CONDITION

Obstructive sleep apnea

Obstructive sleep apnea causes repeated pauses in breathing when the upper airway closes during sleep.

WHAT IT IS
Repeated upper-airway blockage during sleep

BODY SYSTEM
Breathing and sleep

MAIN SYMPTOMS
Loud snoring, breathing pauses, gasping, daytime sleepiness

WHAT CAUSES IT
Upper-airway narrowing or collapse during sleep

HOW IT IS DIAGNOSED
Home sleep apnea testing or laboratory sleep study

MAIN TREATMENT
Positive airway pressure, oral appliances, or surgery

CAN IT BE CURED?
Sometimes - weight loss or surgery may resolve it

IS IT AN EMERGENCY?
Sometimes - with severe breathing trouble or unresponsiveness

LONG-TERM OUTLOOK
Usually manageable with consistent, effective treatment

Overview

Obstructive sleep apnea, often shortened to OSA, is a condition in which the upper airway repeatedly narrows or closes during sleep. Airflow falls or stops even though the body is still trying to breathe. Each event may last several seconds or longer and can happen many times a night.

The brain responds by briefly waking you enough to reopen the airway. You may snort, choke, or gasp and then return to sleep without remembering it. These repeated disruptions can reduce sleep quality and cause changes in oxygen levels, heart rate, and blood pressure.

OSA matters because it can affect alertness, mood, memory, work, school, and driving. When it is not treated, especially when severe, it is linked with high blood pressure and a higher risk of several heart and circulation problems.

OSA is different from central sleep apnea. In central sleep apnea, breathing pauses because the brain does not consistently send the signals needed to breathe. Some people have features of both conditions.

Adults and children can develop OSA. In children, enlarged tonsils or adenoids are common contributors, and symptoms may include restless sleep, behavior changes, or learning difficulties rather than obvious daytime sleepiness.

Symptoms

Loud, frequent snoring is common, but not everyone with OSA snores. Snoring alone also does not prove that a person has sleep apnea.

Night-time symptoms may include:

During the day, you may feel unusually sleepy or tired. Some people have difficulty concentrating, forget things, feel irritable, or have a lower mood. Falling asleep while reading, watching television, working, or driving is particularly important to take seriously.

Symptoms do not always reflect severity. Someone with severe OSA may report few symptoms, while another person with milder test results may feel very tired.

Children may snore, breathe through the mouth, sleep in unusual positions, wet the bed, or have restless sleep. During the day, they may seem overactive, irritable, inattentive, or sleepy. Poor growth can occur in some children.

- Pauses in breathing noticed by another person
- Choking, snorting, or gasping during sleep
- Restless sleep or frequent awakenings
- Waking with a dry mouth, sore throat, or headache
- Getting up often to urinate
- Sweating during sleep

Causes and risk factors

During sleep, the muscles supporting the tongue, throat, and soft palate relax. OSA develops when this relaxation allows the airway to become too narrow or close. The exact reasons differ from person to person.

Body features that can reduce airway space include a large tongue, a small or set-back lower

jaw, enlarged tonsils, and extra soft tissue around the neck. These features may run in families.

Factors associated with a higher chance of OSA include:

Sleeping on your back can worsen OSA in some people because the tongue and soft tissues are more likely to fall toward the airway.

Some health conditions are also associated with OSA, including high blood pressure, type 2 diabetes, atrial fibrillation, heart failure, and stroke. Having one of these conditions does not mean that OSA is necessarily present.

- Higher body weight, although people at any weight can have OSA
- Increasing age
- Menopause
- A family history of OSA
- Enlarged tonsils or adenoids, especially in children
- Nasal blockage
- Alcohol or sedating medicines, which can relax airway muscles
- Smoking

Diagnosis

Symptoms, medical history, and an examination can show whether OSA is likely, but they cannot confirm it. Diagnosis requires a sleep test that records breathing during sleep.

A home sleep apnea test usually measures airflow, breathing effort, heart rate, and oxygen level. It is mainly used for selected adults who have a strong likelihood of moderate or severe OSA and do not have certain complicating health conditions.

