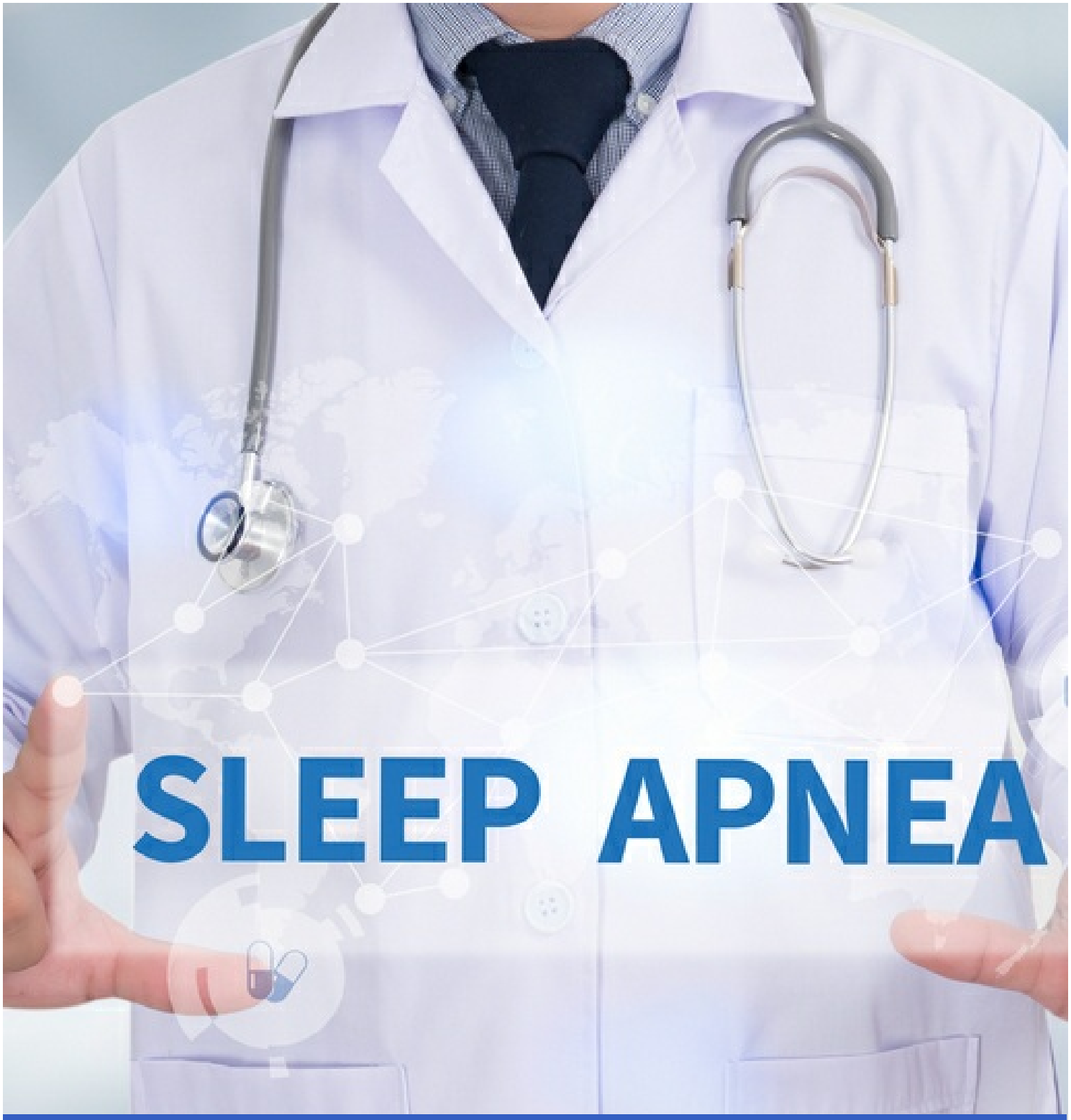

SOUND SLEEP HEALTH

Obstructive Sleep Apnea

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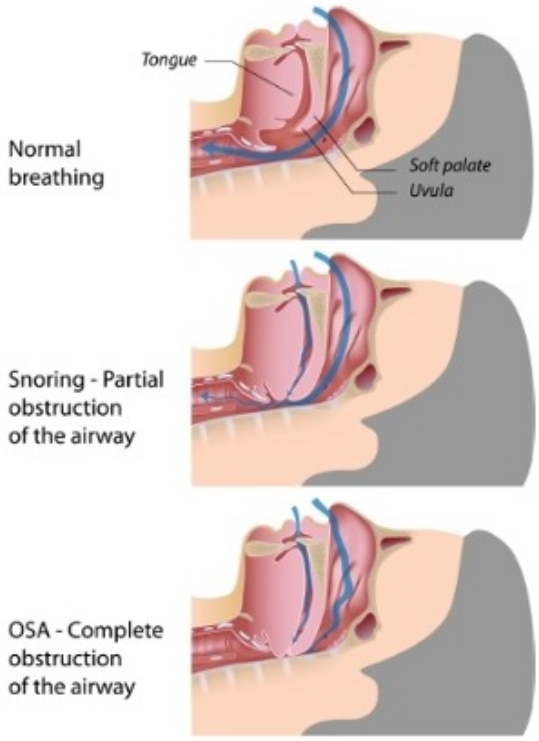
What Is Obstructive Sleep Apnea? (Signs, Symptoms, and Risks)



The term "sleep apnea" has become familiar to Americans, and for a good reason: it's estimated by the National Sleep Foundation that 18 million people suffer from this sleep-related breathing disorder, many of them undiagnosed and, consequently, untreated.

OSA is more common in men and in post-menopausal women, but children can also suffer. Despite popular belief, OSA is not a condition limited only to those who are overweight or obese: thin, healthy, young people who have distinctive structures in their airways may also develop OSA.

The list of potential problems that could plague those with untreated sleep apnea is long and serious: diabetes, cardiovascular disease, depression, stroke, motor vehicle accidents, obesity, even cancer, can be outcomes.

Fortunately, sleep apnea is treatable, so many of these concerns can be prevented by simply treating the condition. But what exactly is sleep apnea? And how does it connect to these other health issues?

What is sleep apnea?

Sleep apnea refers to a category of several sleep breathing disorders, of which obstructive sleep apnea (OSA) is, far and away, the most common.

The word "apnea" means "without breath." It refers to any situation when the body stops breathing and, in doing so, the bloodstream becomes deprived of oxygen.

"Sleep apnea," then, refers to incidences in which the body stops breathing *as you sleep.*

More specifically, "obstructive sleep apnea" describes the chief reason why the body stops breathing: there is an obstacle preventing breathing.

What causes sleep apnea?

The obstacle in an obstructive breathing event is not an external one, but internal. It consists of one or more parts of the upper airway. The upper airway includes not only the throat, but the mouth, the sinuses, and the nasal areas. Key parts of the upper airway that cause obstructions include the tongue, adenoids, uvula, or tonsils. Any of these might be swollen or oversized. The jaw, too, can slide backward during sleep, compressing the airway near the back of the oral space known as the soft palate.

Those with added weight in their necks, or who suffer from swelling anywhere in the body, may find that the weight of retained fluids or fatty tissues also compresses the airway, either partially or completely, during sleep.

Sometimes, however, thin people with very narrow airways also suffer from partial or complete obstruction of the airway. In these cases, as with all OSA sufferers, the tone of the muscles and tissues that compose this part of the body slackens during sleep. These "flabby" areas are what cause the vibrations that we know as snoring. As we age, however, we also lose our tone in the upper airway, which might explain why older people seem to snore more than younger people.

Signs of sleep apnea

Snoring is, in fact, a key sign that OSA might be present in some people. While snoring itself is not the same thing as OSA, it almost always accompanies OSA and should be investigated to make sure any hidden sleep breathing issues are identified and treated. Even untreated snoring can have unhealthy consequences if it is loud and frequent, night after night.

