

## **What Kills More People Every Year Than Drunk Drivers? Sleep Apnea**

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Several years ago, I received a call from a family friend. He was an ex-NFL lineman who had also been a youth football coach to my younger brother for several years. Terry, as I'll call him in this story, had been diagnosed with sleep apnea some time before.

Terry reached out to me because he knew that certain dentists are uniquely able to help with sleep apnea.

Dentists are often the first professionals to notice this problem, and many of us are trained to treat it. Sleep apnea occurs when your muscles relax during sleep, allowing soft tissue to collapse and block your airway. Think of putting a toilet plunger in the toilet bowl and flushing it at the same time. That blocked sensation is similar to what people with sleep apnea suffer (very often unknowingly) during sleep. It is a life-threatening epidemic, and millions of Americans are undiagnosed with it. I see patients with symptoms daily. Fortunately, awareness is starting to gain traction, because more and more patients and outside people are coming to me with questions about it.

Terry was working in California but arranged to stop by my office when he was back home in Utah visiting family. He planned to return in a few weeks to receive his custom oral appliance and start his appliance therapy. Unfortunately, I never saw Terry again. He suffered a massive heart attack that took his life, likely from his sleep condition. I wish I would have known what I know now. I would have reached out to him months earlier to give him an option to sleep better. Prevention saves lives. Poor sleep, especially sleep apnea, has been linked to many diseases, including cancer, diabetes, erectile dysfunction, Alzheimer's, and heart disease. If Terry wasn't being robbed of his oxygen every night from sleep apnea, his heart may have lasted longer. Studies have shown that men over the age of fifty, with a history of high blood pressure and a neck size larger than sixteen inches have a 95 percent chance of suffering with sleep apnea. You can find two great screening tools online. Search "S.T.O.P. B.A.N.G." and the Epworth sleepiness scale. If you score high on either of these, get to a sleep lab or qualified dentist right away for an overnight sleep test and find out why you are having these symptoms. Remember these are screening tools only. While they are usually helpful, I have had patients score low on these tests and yet were still found to have sleep apnea.

Many people don't know the dangers of sleep apnea, but a quick online search will show many stories of people who have died from it—and even unintentionally killed others because of it. Reuters reported in October 2016 on a tour bus driver who crashed into a tractor trailer, killing thirteen and injuring another thirty people. The driver had untreated sleep apnea. In fact, sleep apnea kills more people each year than drunk drivers do. Imagine if you had a sleep disorder and you drove a truck or a school bus for a living. That could be disastrous.

Sleep apnea also leads to other issues, including dry mouth, which can lead to further oral health concerns. There is also a combination

of symptoms we know as the bruxism triad, related to sleep apnea. I distinctly remember reading an article in early 2010, just before I graduated dental school. I read it in one of the first online continuing education courses I ever took—and I've been hooked on this science ever since. The research done by Dr. Jeffrey Rouse, a dentist, found a common link among unknowing teeth grinding during sleep, acid reflux (GERD), and sleep apnea. It has been an interesting link for me to study, and I've found countless numbers of my patients in this boat. Often when I see worn teeth on adults, I ask if they have acid reflux and/or heartburn or sleep apnea. Most say yes to at least one. It's also a great screening tool for those who have never received a sleep test to find out if they have any sleep conditions. Since learning of it, I have diagnosed or referred many people with this combination condition.

I asked my friend Scott Schauss, a certificated physician assistant, to share his thoughts on sleep apnea for this book. In his work in sleep medicine, he meets with a lot of patients suffering from sleep apnea. He has a lot of experience in the sleep lab, testing and diagnosing patients with all types of sleep disorders. He and I work together with patients who are diagnosed with mild or moderate obstructive sleep apnea but can't or won't wear a CPAP or similar mask for sleep apnea. So, he refers them to me for oral appliance therapy. Plus, I find so many of my own patients have signs of sleep apnea but have not received a home sleep test, so we get them over to Scott ASAP for a basic or overnight sleep test.

After he shares his expertise, I'll tell you more about treatment options I recommend. With so many sleep-related deaths, effects on our bodies, and links to other medical and dental conditions, I take screening and treating sleep disorders very seriously.