A laboratory sleep study, called polysomnography, records more information. This may include brain activity, eye movements, muscle activity, airflow, breathing effort, oxygen level, heart rhythm, and sleep position. It can detect other sleep conditions and may be preferred when a home test is unsuitable or has not explained continuing symptoms.

The report estimates how often breathing becomes partly or completely blocked each hour. This helps describe the severity of OSA. Oxygen changes, symptoms, other health conditions, and the amount of sleep recorded also matter.

A negative or unclear home test does not always rule out OSA. Further assessment may be appropriate if symptoms remain strongly suggestive. Children are usually assessed through specialist services, often with laboratory sleep testing.

Treatment and management

Treatment aims to keep the airway open, improve sleep and daytime functioning, and reduce health risks. The most suitable approach is influenced by severity, symptoms, airway anatomy, other health conditions, and what you can use consistently.

Positive airway pressure, or PAP, is a common and effective treatment. A bedside machine sends pressurized air through a mask to prevent the airway from closing. Continuous positive airway pressure, known as CPAP, uses a set pressure. Auto-adjusting PAP changes pressure within a prescribed range.

Mask leaks, dry mouth, nasal symptoms, or discomfort can make PAP difficult at first. Different mask styles, humidification, pressure adjustments, and practical support may help. The machine's data can show how often it is used and whether breathing events and leaks are controlled.

A custom-made oral appliance may be an option for some adults. It fits over the teeth and holds the lower jaw forward to create more airway space. Follow-up is needed to check comfort, tooth or jaw effects, and whether the appliance controls OSA. Over-the-counter anti-snoring devices are not equivalent to a professionally fitted appliance.

Other management options include:

Do not stop a prescribed sedating medicine on your own. A prescriber can review whether it affects breathing during sleep and whether alternatives are appropriate.

For children with enlarged tonsils and adenoids, surgery to remove them may be considered. Some children need PAP, weight-related support, or other treatment. Follow-up matters because OSA can continue or return.

- Weight management when higher body weight contributes to OSA
- Avoiding alcohol near bedtime if it worsens breathing
- Positional therapy for OSA that mainly occurs when sleeping on the back
- Treating significant nasal blockage to improve breathing and PAP comfort
- Surgery to enlarge or stabilize the airway in selected people
- Hypoglossal nerve stimulation for some adults who meet specific criteria

Complications

Untreated OSA can cause persistent sleepiness, reduced concentration, headaches, mood

changes, and poorer quality of life. Sleepiness can increase the risk of road and workplace accidents.

OSA is associated with high blood pressure. It can also contribute to strain on the heart and circulation, particularly when breathing events are frequent or oxygen levels repeatedly fall. It is linked with atrial fibrillation, coronary heart disease, heart failure, and stroke, although OSA is not the only cause of these conditions.

OSA may make blood sugar harder to control and is associated with type 2 diabetes. It can also complicate recovery around surgery because anesthesia, pain medicines, and lying on the back may worsen airway blockage. Tell the surgical and anesthesia team if you have diagnosed or suspected OSA.

In children, untreated OSA may affect behavior, attention, learning, growth, and cardiovascular health.

Prevention

OSA cannot always be prevented. Inherited facial structure, jaw shape, age-related changes, and naturally large tonsils or other airway tissues are not under your control.

Maintaining a weight that is healthy for you may reduce the chance or severity of OSA when body weight is a contributing factor. Avoiding smoking and limiting alcohol near bedtime may also reduce factors that narrow or relax the airway.

These steps do not guarantee prevention. People who are active and not overweight can still develop OSA because of their airway anatomy or other factors.

Living with it and what to expect

OSA is often a long-term condition, but effective treatment can greatly improve sleepiness, alertness, snoring, and quality of life. Some people notice changes soon after starting treatment, while others improve more gradually.

Treatment works only while it is being used. PAP and oral appliances control airway blockage but do not usually remove the underlying tendency for the airway to close. Regular use, including during naps and travel, provides the most consistent control.