Other signs you might have OSA include:

- **gasp, choke, or cough** in your sleep after **long silent pauses of breaths**
- Excessive daytime sleepiness
- waking with a sore throat
- dry mouth
- unexplained chest pain or tightness
- morning headaches
- If you awaken in a poor mood and feel like you are not sleeping well
- Frequent kicking following quiet periods might also indicate your body is forcing you awake to correct the effects of obstructed breathing.

You may even notice these things for yourself: that you are waking up a lot at night and may have even had the experience of "snorting" yourself awake. Or you may find you are getting up to use the bathroom frequently with no other explanation for these nocturnal awakenings.

When you do this, it could be because the brain is receiving signals from the body that the levels of oxygen in your bloodstream are too low for healthy function. Your brain "wakes you up" so you can voluntarily breathe to clear any obstacles. Secondarily, while the brain alerts the body to episodes of apnea, it might also send messages to void the bladder now that you're awake.

Symptoms of sleep apnea

Excessive daytime sleepiness is a hallmark of OSA. Frequent awakenings at night compromise your ability to achieve deep, restorative sleep and, over time, this can lead to chronic problems with fatigue and daytime sleepiness. These are problems that should not go ignored: people with untreated OSA have more motor vehicle accidents (including fatal ones) and make more mistakes at work than people who treat their OSA. If you feel like you are not as focused during the day or struggle with decision-making, these could also be especially telling of hidden OSA, as it causes sleep deprivation that leads to cognitive challenges with normal everyday tasks like problem solving.

Elevations in blood pressure, especially absent any other explanation, may also be symptomatic of OSA. The reason is simple: when the body has less oxygen, all of its systems—including the heart and lungs—require much more effort to work efficiently. Over time, this continual strain on the heart to keep up while using less

oxygen will increase blood pressure.

Sleep apnea risks

A person with untreated OSA risks developing many chronic diseases or aggravating any current medical conditions they already have. Why is this?

When the body does not get enough oxygen, the depleted bloodstream and various body systems must compensate to keep everything—from digestion to cell regeneration to immune system balance—functional. Long-term reductions in blood oxygen, as is seen with OSA patients—who go for hours with less-than-healthy levels on a nightly basis—lead to chronic, *systemic* (system-wide) *inflammation*.

If you allow inflammation to become the "norm," the body begins to break down under what is known as *oxidative stress*. The heart, the brain, the lungs, the veins and arteries, the liver, the pancreas, the kidneys... all of these critical organs begin to experience distress which will ultimately lead to dysfunction and damage.

This is why OSA can lead to serious diseases like diabetes, cancer, atherosclerosis, atrial fibrillation, and more if it's not treated.

What to do if you suspect sleep apnea

The beauty in understanding OSA is in the fact that it can be treated. A number of methods exist, including continuous positive airway pressure (CPAP), oral appliance therapy, positional therapy, outpatient procedures, neurostimulation implants, oronasal surgeries, and others.

First, however, you need to identify it by undergoing a sleep study. This may either occur in your home or in an accredited sleep center; the type of test you need will be determined by your sleep physician.

If you discover you have OSA, you and your sleep medicine professional will work together to determine which treatments you qualify for and which will work best for you.

If you have not yet been diagnosed with OSA, and you suspect you might have it, or you have a loved one who you believe may be suffering from OSA, don't delay. Speak to your general physician about getting an appointment with a board-certified sleep physician. With so many risks, yet so many treatments available to you, there's really no good reason not to.

Please reach out to us at Sound Sleep Health. We have 3 locations in the greater Seattle/Kirkland areas. So, call us and Improve Your Sleep Today (425) 296-6194

Do you or a loved one suffer from sleep apnea and want to know what to do? Just click on the free sleep assessment button below to get started sleeping better today!

The high price of untreated obstructive sleep apnea

After insomnia, sleep apnea is the most common sleep disorder in the US, affecting nearly 20 million Americans.

As much as 10 percent of the entire US adult population suffers from obstructive sleep apnea (OSA), the most common form of sleep apnea.

Anywhere between 40 and 80 percent of people with OSA may not even know

they have it, or if they do have it, are not treating it.

The risks of living with untreated sleep apnea far outweigh the efforts needed to invest in continuous positive airway pressure (CPAP) therapy to treat it.

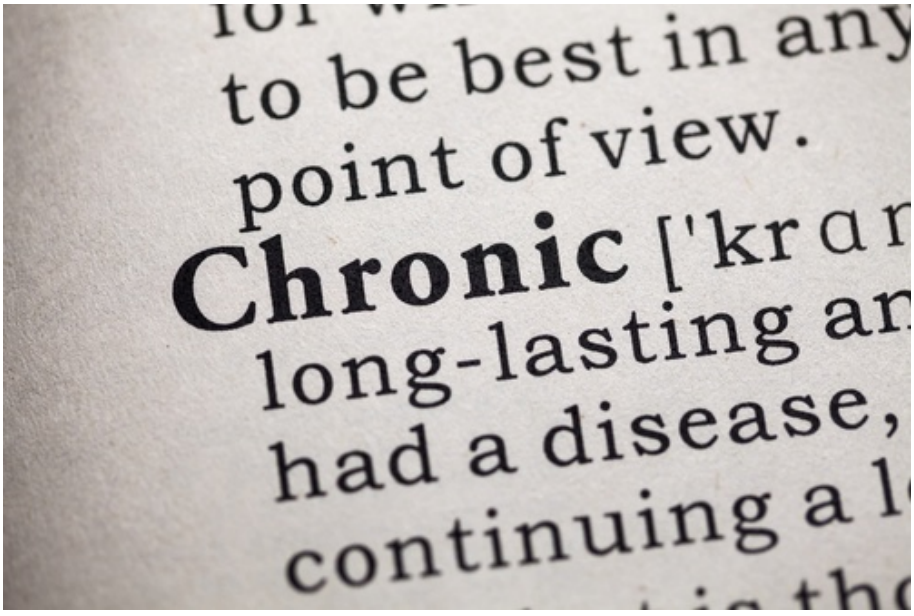
Without proactive compliance to CPAP therapy, those with sleep apnea are setting themselves up for a lifetime of chronic health problems as well as a higher likelihood of suffering from injuries.

In addition, the higher healthcare expenses that come with untreated OSA, and the reduction in quality of life that is also part of the cost of not treating it, make one thing clear: you can't ignore a sleep apnea problem without paying a price.

What are the risks of ignoring sleep apnea?

Chronic disease

The American Academy of Sleep Medicine (AASM) reports that people with moderate to severe OSA are "four times more likely to die when is left untreated in the long term." They list these negative long-term health consequences for those who think they can just ignore sleep apnea:



- *High blood pressure and stroke*
- *Heart disease (coronary artery disease, congestive heart failure, cardiac arrhythmia)*

- *Pre-diabetes and diabetes*

- *Depression*

The president of the AASM, Dr. Safwan Badr, makes it clear: "Obstructive sleep apnea is a chronic disease that can be destructive to your health."

Other research shows even more problems which are also independently linked to untreated sleep apnea:

- *Cancer patients with untreated OSA are four times more likely to die when compared to those without OSA or who treat their OSA proactively, says a study in the Journal of Clinical Sleep Medicine.*

- *A link exists between undiagnosed or untreated OSA and increased adverse outcomes for surgical patients, as shown by research conducted by Dr. Vishesh Kapur at the University of Washington. Their research showed that those with untreated OSA are more likely to experience respiratory failure while under general anesthesia.*

- *Without active treatment of sleep apnea, someone with OSA is more likely to suffer from chronic kidney disease, according to research published in Thorax in 2015 that observed outcomes for more than 3 million veterans with OSA.*

Injury risks

Untreated OSA leads to *sleep deprivation*; this is because sleep is interrupted continuously by lengthy pauses in breathing that can lead to ongoing issues with *hypoxia* (low blood oxygen). This disrupted sleep prevents you from getting the healing, restorative rest your body and brain need to function while awake.