### **Destined to Help: Scott Schauss's Story**

*I always knew that I wanted to work in medicine. I love sports and thought working in sports medicine would be a worthwhile pathway. It didn't quite turn out that way, but looking back, I can say there are no regrets.*

*It was my second year of physician assistant school, and I was just starting my family medicine clinical rotations with Dr. Seth Wallace. Dr. Wallace also happened to be a board-certified sleep specialist. Naturally, during my time with Dr. Wallace, I was exposed to sleep medicine. Over time I came to enjoy it, I found my interests changing, and after graduation, I began my career in sleep medicine.*

*What attracts me the most to sleep medicine is how much of a positive impact I can have on someone's health. Most of my patients who are suffering from a sleep disorder(s) have very poor qualities of life, not only on a day-to-day basis but long-term as well. As supposed to treating hypertension for example, treating sleep disorders is very gratifying because of the immediate and recognizable impact it has.*

### **OSA: The Most Common Sleep Apnea**

*Most of my patients suffer from a sleep disorder called obstructive sleep apnea, or OSA. OSA is when your oxygen levels are lowered in the bloodstream due to the airway closing off. Simply put, you are suffocating. OSA is the most common sleep disorder and impacts roughly 25 million Americans. To give you some perspective, roughly 43.3 million Americans suffer from high blood pressure or hypertension.*

*We need oxygen to survive, and without it our bodies begin to shut down. To give you an understanding of how serious this can be, the worst I have seen in a patient was breathing disturbances occurring 160 times each hour. That is 2.66 events per minute that are lasting at least 10 seconds each and dropping the oxygen 3 percent or more from baseline. While it is true that our bodies are designed to keep us alive in such moments, the day-to-day and even long-term ramifications can be quite severe and debilitating.*

## **Who Is Most at Risk for OSA?**

Notable risk factors for OSA include advancing age, being male, and obesity. In fact, obesity is probably the strongest risk factor, with 80 percent of anyone with a body mass index of 40 having OSA. Other factors include family history, neck size, and how closed off the back of your throat or airway is.

## **OSA Symptoms**

The big three signs of OSA include loud and excessive snoring and pauses in breathing, followed by a gasp for air. Symptoms are generally going to be complaints of unrefreshing sleep with difficulty getting out of bed in the morning, memory loss, mood shifts, and daytime fatigue with excessive daytime sleepiness being a major complaint. The reason why daytime sleepiness is a predominating symptom is that at night, every time you have a breathing disturbance, your body wakes you up, so you breathe again. This is how you survive. It also means you never get a full night's rest.

As you can imagine or have even experienced yourself, it is very difficult to have an optimal quality of life when you are constantly sleepy and/or fatigued. Most people with OSA suffer in all aspects of their lives; school, work, relationships, even personal health. The estimated economic cost of undiagnosed OSA was nearly \$150 billion in 2015.

## **Dangers of Living with OSA**

This leads me to discuss some of the dangers of OSA. One of the most common things that I see in my clinic is drowsy driving. Some patients have been fortunate enough to have never fallen asleep at the wheel, but others have. Imagine if your family members were involved in a major accident due to a drowsy driver. Paints a realistic picture, doesn't it? Please never drive drowsy.

In addition to drowsy driving, most patients will run the risk of developing or worsening existing medical conditions. In fact, those with sleep apnea have a two to three times more risk for developing atrial fibrillation, an erratic and



*dangerous heart rhythm that may contribute to other dangerous health risks. Other risks include heart attacks, strokes, developing or worsening diabetes or hypertension, Alzheimer's, dementia, and Parkinson's. Quite frankly, there isn't an area of the body that OSA does not impact.*

## **OSA Solutions**

*Hopefully you're not discouraged at this point. There are ways to lower your risk. The first step is to see and consult a sleep specialist for further diagnosis. Diagnosis is done through a sleep study, either at home or in the lab. That decision is made on factors such as your comorbidities or existing health issues, risk factors, insurance, and standard of practices. Once testing is completed, the best way to treat sleep apnea is with a continuous positive airway machine otherwise known as CPAP. Other forms of therapy include mandible advancement devices, oral surgery and/or nerve stimulators. For example, in mild, straightforward OSA cases, a mandibular advancement device can be very effective and appropriate. In all cases, please consult with your sleep specialist before therapy is started.*

