

Hypertension

Those who suffer with OSA experience repeated awakenings during their course of sleep. During sleep, the airway relaxes, losing its potency (muscle tone) and narrows or closes completely. Oxygen is depleted. After 10-20 seconds (a minute is not unusual) the body forces the person awake so that they can open the airway again. Often, these interruptions are so short that they go unnoticed but can occur quite frequently - hundreds of times a night. The drop in oxygen levels caused by not breathing and the increase in heart rate and blood pressure due to frequent awakenings puts stress on the heart. The result? A rise in blood pressure during the night and a resulting rise in blood pressure during the day. Permanently.



Are you taking hypertension medication?
Lowering your blood pressure may be difficult if your sleep apnea remains untreated. Correcting your sleep apnea problem will likely lessen the severity of your hypertension.

Coronary Artery Disease (CAD)

CAD results from constricted arteries or atherosclerosis (the build-up of fatty material and plaque). OSA causes a drop in blood oxygen levels and a rise in heart rate and blood pressure. As a result, the heart is forced to work harder. Simultaneously, the heart needs more oxygen due to the OSA, and arteries are narrowed due to the CAD. Ischemia, lack of blood flow, occurs. The heart responds, trying to pump more blood through a smaller area - straining the heart to such a degree that a heart attack could result.

Stroke

A stroke occurs when the supply of blood and oxygen to the brain is either partially or completely cut off. In a person with OSA, blood flow and oxygen are already reduced, further exacerbating the likelihood of a stroke.

Sleep is a major part of our overall health

The following brief quiz from the American Academy of Sleep Medicine may provide a clue as to how healthy your sleep is.

If you answer true more than twice, you may want to discuss this quiz with your dentist. Ask about the possibility of oral appliance therapy.

Epworth Questions

- | | TRUE | FALSE |
|--|--------------------------|--------------------------|
| 1. I feel sleepy during the day, even when I get a good night's sleep. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I get very irritable when I can't sleep. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I often wake up at night and have trouble falling back to sleep. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. It usually takes me a long time to fall asleep. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I often wake up very early and can't fall back asleep. | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. I usually feel achy and stiff when I wake up in the morning. | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. I often seem to wake up because of dreams. | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. I sometimes wake up gasping for breath. | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. My bed partner says my snoring keeps him/her from sleeping. | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. I've fallen asleep driving. | <input type="checkbox"/> | <input type="checkbox"/> |

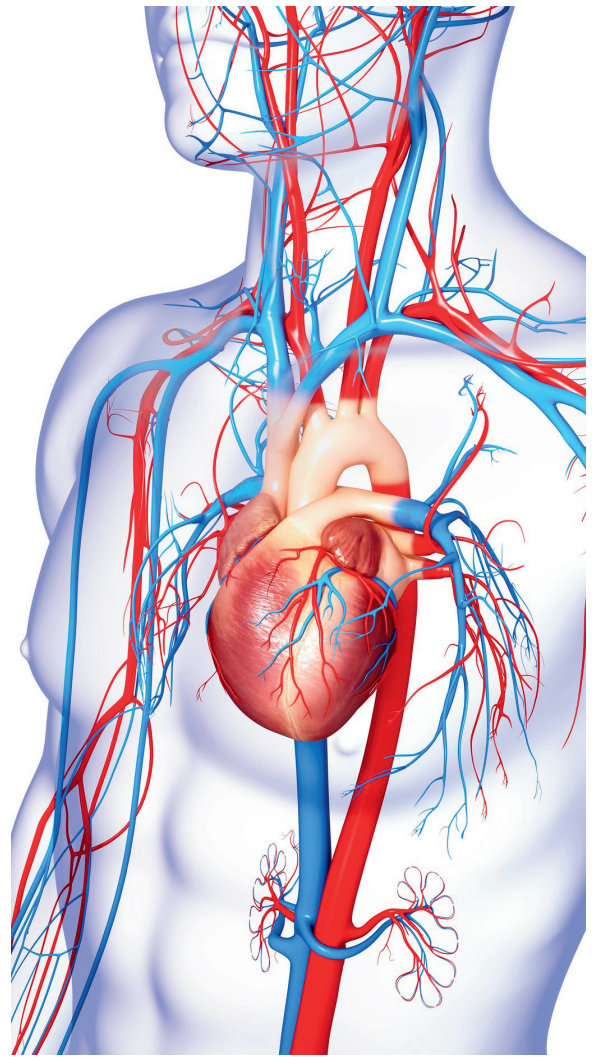


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Sleep Apnea & Snoring

CARDIOVASCULAR

Disease & Sleep Apnea



Sleep-disordered breathing affects your health

High Blood Pressure • Stroke • Heart Attack

There is a Solution!

Snoring can contribute to...

- Hypertension (High Blood Pressure)
- Coronary Artery Disease
- Stroke
- Death

You may think sleeping is simply a welcome respite - a time when everything shuts down. Not True. Your body never completely relaxes. Even when your eyes are closed, it continues to work (but not as hard).

Sleep is like walking when you've been running all day.

What happens if your body never gets the chance to take the break it deserves when night falls and your brain tells you it's time to rest?

- Do you snore?
- Do you wake up tired or with a headache?
- Do you have trouble concentrating?

If you answered yes to the above questions you're probably not getting a good night's sleep. Your body isn't able to rest.

Snoring and daytime tiredness are clear indications of a more severe disease called Obstructive Sleep Apnea (OSA).

If you suffer from OSA when you sleep your air-way loses its strength (its potency) and collapses in on itself. The narrowed or completely closed airway doesn't let enough oxygen into your body.

When you have OSA, your body is never walking, its always running!

The majority of your night

Is spent in non-REM sleep stages. Here, your blood pressure and heart rate drop to levels much lower than when you're awake. This is your body's chance for some relaxation.

Normal physiological changes occur when day-light wakes you up. Your heart begins pumping and working harder. Gradually, your heart rate and blood pressure climb.

If you are not sleeping well, your body never relaxes. It works hard at night and even harder during the day.

The consequence? Cardiovascular Disease

What are the usual options for treatment?

Oral Appliance Therapy is a device custom fit directly in the mouth by your dentist and is worn during the night. It's designed to keep your airway open and help prevent apneas. As the patient sleeps the device stabilizes the airway to allow air to pass through with less resistance.

Side effects may include: soft tissue or gum irritation, minor bite problems, slight jaw pain, TMJ symptoms, sore teeth, excessive salivation, dry mouth, headaches limited opening, or change in jaw mobility.

Surgery ranges from tonsillectomy to tongue-based surgery and encompasses everything in between. Degrees of invasiveness vary from procedure to procedure. Some are more painful, some have longer recuperation periods. Estimates of surgical effective-ness are as high as 50% and as low as 30%.

How do we treat OSA?

Dental Sleep Medicine is an emerging field of dentistry concentrating on the reduction of patient's respiratory distress resulting from Sleep Disordered Breathing (SDB) - i. e. snoring and Sleep Apnea.

We use Airway Orthotics (oral appliances) instead of the cumbersome CPAP or ineffective surgery. An oral appliance looks much like an athletic mouth guard but not as thick.

Airway Orthotics (AO) come in varied designs and many are FDA-cleared They are non-invasive and must only be worn at night.

ORAL APPLIANCES



In order to fit an oral appliance correctly, we perform two quick and completely painless test: Rhinometry and Pharyngometry via the Eccovision Systems, Assesment tools employing "Acoustic Reflection" technology. The two tools map the nasal and pharyngeal airways, respectively, producing graphs pinpointing their trouble spots.