Accidents and injuries are a public safety problem that relates directly to sleep

deprivation, according to the Centers for Disease Control and Prevention.

For instance, someone with untreated OSA (or who is avoiding or ignoring their prescribed sleep apnea treatment) is three times more likely to have a workplace accident or sustain an injury while on the job. For motor vehicle accidents, undiagnosed OSA can lead to a *20 percent increase* in the risk for sleep-related traffic accidents.

Sleep deprivation causes, among other things, impaired vigilance, a reduction in the ability to adequately perform daily tasks while on the job, and a greater chance you'll make poor decisions and egregious errors during your work day.

The economic burden of untreated OSA

In 2004, one study of automobile accidents linked to OSA (estimated at 800,000 annually) showed that nearly 1500 resulted in fatalities, with $16 billion in costs attributed to those accidents.

More recently, the AASM commissioned several white papers to report on the state of OSA as it pertains to public health expenditures. They discovered that underdiagnosing and failing to treat OSA has become an expensive drain on the entire healthcare system.

Immediate past president of the AASM, Dr. Nathaniel Watson, published an eye-opening editorial this summer on the results of the findings in these white papers: "Health Care Savings: The Economic Value of Diagnostic and Therapeutic Care for Obstructive Sleep Apnea."

In the aforementioned UW study, Dr. Kapur and his team also found that the mean annual healthcare costs for someone with untreated OSA were nearly twice those of someone without OSA.

Who suffers the economic burden?

People with OSA are 10 times more likely to file for workplace disability, which drives up employment costs and reduces overall productivity.

They also spend more time and money engaged in healthcare concerns, as expressed in the results of multiple research studies that measure healthcare costs among those in this patient population.

Other entities that feel the pinch include insurance companies, Medicare, and healthcare professionals, which leads to increases in rates and reimbursements as well as more strict protocols to weed out system abusers and noncompliant patients.

Lost: Quality of Life

Forget about the practical benefits of treating OSA. What about simply feeling better and having the energy and focus to live a fully realized life?

The sleep deprivation that results from untreated OSA makes it difficult to get out of bed in the morning, causes problems with daytime sleepiness, and leaves sufferers with hypersensitivity to pain, cognitive fogginess, and irritability.

Not surprisingly, outcomes of these unpleasant and adverse effects of untreated sleep apnea include job dissatisfaction, burnout, and relationship stress.

What are you waiting for? If you think you have sleep apnea, investing in a sleep study, confirming a diagnosis, and applying CPAP therapy could be the best investment you ever make in your health.

If you've already been diagnosed, please practice compliance with your therapies. If that means you need to come back to treatment after a significant time away, so be it. A sleep specialist can quickly and easily help you get back on track... but only if you ask for help.

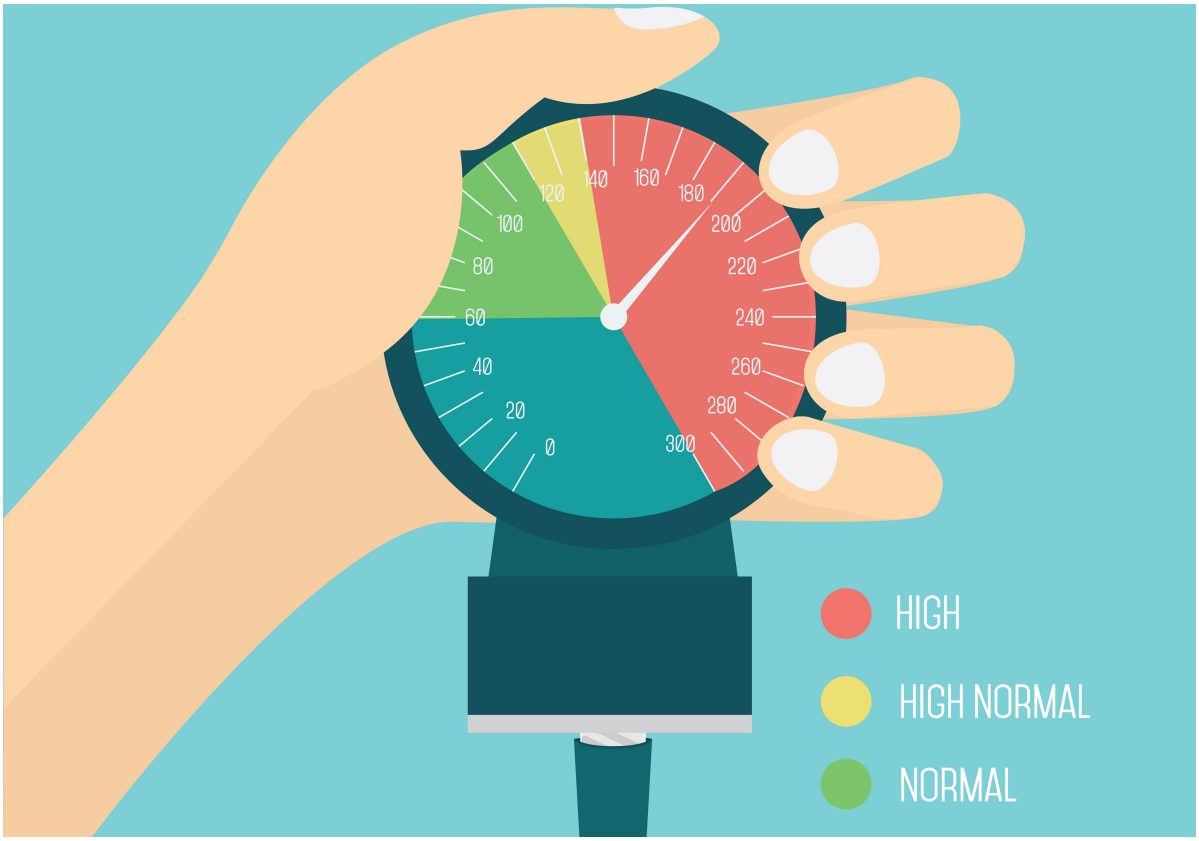
In the meantime, check out our free downloadable e-book below for information about starting PAP, if you are planning to make a return or are curious about this

highly effective OSA treatment.

Sources:

American Academy of Sleep Medicine
Centers for Disease Control
Journal of Clinical Sleep Medicine
National Sleep Foundation
Thorax

Untreated sleep apnea and high blood pressure: Risks, causes, and correlations



There are people who have been diagnosed with some form of sleep apnea who have not taken the critical step of starting therapy for it.

They may mistakenly believe they can "live" with their sleep apnea, or they may be intimidated by treatment options (or not know about their options at all).

Unfortunately, if they don't treat their sleep apnea, they are practically guaranteeing that they will either develop high blood pressure (*hypertension*) as a result, or aggravate a preexisting case of it.

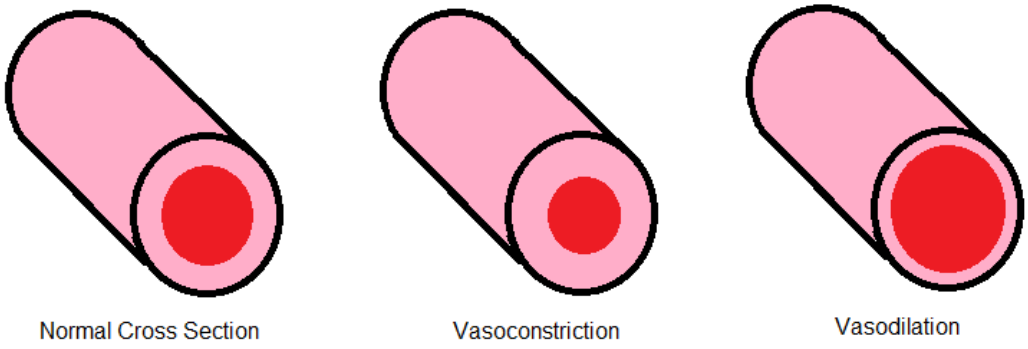
What makes this even worse is that both sleep apnea and hypertension are silent

conditions, in that it can be impossible for some people to know they have either without a full medical assessment.

