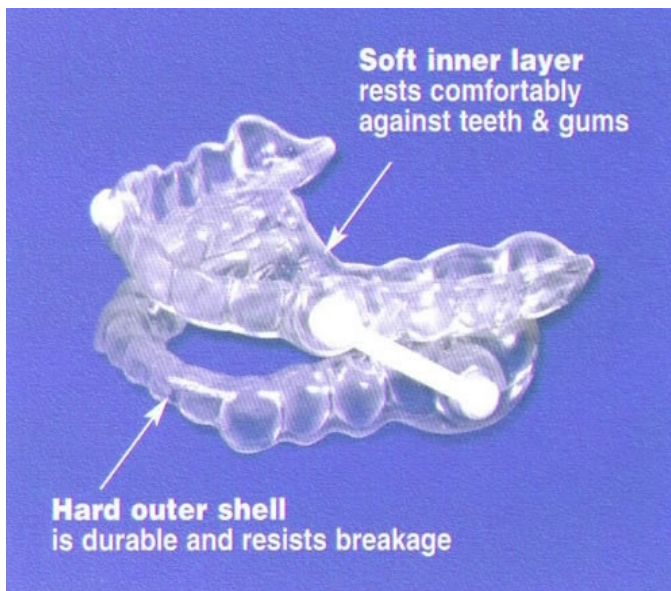


Notice how much easier it is to inhale? This is why the OASYS is designed this way.

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The **SILENT NITE®** device does not interfere with breathing through the mouth, and is one of the more comfortable designs. It is not made for severe grinders, but it is a comparatively small device with tiny connectors attached to transparent flexible upper and lower forms.



Another mandibular-repositioner is the **Silencer Professional**, a laboratory fabricated fully adjustable oral appliance. The appliance features a titanium precision attachment, which controls the anatomical settings of the appliance. It is capable of anteroposterior adjustment as well as vertical adjustment through a range of 10mm, in both dimensions. The design of the precision attachment also allows lateral movement of the mandible which respects and protects the TMJ.

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Another type of appliance is the **Tongue Retaining Device**. The "TRD" is constructed of a flexible polyvinyl material adapted to the general contours of the teeth and dental arches. It does not depend on teeth for retention. Rather, the tongue is held forward by the negative pressure created in the vacuum bulb on the front of the appliance.



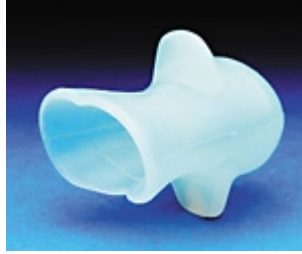
A less complicated version of a tongue-retaining device is the AveoTSD, or "Tongue Stabilizing Device".

The aveoTSD is made from a soft medical silicone for comfort and works by holding the tongue forward by gentle suction preventing it from falling back against the back of the throat, keeping the airway open during sleep.

According to the company, the TSD is ideal for edentulous patients, temporomandibular joint (TMJ) indicated disorders, large tongue problems, complicated dentition conditions, periodontal problems, and children.

Unlike the other devices, the aveoTSD does not attach to the teeth, but acts much like a pacifier. Don't worry..we won't tell if this is what you decide to use.

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These are currently our favorite appliances, but this field is still in it's relative infancy, and more appliances are being invented and/or awaiting FDA approval all the time. We treat each patient individually, so we might suggest a specific appliance for you, but a different one for your spouse.

Whether it's snoring that has forced you into a life on the couch or a more serious apnea problem, please call or schedule an appointment today to discuss your condition.

We encourage you to read additional patient brochures for more information. Online patient brochures such as the Patient FAQ provide detailed information about symptoms, and how the various SomnoMed options provide comfortable alternatives to sleep disorder treatment. ■