Your treatment needs may change over months or years. Weight change, aging, menopause, nasal problems, surgery, new medicines, or new health conditions can affect OSA. A repeat sleep test may be considered after major changes or if symptoms return.

Routine follow-up can address mask fit, side effects, oral appliance adjustment, equipment data, and continuing symptoms. Persistent tiredness despite effective treatment may have another cause, such as insufficient sleep, another sleep condition, depression, anemia, thyroid problems, or medicine effects.

Some people no longer meet the criteria for OSA after substantial weight loss or successful airway surgery. This should be confirmed with reassessment rather than assumed from reduced snoring.

When to get medical help

Arrange a routine medical assessment if you have frequent loud snoring together with witnessed breathing pauses, gasping, morning headaches, or unexplained daytime sleepiness. Assessment is also appropriate if a child regularly snores or has restless sleep with behavior, attention, or growth concerns.

Seek prompt advice if sleepiness is affecting driving, work, or other safety-sensitive activities. Do not drive when sleepy. If you become drowsy while driving, stop somewhere safe rather than trying to push through it.

Call emergency services if someone:

The brief breathing pauses typical of OSA usually end with a gasp or partial awakening. Witnessing these events is a reason to arrange assessment, but it is not usually an emergency if normal breathing promptly returns and the person is otherwise well.

- Has severe difficulty breathing while awake
- Turns blue, gray, or unusually pale
- Cannot be woken normally
- Has breathing that does not restart
- Develops chest pain or signs of stroke, such as facial drooping or sudden weakness

Common questions

Is snoring always sleep apnea?

No. Many people snore without having OSA, and some people with OSA do not snore noticeably. Repeated pauses, gasping, and daytime sleepiness make OSA more likely, but a sleep test is needed to confirm it.

Can I have obstructive sleep apnea if I am not overweight?

Yes. Weight is only one risk factor. Jaw shape, tongue size, tonsils, age, family traits, menopause, and nasal blockage can also affect the airway.

Can obstructive sleep apnea go away?

Sometimes. It may resolve after substantial weight loss or successful treatment of a specific blockage, such as enlarged tonsils. For many people it remains a long-term condition that can be controlled. Repeat testing is needed before stopping treatment.

Do I have to use CPAP forever?

Not necessarily, but many people need ongoing treatment. Changes in weight, anatomy, health, or surgery may alter your needs. Do not stop CPAP based only on feeling better or snoring less, because symptoms may improve while airway blockage continues.

What is the best sleeping position for sleep apnea?

Side sleeping may reduce events when OSA mainly occurs on the back. It does not work for everyone and may not control more severe OSA. A sleep test can show whether breathing changes with position.

Can sleep apnea cause high blood pressure?

OSA can contribute to high blood pressure through repeated oxygen changes, awakenings, and activation of the body's stress responses. Treating OSA may help blood pressure control, but it does not replace prescribed blood pressure treatment.

Sources

- National Heart, Lung, and Blood Institute. "Sleep Apnea."
- National Institute for Health and Care Excellence. "Obstructive sleep apnoea/hypopnoea syndrome and obesity hypoventilation syndrome in over 16s." NICE Guideline NG202, 2021.
- Kapur VK, Auckley DH, Chowdhuri S, et al. "Clinical Practice Guideline for Diagnostic Testing for Adult Obstructive Sleep Apnea." Journal of Clinical Sleep Medicine, 2017.
- Patil SP, Ayappa IA, Caples SM, et al. "Treatment of Adult Obstructive Sleep Apnea with Positive Airway Pressure." Journal of Clinical Sleep Medicine, 2019.
- Ramar K, Dort LC, Katz SG, et al. "Clinical Practice Guideline for the Treatment of Obstructive Sleep Apnea and Snoring with Oral Appliance Therapy." Journal of Clinical Sleep Medicine, 2015.



- American Academy of Pediatrics. "Diagnosis and Management of Childhood Obstructive Sleep Apnea Syndrome." Pediatrics, 2012.