How is sleep apnea related to high blood pressure?

When you have a respiratory event called an *apnea* (or a pause in breathing), you risk depriving your bloodstream of necessary oxygen.

Apneas that repeat over the course of the night can result in a problem with developing significantly lower levels of oxygen in the blood over several hours. This is called *hypoxia*. During hypoxic events, the brain receives chemical messages alerting it to these dangerous reductions in blood oxygen (called *desaturations*).

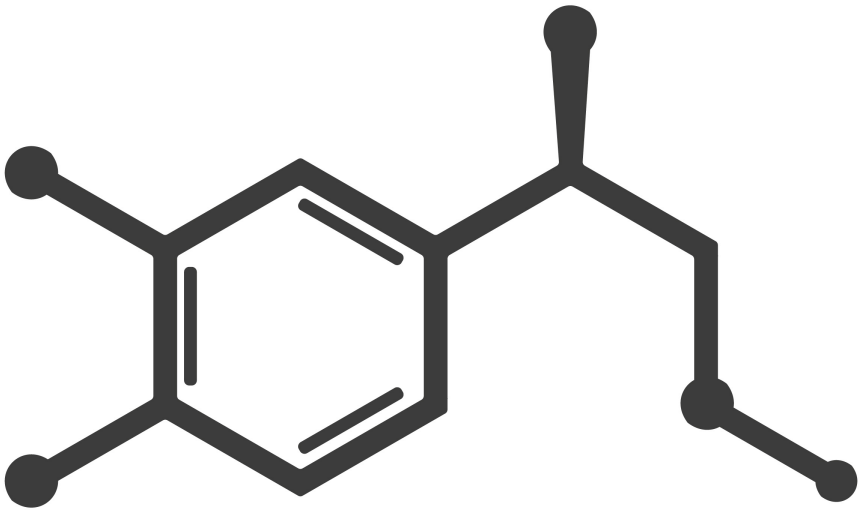


As its response to these desaturations, the brain sends signals to the nervous system to tighten up the blood vessels in order to speed up blood flow. This is called *vasoconstriction.*

Why does the brain do this? It needs adequate oxygen to function properly; the quicker it can receive necessary oxygen, the better. The problem with this is that, in doing so, the brain raises blood pressure by as much as 20 percent. Normally, most people experience a blood pressure *drop* of between 10 and 20 percent during sleep, not an *increase*.

Another side effect of hypoxia is that the brain instructs the body to awaken briefly in order to provoke the respiratory system to start breathing again. This involves flooding the bloodstream with stress hormones

EPINEPHRINE



ADRENALINE

, such as epinephrine and adrenaline, to awaken in order to start breathing again. This is one of the main reasons why sleep fragmentation occurs; it is also one of the reasons why inadequate sleep is also connected to hypertension.

This stress response also speeds up the heart rate (the pulse), leading to added stress on the heart muscle. Over time, blood pressure rises to resting levels that are higher than normal, no matter what time of day, for people with untreated sleep apnea. This is because the walls of the blood vessels cannot relax like they are normally meant to.

Instead, people with perpetual desaturation experience perpetual stress responses that leave the blood vessels in a constant state of vasoconstriction, even during the waking state. Eventually, those ranges of blood pressure will increase during the day to become that person's "new normal."

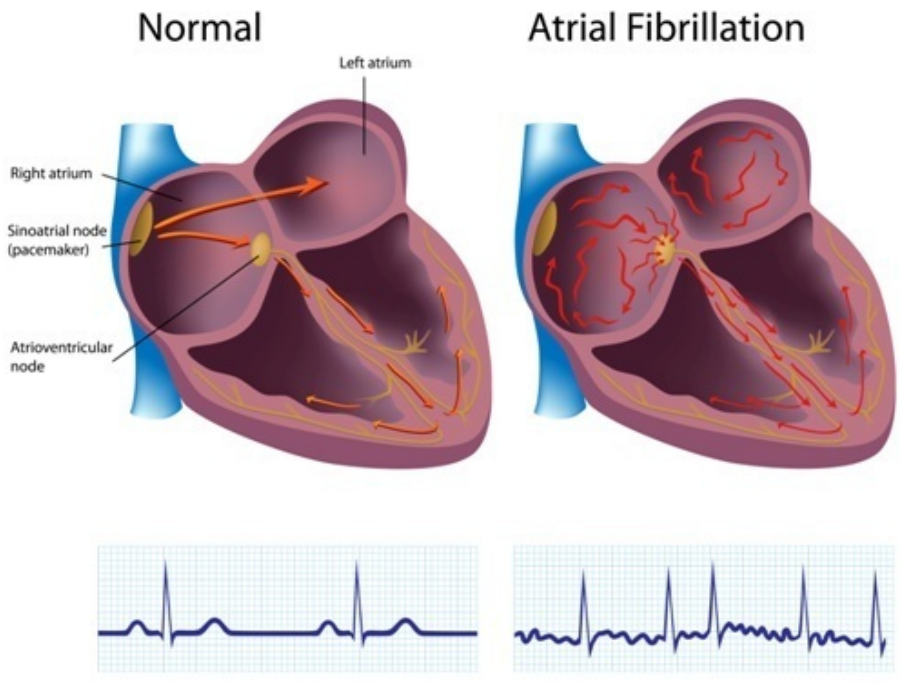
Why untreated sleep apnea threatens heart health

We should all recognize by now that high blood pressure is the villain behind many chronic and dangerous health problems such as heart disease, heart failure, vascular disease, and stroke.

The statistics are compelling when it comes to people with apnea who do not treat their sleep disorder.

The American Association for Respiratory Care estimates that at least half of those who suffer from sleep-disordered breathing, like obstructive sleep apnea (OSA), will develop hypertension.

Also, nearly 6 out of 10 men with severe OSA are likely to develop congestive heart failure, compared to men who do not have OSA, says one National Sleep Foundation study. Older men with moderate to severe OSA were also found to be more likely to develop coronary heart disease than their mild- or non-OSA peers.



The problem of atrial fibrillation

When untreated, OSA also causes problems with the heart's electrical processing that can cause it to race at a stress-induced pace, night after night, eventually damaging the cardiac "engine" and causing arrhythmias to develop, such as atrial fibrillation (AFib).

AFib is a condition of the pacing of the heart that is also caused, in part, by high blood pressure.

Why is AFib a problem? If left untreated, it is well known to be a leading cause of stroke.

According to research published in the *Journal of the American College of Cardiology*, 50 percent of all AFib patients also have OSA (while only 33 percent of patients without AFib have OSA). AFib and OSA share traditional risk factors, such as obesity, hypertension, and diabetes, but AFib is more highly associated with preexisting OSA than with any of these other chronic health problems.

The good news

If you suffer from both sleep apnea and high blood pressure, you may find that treating your sleep-disordered breathing may reverse elevated blood pressure readings as well as reduce your risk factors for other cardiovascular problems.

While treatment depends on the severity of one's sleep apnea, the two most common approaches to therapy—oral appliances and continuous positive airway pressure (CPAP) therapy—have been shown by extensive research to not only reduce the severity of OSA, but to improve blood pressure readings, as well.

To fully assess your risk for sleep apnea, your best bet is to see a sleep specialist, undergo a sleep study to evaluate your respiratory patterns and vital signs during sleep, and identify any underlying sleep-breathing disorders and their severity.

OSA is eminently treatable, which is good news for people with both OSA and hypertension, because treatment for their OSA may also treat their high blood pressure... *and* reduce their risk for developing serious cardiovascular problems down the road.

Sources:

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Circulation
Journal of the American College of Cardiology
Journal of the American Medical Association
National Sleep Foundation
New England Journal of Medicine
Stanford Center for Sleep Sciences and Medicine

Sleep apnea and brain damage: one more reason to wear your CPAP mask

Brain damage is serious business, and researchers are on the lookout for causes as well as potential therapies that not only repair injured brain tissue, but reverse the damage.

