

Obstructive Sleep Apnea (OSA)

Do you feel drowsy during the day? Snore at night? Feel tired after a “good” night’s sleep? If so, you might have obstructive sleep apnea (OSA).

What is obstructive sleep apnea?

In **obstructive sleep apnea (OSA)**, your breathing repeatedly stops (**apnea**) or gets very shallow (**hypopnea**) off and on during sleep. These interruptions can happen frequently — as much as 30 times or more each hour — and can last for a few seconds to a minute each time.

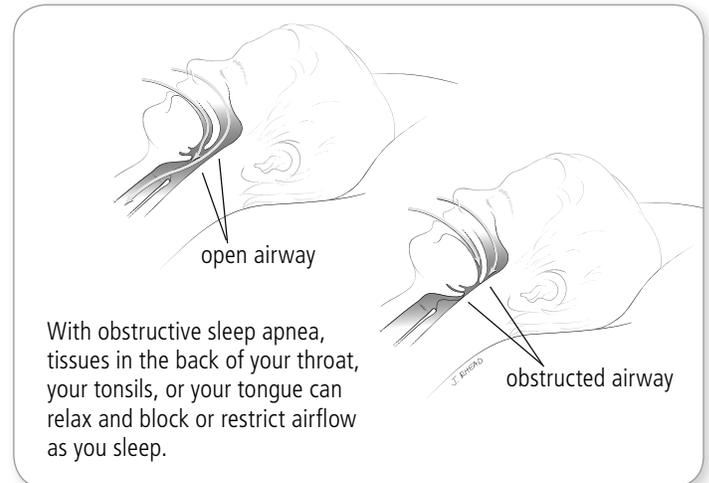
Here’s what happens:

- Tissues at the back of your airway (such as the back of your throat, your tonsils, or your tongue) relax so much that they block or restrict airflow.
- When air flow is blocked or stops, your brain sends a “wake up” signal to your body and you take a deeper breath that opens your airway.
- You breathe normally again until the next interruption.

Obstructive sleep apnea is common. Over 12 million adults in the U.S. have OSA, including 4% of middle-aged men and 2% of middle-aged women. This number may be much higher because many people don’t recognize or seek help for OSA symptoms. OSA can occur at any age, but becomes more common in middle age.

What are the symptoms?

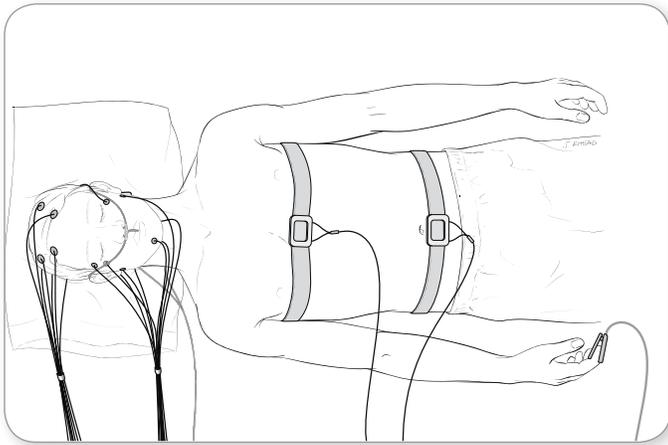
The **most common symptoms of OSA** are loud snoring and daytime drowsiness or fatigue — but not everyone with OSA has these symptoms. Often a person’s bed partner first notices that there might be a problem, based on hearing the person snore or even stop breathing during sleep. In addition to these symptoms, several other factors are commonly associated with OSA and may increase the likelihood of you having, or developing, the syndrome. See the OSA “quiz” at right.



Are you at risk for OSA?

Check each box if it applies to you:

- Snoring?** Do you snore louder than talking or loud enough to be heard through closed doors?
- Tired?** Do you feel tired during the day, even after a “good” night’s sleep?
- Observed breathing interruption while sleeping?** Has anyone ever seen you stop breathing while you’re sleeping?
- Pressure — high blood pressure?** Do you have high blood pressure, + or are you being treated for it?
- Body Mass Index (BMI) over 35?** Do you weigh more than you should for your height? See the table on page 3 to check.
- Age — over 50?** Your risk for OSA increases as you get older.
- Neck size — large?** Does your neck measure more than 15 ¾ inches around? (Even higher risk is over 16 inches for women, or 17 inches for men.)
- Gender — male?** OSA is more common in men than in women.
- TOTAL:** If you checked **1 or 2 boxes**, you may be at risk. If you checked **3 boxes**, your risk is high. **Talk with your doctor if you think you may have or be at risk for OSA.**



In the sleep lab, sensors record body functions while you sleep.