*As important as CPAP or other treatment modalities are, weight loss is crucial. I'm asked every day on how to get rid of OSA all together. The answer in 95 to 99 percent of cases is, simply, lose enough weight and there is a good chance that your OSA will decrease in severity or go away all together. Obstructive sleep apnea is a serious disease and at times life threatening, but with the proper diagnosis and management, it can be controlled and lower the risk of negative outcomes.*



## **Is A CPAP The Best Option?**

Scott shared a lot of great information. Now I'm going to bring us back to my friend Terry, with whom I introduced this chapter. He didn't reach out to me to diagnose his sleep apnea—that part was already done. He reached out to me to help him better treat it, so he could breathe while he slept. He'd been prescribed a CPAP machine but

wasn't wearing it because it wasn't comfortable for him. He knew I offered an alternative solution that was much more comfortable.

CPAP, which stands for Continuous Positive Airway Pressure, is the most common treatment for sleep apnea. A CPAP machine is made up of a hose and full-face mask or nosepiece to keep oxygen moving steadily into a patient. But CPAP can be, to put it bluntly, a real pain in the mouth to deal with. To some, a CPAP is like Darth Vader's mask. It can even make some patients feel claustrophobic. In addition, it can take a few tries to get the mask to fit properly. The face is a unique surface; this is definitely no "one size fits all" machine. Any problems with the machine's fit can lead to the mask rubbing the skin, can lead to dry mouth, and can lead to the patient even removing the CPAP in their sleep.

Oral appliance therapy that dentists provide is an increasingly preferred form of treatment for OSA. This is due to the high rejection rate (up to 50 percent) of CPAP therapy and the fact that oral appliances are much more convenient, portable, and easy to care for. Oral appliance therapy uses a mouthguard-like device to maintain an open, unobstructed airway while you sleep. They are typically as simple to wear as most retainers. Even though it feels like a hockey puck in your mouth when you first receive it, an oral appliance wins hands down next to a CPAP in the comfort department. For most people, the jaw and muscles get used to it usually after a few days or weeks. Studies show appliances work for over 80 percent of people. I have gone through the process myself, from a home sleep test to having an appliance made. I haven't been diagnosed with sleep apnea, but since I discuss it with so many patients so often, I wanted to gain a better understanding of the process. I am picky about my mouth, and I slept a full night, well rested on my first try with my dual-arch (upper and lower mouthpiece) sleep appliance.

There are two ways in which oral appliance therapy works to open your airway:

- By repositioning your lower jaw, it keeps your throat muscles lightly engaged as you sleep, preventing them from collapsing.
- Oral appliances can also move your tongue forward, keeping it from falling back and blocking the throat.

## **Conclusion**

One in five adults has OSA, but most of those people go undiagnosed, suffering without realizing it until the condition causes a major health concern. Just as sleep apnea can cause problems throughout your body, if you treat the rest of your body well, you can counteract that sleep condition. Weight loss is an incredible natural cure for sleep apnea, but I have seen many patients at a healthy weight who have a small airway or a large tongue and tonsils or who are at a high risk from medical conditions or lifestyle habits and who need sleep apnea therapy. Keep in mind that CPAP therapy is a great option and is still the first line of defense for severe OSA or for those with central sleep apnea (CSA, a neurological type of sleep apnea). Dentists have techniques to help those with OSA comfortably and simply manage their apnea without adding a cumbersome machine to their bedtime routine.

Even those who are not candidates for an oral appliance should be aware of acid and heartburn issues or teeth that are chipping or wearing prematurely. Nighttime grinding for just one night's sleep has been equated to as much force as up to ten days of chewing. So, uncontrolled teeth grinding will wear your teeth out ten times faster. Many sleep apnea patients also require a medication for acid reflux and may need to wear a bite splint with their CPAP to protect from the devastating effects of nighttime grinding. Most of those who do wear a CPAP should also wear a bite guard or occlusal splint to protect from the damage of grinding. Ask your dentist if you have signs of accelerated wear.

If you suspect someone has sleep apnea or notice your partner gasping



in bed or sleeping restlessly, set up a sleep test with a qualified sleep lab today or get to a dentist trained in sleep apnea therapy for a treatment plan and referral. You could greatly reduce avoidable medical costs, improve quality of living, or even save your life, or the life of someone you care about.