Obstructive sleep apnea (OSA) has been linked in multiple studies to brain damage in those who have the sleep disorder but are not treating it.

It's estimated that at least 18 million Americans have sleep apnea, and that

anywhere from 40 to 80 percent of them are *not even aware they have it.*

OSA is already associated with other acute health problems such as hypertension, cardiovascular disease, glucose intolerance, impotence, gastroesophageal reflux disease (GERD), neurological disorders, and problems with the brain's vascular system.

Brain damage as a result of untreated OSA is yet one more reason to consider a trip to the sleep center if you suspect you have a sleep-related breathing disorder.

Breathing and the brain

During the day, your brain regulates breathing by two divisions of the peripheral nervous system:

- ***Autonomic nervous system:*** *This regulates our breathing without us thinking about it.*

- ***Somatic nervous system:*** *This allows us to consciously and voluntarily breathe whenever we want.*

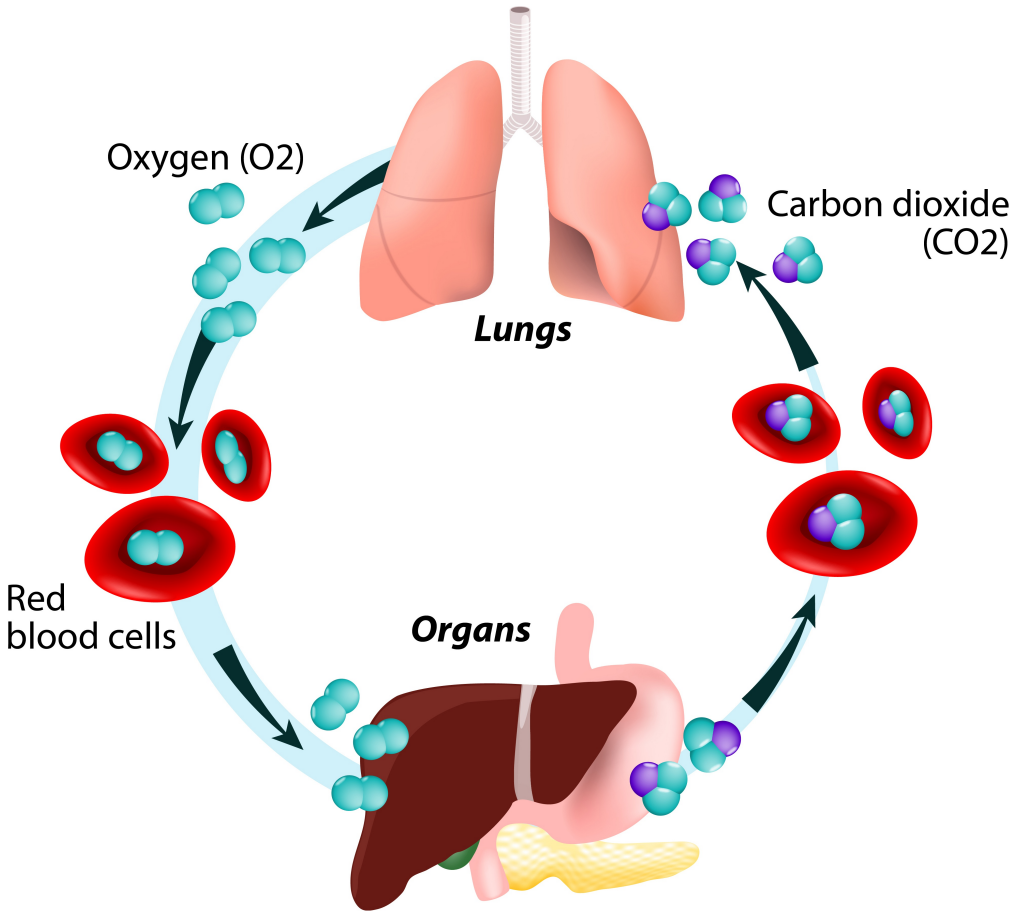
Normal sleep breathing versus sleep apnea

During sleep, your brain regulates breathing almost entirely through the *autonomic nervous system*. However, when OSA occurs, a subsystem of the autonomic nervous system, the *sympathetic nervous system*, must also be called into action.

OSA occurs when the tone of muscle and tissue in the upper airway is lost during sleep, resulting in its partial or complete collapse. This blockage limits airflow for several seconds at a time, even when the brain signals to the body to breathe.

Eventually, the autonomic nervous system notes the drops in blood oxygen and sends out alarms that force an arousal by way of the sympathetic nervous system. This leads to the launch of conscious breathing to allow tone to return to the upper airway, correcting imbalances in oxygen and carbon dioxide in the bloodstream.

Gas exchange 101



One of the chief reasons we breathe is to promote *gas exchange*. We inhale oxygen into our lungs; it is delivered by blood cells through our arteries to the organs to fuel cell activity.

Our cells are busy little factories which generate a waste product known as *carbon dioxide*. The veins bring that carbon dioxide back to the lungs to exhale.

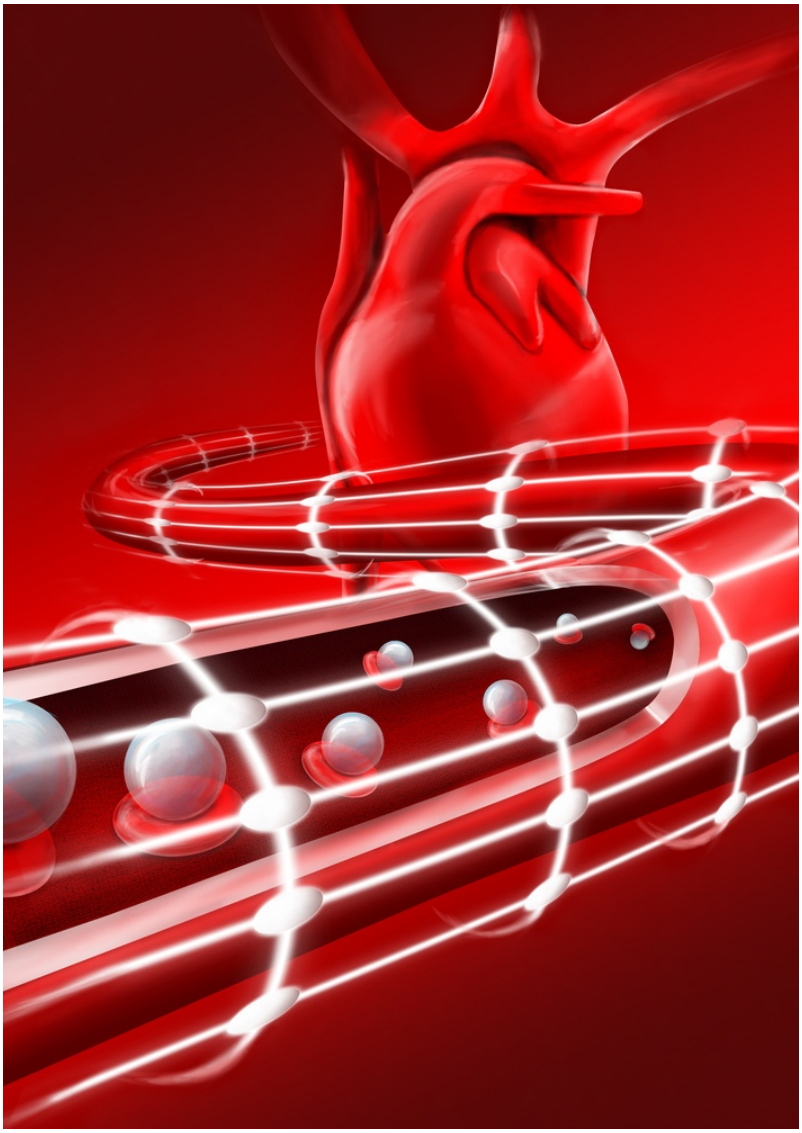
Breathing keeps these two chemical elements in our bloodstream in good balance. Too much or too little of either, however, leads to troubling consequences if these imbalances aren't corrected.