How does the doctor test for OSA?

To evaluate your risk of OSA, your doctor will review your health history and current symptoms. If necessary, your doctor may arrange for one of the following:

- **Consultation with a Sleep Specialist.** A Sleep Specialist is a doctor with specialty certification in sleep medicine. Sleep Specialists have advanced training in testing, diagnosis, management, and prevention of all types of sleep related disorders.
- **Polysomnogram.** The best study for diagnosing OSA is a polysomnogram, which is performed in a sleep lab. During this overnight test, electrodes (sticky patches), an oxygen probe, and other sensors record information while you sleep. The study has two purposes:
 - **Diagnosing OSA.** The test measures apneas and hypopneas, confirms whether you have OSA, and shows how serious the problem is.
 - **Finding the best settings for treatment.** If you have OSA, the best treatment is CPAP (described at right). In the sleep lab, the technician finds the best CPAP settings for you.

If OSA can be diagnosed during your first few hours of sleep in the lab, then the treatment settings can also be tested the same night. If not, you will have two different nights in the sleep lab — the first night to diagnose OSA and the second night to adjust treatment settings. See the Intermountain fact sheet *Sleep Lab Studies* for more details.

- **Home oximetry.** In some cases, your doctor may arrange for home oximetry. This test uses a small device to monitor the oxygen level in your blood while you sleep. If your blood oxygen level repeatedly dips below a certain level, you might be experiencing OSA. Based on your results, your doctor may recommend further testing. See the Intermountain fact sheet *Overnight Home Oximetry* for more details.

How is OSA treated?

Treatment options for OSA include the following:

- **Lifestyle changes** to reduce symptoms (see pages 3 and 4).
- **Positive Airway Pressure (PAP)**, the most common and effective treatment (see below).
- **Oral appliances**, such as a mouthpiece fitted by a dentist or orthodontist.
- **Surgery** to remove, shrink, or stiffen throat tissue.

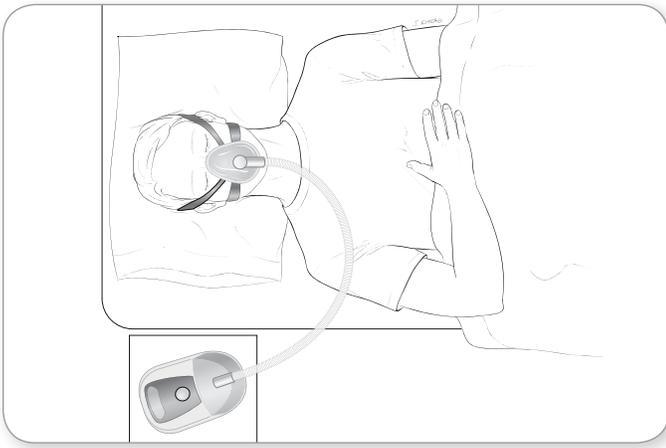
What is PAP?

Positive airway pressure (PAP) is the most common treatment for OSA. With PAP, air constantly flows through your nose. As this airflow moves into your throat, the slight pressure keeps your airway open. A PAP system contains:

- A **flow generator**, which filters room air and creates the airflow.
- An **airflow delivery device** — a face mask that fits over your nose and mouth, a nose mask, or nasal pillows.
- An **airflow hose** that connects the generator and delivery device. Some hoses pass through devices that humidify and/or warm the air for comfort.

CPAP (continuous positive airway pressure) is the most common type of PAP treatment. With CPAP, the air pressure is customized for you in the sleep lab, so it's just enough to keep your airway open. After using CPAP, apnea patients usually report feeling much better and having more energy. To learn more, see the Intermountain fact sheet *CPAP (Continuous Positive Airway Pressure)*.

If for some reason you can't use CPAP, your doctor may prescribe **autotitrating positive airway pressure (APAP)** or **bilevel positive airway pressure (BPAP)**. These treatments are similar to CPAP, but they adjust the air pressure based on various sensors or on whether you're breathing in or out.



CPAP therapy provides slight air pressure to keep your airway open. It is the most common and effective treatment for OSA.

What if OSA is not treated?