The “chemical roller coaster” of OSA

Last February, David DiSalvo, in an article in *Forbes* magazine, aptly characterized the changes that untreated sleep apnea imposes on the brain and respiratory system as a "chemical roller coaster."

What he's referring to is a chemically induced pattern of sleep breathing called *hypoxemia-reoxygenation.* First:

- *Pauses in breathing (**apneas**) are followed by*
- *drops in oxygen (**hypoxia**) and rises in carbon dioxide (**hypercapnia**) in the bloodstream, which are followed by*
- ***arousals** (or sleep fragmentation) leading to*
- *the **reoxygenation** of the bloodstream.*



Rather than a rhythmic ebb and flow of inhale and exhale that is part of normal breathing during sleep, this pattern is one of interruptions and compensations. It should come as no surprise that it has a huge impact on brain health.

The brain without oxygen

While OSA is thought to be a mechanical issue of the upper airway, researchers are finding that, if left untreated, it can lead to actual changes in the structure and volume of the brain itself.

These changes create the perfect conditions for serious brain concerns such as seizures, dementia, learning disabilities, and hyperactivity.

How does this happen? Low blood oxygen leads to *intermittent hypoxemia*, the outcome of the stressful hypoxemia-reoxygenation cycle. Intermittent hypoxemia constricts blood vessels. This not only contributes to hypertension during sleep, but to changes in brain tissues.

How OSA damages the brain

The brain is mainly composed of gray and white matter.

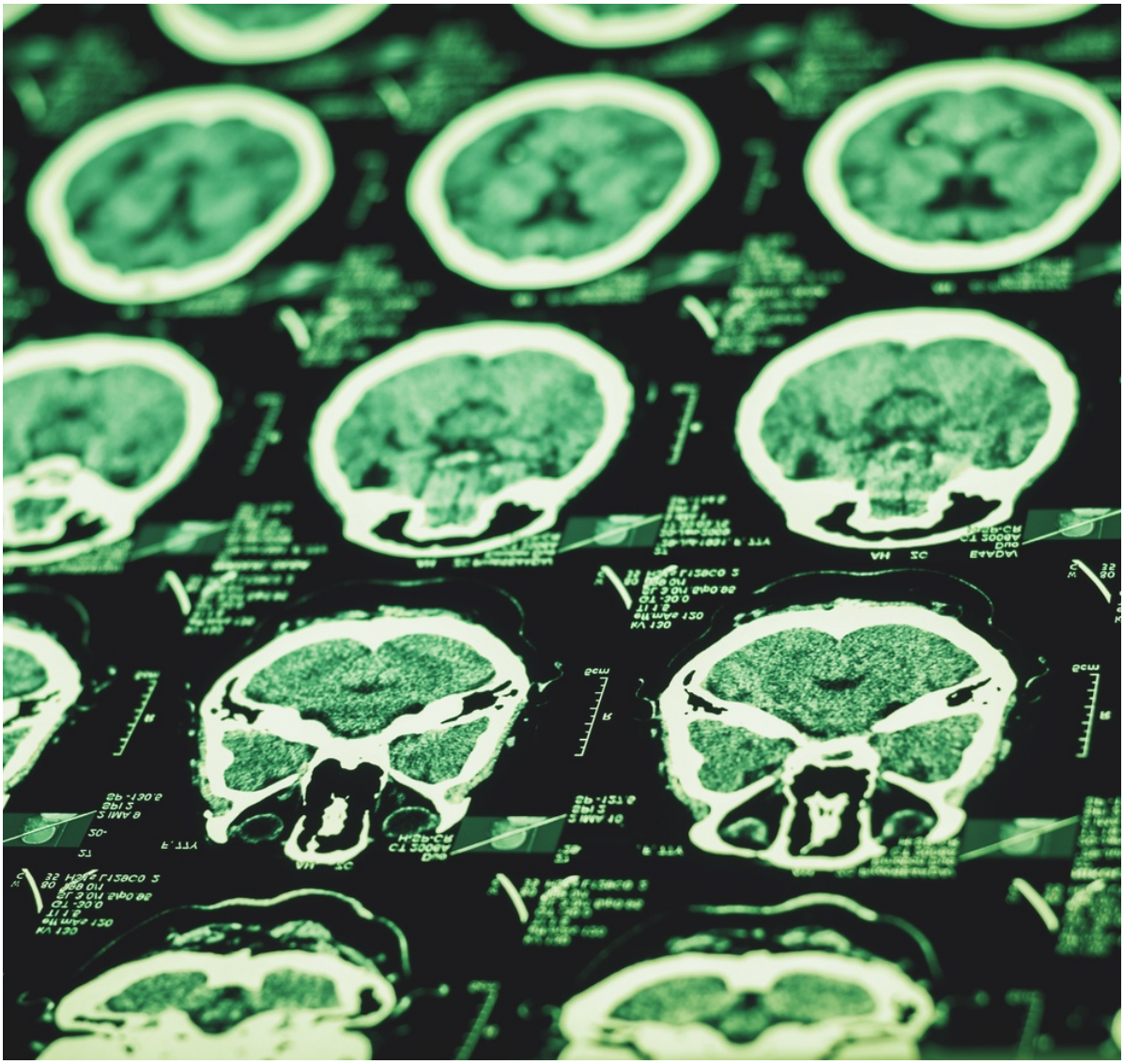
Gray matter is found in the brain and spinal cord; you can think of gray matter as the mainframe computer in your body.

White matter is composed of the neural pathways linking the gray matter together; think of it as the network of cables that connect the mainframe to the rest of the body.

Studies done in 2010 showed that untreated OSA patients had *low* gray matter volume. This was associated with memory and attention deficits, struggles with executive function, greater incidence of excessive daytime sleepiness, and problems with regulating mood.

More recently, UCLA researchers found new evidence that OSA also weakens something known as the *blood–brain barrier*.

The brain has its own "shield" which prevents harmful



microorganisms, infections, and substances from accessing its tissue. However, this "blood brain barrier" (BBB) can be compromised by certain kinds of chronic health problems, including OSA, and this can lead to damage.

Dr. Rajesh Kumar, the UCLA study's lead investigator, says their research shows that "the blood–brain barrier becomes more permeable in obstructive sleep apnea, a breakdown that could contribute to brain injury, as well as potentially enhancing or accelerating the damage."

What are the consequences? "This type of brain injury in obstructive sleep apnea has significant consequences to memory, mood and cardiovascular risk," says Kumar.

The subjects they studied were patients newly diagnosed with OSA who had not yet started treatment. Researchers found their BBB permeability to be significantly higher when compared against normal subjects who did not have OSA.

Research at UCLA, prior to this study, has already shown how untreated OSA affects the brain's vascular system, leading to hypertension, a known risk factor for stroke.

OSA is now recognized clinically as a cause for brain injury associated with these risk factors:

- *cognitive decline (including dementia and Alzheimer's disease)*
- *heart disease*
- *reduced quality of life*
- *higher incidence of workplace errors*
- *more accidents while on the job or behind the wheel of a vehicle*

Treating sleep apnea to heal the brain

The best solution at hand for preventing further brain damage and healing injury? *Continuous positive airway pressure (CPAP).*

Researchers examined brain damage

in OSA patients to see if they could measure any positive effects from using CPAP therapy.

What they found: In OSA patients not using CPAP, brain damage was widespread, while those who used CPAP showed an increase in the volume of gray matter.

Brain damage caused by OSA may not always be permanent, and with vigilant use of CPAP, it may even be reversible.

Researchers may still be refining how the "signature" of OSA affects the structure of the brain, but what they do know with certainty is that OSA is not a single health concern, but a chronic (long-lasting) condition which has a negative impact on multiple body systems. It is more prevalent that people are aware of, which means it can go undiagnosed for a long time before it's detected and treated.

Fortunately, the news about using CPAP to reverse damage to gray matter caused by OSA is encouraging and should become yet one more good reason to stick with therapy.

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Journal of the International Neuropsychological Society
Journal of Neuroimaging
National Sleep Foundation
SLEEP

FAST FACTS: Signs that you might have sleep apnea

The most obvious signs of sleep apnea—the loud snoring, the gasping—are often the only reasons some people come to see the doctor about sleep breathing disorders.

However, there are several other signs and symptoms of sleep apnea you need to be aware of. These are often overlooked indicators that, by themselves, don't seem like they can be connected to a sleep disorder.

Put them together, though, and you have several warning signs and symptoms of obstructive sleep apnea (OSA) you will not want to ignore.

15 signs you might have sleep apnea

1. *You **snore** or **snort yourself awake***
2. *Loved ones have witnessed **pauses in breathing** as you sleep*
3. *You suffer from **excessive daytime sleepiness** and **feel tired all the time***
4. *You experience **morning headaches***
5. *You have **high blood pressure***
6. *You are **overweight or obese***
7. *You find you are having **mood swings, depression, irritability,** or **anxiety** you didn't have before*
8. *You have **trouble waking up** in the morning*
9. *You're a **restless sleeper**, tossing and turning all night long*
10. *You need to **use the restroom** several times a night*
11. *You have experienced problems with **bedwetting***

12. *You need to **prop yourself up** with pillows or **sit in a recliner** in order to sleep*

13. *You have inexplicable bouts of **insomnia** either at the beginning of the night or later in the night*

14. *You awaken with a **racing heart** or find yourself **gasping for breath***

15. *In the morning, your throat or mouth is **dry, raw,** or **hoarse***

If you can relate to more than one—or several—of these signs, you may wish to consult your doctor about the possibility that you might have sleep apnea. Also, we offer a FREE sleep apnea test and consultation opportunity below, if you're concerned.

LEARN MORE ABOUT SLEEP APNEA HERE:

- Central Sleep Apnea: Causes, Diagnosis, and Therapies
- FAST FACTS: SLEEP APNEA vs SNORING
- Sleep apnea and brain damage: one more reason to wear your CPAP mask
- Sleep Apnea and Weight Gain: Reasons and Answers
- Sleep Apnea, Opioid Pain Medication, and the Sleep Study
- What is sleep apnea? Signs, symptoms, and risks
- When is my husband's snoring more than annoying?

FAST FACTS: SLEEP APNEA vs SNORING

DID YOU KNOW?

- ***Sleep apnea*** *almost always includes snoring as a symptom*

  *HOWEVER... **Ordinary snoring** does not necessarily signal sleep apnea*

- ***Sleep apnea-related snoring*** *occurs mostly during REM sleep*

  *HOWEVER... **Ordinary snoring** happens across every sleep stage*

- ***Sleep apnea*** *is considered a sleep-related breathing disorder*

> *HOWEVER... **Ordinary snoring** is not considered a sleep disorder*

- ***Sleep apnea** may be completely silent*

> *HOWEVER... **Ordinary snoring** is never completely silent*

- ***Sleep apnea** is most commonly treated using positive airway pressure (i.e. CPAP)*

> *HOWEVER... **Ordinary snoring** is not usually treated with positive airway pressure*

- ***Sleep apnea** is estimated to affect 45 million Americans*

> *HOWEVER... **Ordinary snoring** is estimated to affect 90 million Americans*

LEARN MORE ABOUT SLEEP APNEA AND SNORING HERE:

When is my husband's **snoring** more than annoying?
What Is **Sleep Apnea?** (Signs, Symptoms, and Risks)

FAST FACTS courtesy:
American Academy of Sleep Medicine

National Sleep Foundation
ResMed
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When is my husband's snoring more than annoying?

Remember, as a child, watching cartoons and seeing the creative, charming ways in which snoring was depicted? People floating above their beds with the inhale, landing softly with the exhale... the cute whistling noises and soft rattles reimagined into amusing songs?

That's probably not the way your husband snores.

If only the charming, harmless snoring depicted in cartoons could replace the ugly, dangerous reality of sleep-disordered breathing.

We hear the laments about snoring spouses at the sleep center all the time and thoroughly appreciate the frustration that comes of living with a loved one who snores or has other breathing issues while they sleep. Most people who snore do not realize they snore, so it's very easy for them to deny it even happens.

The sound of the snoring may not be the only thing that is off-putting... The sleep deprivation you endure night after night, being a captive audience, is no small thing either.

Time to take action

You have probably discussed this problem with your spouse already. And they have likely denied it's a problem, or become defensive about it. Or, if they admit they snore, they may brush it off as nothing to worry about.

Sounds like your husband probably watched the same cartoons you did as a kid.

But here's the problem. Snoring isn't always just snoring. At least 4 times out of 10, snoring is not snoring at all, but a symptom of sleep apnea, a serious medical problem that requires treatment. And even if it is only snoring, the reality is that snoring is connected to increased risks for chronic health issues if it's left untreated.

What is snoring?

Snoring is the sound effect that happens as the result of air coming into contact with tissues in the throat; the vibrations this causes can make noises: whistling, groaning, growling, or rumbling. How loud it is depends upon how much friction is taking place in the upper airway.

If a person sleeps on their back, their snoring will likely be more pronounced than that of the person who sleeps on their side. This is why a wife's go-to response to her husband snoring is to shove, nudge, or poke him until he turns over. Sadly, some people snore no matter what side they sleep on, so this is not a foolproof exit strategy for either spouse.

Is snoring harmless?

Snoring is not even normal. Snoring is a warning from the body that the free flow of air through the upper airway is being blocked by something that's not supposed to be there. We are not meant to snore; snoring usually means *something's wrong.*

People who are chronic snorers often know there's something wrong, but they can't quite put their finger on it. They wake up groggy, have raw throats or cottonmouth, feel grumpy, can't concentrate, forget things, suffer a low libido, or feel like they could nap all day long.

Sleep deprivation is a concern for snorers, who experience broken sleep (also known as *sleep fragmentation*) all night long; enough nights of untreated snoring leads to sleep deprivation and a growing sleep debt that becomes difficult to "pay off."

And remember: untreated snoring is not a one-way street. For spouses, these same risks and challenges also come into force...

...especially when the wife is watching her husband suffocating in his sleep, night after night.

When snoring is actually sleep apnea

Snoring is often rhythmic and, if soft enough, may be okay to deal with for a while. Throw in some lengthy breathing pauses, however, and you find yourself panicked that he's going to choke and die in his sleep. Pauses that last at least 10 seconds and are followed by uncharacteristically deep (and often noisy) breaths, throat clearing, coughing, swallowing, or snorting are exactly what an episode of sleep apnea looks like.

In obstructive sleep apnea (OSA), not only is there the noise of snoring to deal with, but evidence of an obstruction blocking airflow partially or completely. *Very little to no air is getting into or out of the lungs during this time.*

Over the space of a night, that leads to oxygen deprivation. Our bodies need a steady supply of oxygen; without it, our brains, heart, major organs, muscles, nervous system—every last little bit of cellular function we need to sustain it all—suffers.

When apneas take place over weeks, months, or years of sleeping, the results are not only chronic but harmful. The list is long: diabetes, heart disease, stroke, hypertension, depression, cancer, obesity, and much more come from leaving OSA untreated.

How to help your husband (and yourself)

- *Urge him to read this post to show him that snoring needs to be investigated.*

- *Ask him to pay one visit to his primary care physician to address*

your concerns to make you "feel better." Chances are, the discussion will evolve into awareness that he needs a sleep assessment.