Some people may think of OSA as a minor health issue, and decide not to use recommended treatments. But it is not a minor health issue. Untreated OSA increases the risk of developing serious health problems:

- High blood pressure (people with OSA have up to 2 or 3 times the risk)
- Heart rhythm problems
- Stroke
- Increased risk of complications after surgery
- Car accidents

Can I reduce my OSA symptoms?

Treatment is the best solution to OSA. But you can — and should — take action to reduce several factors that make OSA symptoms worse:

- **Avoid or limit alcohol (especially at bedtime) — and don't smoke!** Both these habits make it harder for your throat to stay open while you sleep.
- **Avoid medication that makes you sleepy.** If you are at risk for OSA, it can be dangerous to take pain medications, sleeping pills, or any medication that has a drowsiness warning on the label. These medications make your throat muscles relax so they are likely to tighten or close your airway. Talk to your doctor before taking any of these medications.

- **Sleep on your side instead of your back and raise the head of your bed.** These actions can help keep your airway open and reduce snoring. Ask your doctor about available sleep aids. One trick to try is pinning a sock containing a tennis ball to the back of your pajamas or nightgown, so the ball is between your shoulder blades. If you turn onto your back the ball prompts you to turn back onto your side, usually without waking you.
- **Keep your nasal passages open.** If you have sinus problems or nasal congestion, use nasal spray or breathing strips to keep your nose open. Ask your doctor before taking antihistamines or decon-gestants— these are not meant for long-term use.
- **Lose weight, if you need to, to improve your body mass index (BMI).** A high BMI (especially if over 35) is a major risk factor for OSA.

Height	Weight (lb)	
	For BMI 30 (at risk)	For BMI 35 (high risk)
4'10"	143	167
4'11"	148	173
5'	153	179
5'1"	158	185
5'2"	164	191
5'3"	169	197
5'4"	174	204
5'5"	180	210
5'6"	186	216
5'7"	191	223

Height	Weight (lb)	
	For BMI 30 (at risk)	For BMI 35 (high risk)
5'8"	197	230
5'9"	203	237
5'10"	209	243
5'11"	215	250
6'	221	258
6'1"	227	265
6'2"	233	272
6'3"	240	279
6'4"	246	287
6'5"	253	295

Even a little weight loss can help. Studies show that losing just 10% of your weight can reduce OSA symptoms as much as 50%. For information on nutrition, activity and other tips to lose weight, see the *Weigh to Health* booklet and other resources at intermountainhealthcare.org/weight.

Additional tips for better sleep

OSA symptoms can improve if you make sure to get enough sleep. The tips below can help you get a better night's sleep.

- **Stick to a regular schedule.** It will be easier to get to sleep if your body expects sleep at the same time each day.
 - **Go to bed and wake up at the same time** each day, even on weekends or days off work.
 - **If you're a shift worker,** maintain the same sleep/wake schedule even on your days off.
 - **Try not to nap** during the day. If you do nap, don't nap for more than an hour or within a few hours of bedtime.
 - **Create a bedtime routine** that you go through about 30 minutes before going to sleep. Consider quiet activities like reading, listening to quiet music, or taking a bath.
- **Be active.**
 - **Exercise regularly** to improve your sleep.
 - **Avoid heavy exercise** 2 to 4 hours before bedtime.
- **Be careful about medications.**
 - **Do NOT take sleep medications.** These can cause your throat to relax even more and block your airway.
 - **Talk to your doctor before taking any medication with a drowsiness warning** on the label. Read labels carefully.
- **Make your bedroom the place for sleep.**
 - **Sleep only in your bedroom**—avoid napping in other rooms.
 - **Don't use your bedroom for a lot of activities,** such as paperwork or watching TV. Use your bedroom only for sleep and sex.
 - **Make sure your bedroom is quiet and dark.** Put the TV and phone in another room, and get curtains that block outdoor light.
 - **Focus on comfort.** Make sure your bed and pillow are comfortable. You might want to try different kinds of pillows. Keep the bedroom at a comfortable temperature, on the cool side.
- **Watch what you eat and drink.**
 - **Avoid alcohol and caffeine** within six hours of bedtime.
 - **Don't go to bed hungry.** Eat a light snack before bed, but don't eat a large meal. Avoid eating spicy foods before bedtime.
- **If you smoke, quit!** Along with better sleep, this change will bring a variety of important health benefits. For tips, see Intermountain's booklet *Quitting Tobacco: Your Journey to Freedom*.