- *If he is tired all day, suggest that it's his snoring that's keeping him from enjoying time with his children or hobbies.*
- *Tell him you think he'd be in a better mood if he slept better and that you want your old husband back, the one who was good-natured and energetic.*
- *If things are not going well at work, remind him that quality sleep can alleviate problems with focusing, concentration, problem solving, or energy while on the job.*
- *If he's concerned about his sex drive, tell him even Arianna Huffington thinks the secret to a healthy sex life is not a little pill, but a good night of uninterrupted sleep.*
- *Employ his loved ones to support your efforts. When more than one person complains of another's snoring, it's easier to cajole the snorer into accepting the truth.*
- *Record your husband snoring using audio and/or visual recording devices. Audio alone can convince some to curb their snoring, but video can capture episodes of apneas, which are hard for anybody to watch.*
- *Look after yourself. As the wife of a snorer, you are subject to something called "spousal arousal" (and not in a good way). You need your sleep, too! Use ear plugs, a white noise machine, or noise-*

canceling earphones to drown out his snoring. A drastic move to a second bedroom sends a strong message as well. Maybe if he sees you taking these measures, he will change his attitude and get help.

If it's not sleep apnea, what is it? (UARS)

Sometimes people have a problem with breathing during sleep that is not diagnosed as obstructive sleep apnea (OSA) after they've had a sleep study.

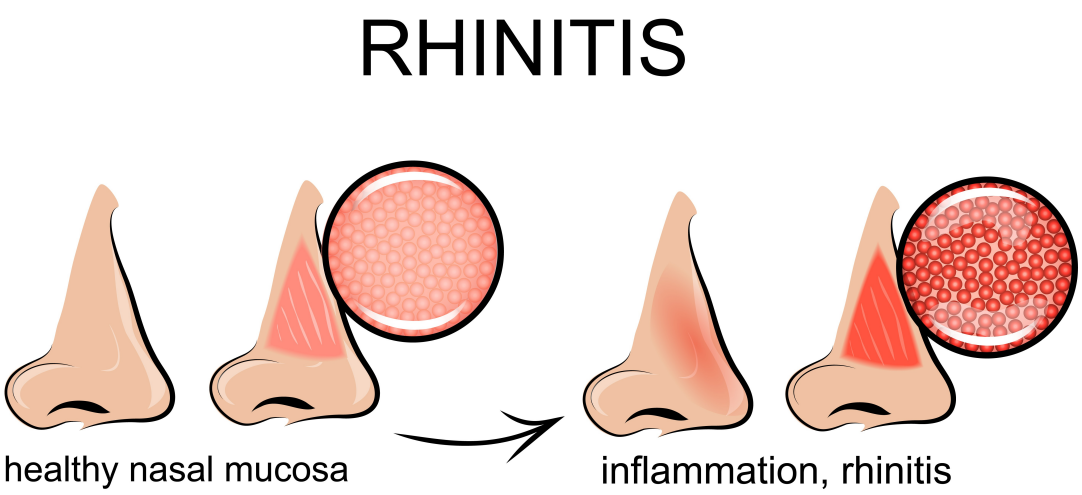
Upper airway resistance syndrome (UARS) is a form of obstructive breathing during sleep which only yields a partial blockage of the airway and does not result in low oxygen levels in the bloodstream.

What is upper airway resistance?

It can include snoring, but the syndrome that defines UARS doesn't necessarily lead to snoring. With upper airway resistance, the airway narrows so much that the muscles of breathing along the ribcage and the diaphragm work double duty to ensure a complete inhale. Imagine breathing through a straw and you can see how it might be harder to breathe.

These conditions create what the Ohio Sleep Medicine Institute refers to as "snore arousals." Technically speaking, these are respiratory event related arousals (RERAs): arousals caused by resistance in the airway which do not result in oxygen desaturation. They are accounted for during sleep studies along with apneas and hypopneas in what is known as the Respiratory Distress Index (RDI).

While there's no fear of oxygen-deprived blood due to RERAs, those who have them frequently still struggle to achieve deep sleep. They tend to suffer from sleep fragmentation, which is, in its own way, dangerous. Night after night of broken sleep can lead to the same side effects as insomnia and sleep apnea, such as mood swings, excessive daytime sleepiness, high blood pressure, and drowsy driving.



What causes UARS?

Like OSA, UARS is caused by faulty mechanics, such as blockages in the airway due to:

- *an overlarge tongue, adenoids, or uvula*
- *narrow upper airway passages*
- *a high narrow palate or an overbite*

- *related respiratory ailments (sinus and nasal allergies or chronic rhinitis), which swell the mucous membranes lining the airways, thereby narrowing them*
- *a deviated septum, swollen turbinates, nasal polyps, or collapsed nasal valves*
- *edema (swelling) anywhere in the body: it redistributes as the body reclines, sending fluid into the neck which can mechanically disrupt breathing*
- *pregnancy, due to swelling and softer upper airway tissues*

How else is UARS distinguished from sleep apnea?

Here are some other factors that doctors consider during diagnosis:

- *OSA prevails in men, but women are more likely to suffer from UARS*
- *OSA is more common in older people, while UARS occurs in patient of all ages, even the very young*
- *OSA often accompanies someone with obesity, whereas UARS sufferers often have normal BMI or are even underweight*
- *People with UARS suffer more from frequent awakenings and*

difficulty resuming sleep than those with OSA

- *People with UARS do not always snore, whereas snoring or gasping is a common marker of OSA*

What happens when UARS is left untreated

The discovery of UARS as a sleep breathing disorder happened at Stanford nearly 25 years ago, and yet diagnosing and treating it is still inconsistent, at best.

Patients observed for the obvious signs of sleep apnea showed none, yet they were still tired all the time and suffered physically and mentally.

Doctors, lacking any conclusive evidence of a sleep disorder that insurance would be willing to reinburse treatment for, often overlooked the diagnosis or, because they were looking for sleep apnea, did not diagnose anything in its place when data showed differently.

The Ohio Sleep Medicine Institute refers to UARS as "the orphan child of sleep medicine" because its diagnosis escapes some doctors, who don't always agree on

how to define it, or don't always offer treatment when it can be confirmed.

To make matters worse, UARS is also often misdiagnosed as chronic fatigue syndrome (CFS), fibromyalgia, depression, mood disorder, or migraine by primary care physicians who do not consider the value of having their patients undergo a sleep study to rule out a sleep-breathing disorder. Other impacts from untreated UARS include:

- *Acid reflux, heartburn, gastroesophageal reflux disease (GERD), or laryngopharyngeal reflux disease (LPRD)*
- *Bruxism (teeth grinding and jaw clenching)*
- *Chronic insomnia*
- *Excessive daytime sleepiness*
- *Headaches*

- *High (or low) blood pressure*
- *Irritable bowel syndrome (IBS)*
- *Memory problems*
- *Morning nasal congestion*
- *Night sweats*
- *Nocturia*
- *Non-refreshing sleep (or, waking up tired)*

- *Parasomnias like confusional arousal, sleepwalking, sleeptalking, sleep paralysis*

There's also controversy as to whether UARS is a sleep disorder that's distinct from OSA. Some doctors argue that it is, while others believe that, if left untreated, it can gradually progress, in its "harmless" position in the hierarchy of sleep breathing disorders, from "benign snoring," to UARS to, ultimately, sleep apnea.

Meanwhile, about 1 in 7 patients having sleep tests to reveal sleep breathing problems are still shown to have UARS and still need help breathing at night.

Treating UARS

Fortunately, things have changed since the early 1990s; the American Academy of Sleep Medicine (AASM) identified it as a sleep breathing disorder and included practice parameters for treating it in 2005.

Insurance is starting to recognize UARS and provide for its therapies as well, which include use of continuous positive airway pressure (CPAP), an oral appliance, weight loss, positional therapy, and some surgical approaches.

At Sound Sleep Health, we look at the full range of possibilities when it comes to sleep breathing disorders. Contact us today to get a free sleep assessment to determine if you might potentially suffer from UARS:

Sources:
American Academy of Sleep Medicine
Cleveland Clinic
Current Opinion in Pulmonary Medicine
Journal of Clinical Sleep Medicine
Ohio Sleep Medicine Institute
Sleep Science
Stanford Center for Sleep Sciences and Medicine

Sleep Apnea is Serious

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