CONDITION

Obstructive sleep apnea - adults

Obstructive sleep apnea causes repeated pauses in breathing when the throat narrows or closes during sleep.

WHAT IT IS
Repeated upper-airway blockage during sleep

BODY SYSTEM
Breathing and sleep

MAIN SYMPTOMS
Loud snoring, breathing pauses, unrefreshing sleep, daytime sleepiness

WHAT CAUSES IT
Throat tissues relaxing and narrowing the airway during sleep

HOW IT IS DIAGNOSED
Home sleep apnea testing or overnight polysomnography

MAIN TREATMENT
Positive airway pressure, weight management, or oral appliances

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

IS IT AN EMERGENCY?
No - but dangerous driving sleepiness requires prompt action

LONG-TERM OUTLOOK
Usually manageable, though ongoing treatment is often needed

Overview

Obstructive sleep apnea, often shortened to OSA, is a condition in which the upper airway repeatedly narrows or closes during sleep. Airflow may decrease or stop for several seconds at a time, even though the body is still trying to breathe.

Each blockage can lower the oxygen level in the blood and briefly disturb sleep. You may not remember waking, but this pattern can happen many times during the night. It prevents restful sleep and puts repeated strain on the heart and circulation.

OSA is different from central sleep apnea. In central sleep apnea, the brain temporarily does not send the usual signals needed for breathing. Some people have features of both conditions.

Many people first learn about possible OSA because a partner notices loud snoring, gasping, or breathing pauses. Others seek help for daytime tiredness, morning headaches, poor concentration, or high blood pressure.

OSA matters because untreated symptoms can affect driving, work, mood, and quality of life. Over time, it is also associated with cardiovascular and metabolic problems. Effective treatment can improve breathing during sleep, reduce sleepiness, and lower some health risks.

Symptoms

Snoring is common in OSA, but not everyone who snores has the condition. Some people with OSA do not snore loudly, especially if they sleep alone and no one can observe them.

Possible symptoms during sleep include:

Possible daytime effects include:

Symptoms can be less obvious in some adults. Fatigue, insomnia, mood changes, or morning headaches may be more noticeable than sleepiness. The severity of symptoms also does not always match the number of breathing events on a sleep study.

- Loud, frequent snoring
- Pauses in breathing noticed by another person
- Gasping, choking, or snorting
- Restless sleep or frequent waking
- Waking with a dry mouth or needing to urinate often
- Feeling unrefreshed after enough time in bed
- Excessive sleepiness, including dozing unintentionally
- Morning headaches
- Poor memory, concentration, or decision-making
- Irritability, low mood, or reduced interest in sex

Causes and risk factors

OSA develops when muscles supporting the tongue, soft palate, and throat relax during sleep. In a susceptible airway, the relaxed tissues move inward and restrict airflow.

Body structure plays an important role. A small or set-back lower jaw, a large tongue, enlarged

tonsils, or a naturally narrow throat can reduce the space available for breathing. Nasal blockage may add to the problem but is rarely the only cause.

Factors linked with a higher chance of OSA include:

People at any body weight can have OSA. Having a larger body is an important risk factor, but it is not required for the condition to develop.

Sleeping on your back may make airway collapse worse because gravity allows the tongue and soft tissues to move backward. For some people, breathing events happen mainly in this position.

- Overweight or obesity, particularly weight around the neck and upper body
- Increasing age
- A family history of OSA or similar airway features
- Menopause
- Alcohol use, especially close to bedtime
- Medicines that relax muscles or suppress breathing, including some sedatives and opioids like oxycodone or morphine
- Smoking
- Long-term nasal congestion
- Certain hormonal or neurological conditions

Diagnosis

Symptoms and questionnaires can show that OSA is possible, but they cannot confirm it. Diagnosis requires a sleep study that records breathing during sleep.

A clinician may ask about snoring, witnessed breathing pauses, sleep quality, daytime sleepiness, medicines, alcohol use, and other health conditions. An examination may look for features such as a narrow airway, enlarged tonsils, nasal obstruction, or a larger neck size.

Sleep testing may involve:

The report may include an apnea-hypopnea index, or AHI. This is the average number of complete or partial breathing blockages per hour of sleep. The result helps classify severity, but treatment decisions also consider symptoms, oxygen changes, other health conditions, and personal circumstances.

A home test can miss OSA, particularly when breathing events are mild or the device does not

record enough usable information. If symptoms remain concerning after a negative or unclear home test, an overnight study may be needed.

- Home sleep apnea testing: Portable equipment usually records airflow, breathing effort, oxygen levels, and heart rate while you sleep at home. It is mainly used when uncomplicated, moderate-to-severe OSA is suspected.
- Polysomnography: An overnight study in a sleep centre records sleep stages, brain activity, eye and muscle movements, breathing, oxygen levels, and heart rhythm. It can identify OSA and other sleep disorders.

Treatment and management

Treatment aims to keep the airway open, improve sleep and daytime function, and reduce health risks. The most suitable approach is guided by OSA severity, symptoms, body structure, other conditions, and personal preferences.

Positive airway pressure , or PAP, is a main treatment. A bedside machine sends pressurised air through a mask, creating an air splint that keeps the throat open. Continuous positive airway pressure, known as CPAP, provides steady pressure. Other machines automatically adjust pressure or use different pressures for breathing in and out.

Finding a comfortable mask and suitable machine settings can take time. Dryness, nasal blockage, air leaks, and skin irritation can often be addressed by changing the mask fit, adding humidification, or reviewing the equipment.

A mandibular advancement device is an oral appliance that holds the lower jaw forward during sleep. This creates more room behind the tongue. A custom-fitted device supervised by a dentist with relevant sleep training is generally preferred to an over-the-counter mouthpiece. Follow-up testing may be used to check whether it controls the OSA.

Weight management can reduce airway narrowing in people who are overweight or obese. Support may include nutrition and activity changes, behavioural care, weight-management medicines, or bariatric surgery when appropriate. Weight loss can improve OSA, but it does not guarantee that the condition will disappear.

Other options include:

There is no single treatment that suits everyone. Follow-up is important to check symptoms, equipment data, side effects, and whether treatment is controlling breathing events.

- Sleeping on your side when events mainly occur on your back
- Treating significant nasal blockage

- Avoiding alcohol near bedtime
- Reviewing sedatives, opioids, or other breathing-suppressing medicines with the prescriber
- Surgery to change selected areas of the nose, throat, tonsils, jaw, or tongue
- An implanted device that stimulates the nerve controlling the tongue in carefully selected adults

Complications

Repeated sleep disruption can cause persistent sleepiness and reduced attention. This increases the risk of mistakes and road or workplace crashes. Driving while sleepy can be dangerous even if you have not previously fallen asleep at the wheel.

Untreated OSA is associated with high blood pressure, abnormal heart rhythms such as atrial fibrillation, stroke, coronary heart problems, heart failure, and difficulties controlling blood sugar. Risk is influenced by OSA severity and by other health factors.

OSA can also worsen mood, memory, sexual function, and quality of life. Partners may lose sleep because of loud snoring or concern about breathing pauses.

Sedation, anaesthesia, and opioid pain medicines can further reduce breathing. Tell surgical, dental, and anaesthesia teams if you have diagnosed or suspected OSA. If you use PAP, you may be asked to bring your machine for a procedure or hospital stay.

Prevention

OSA cannot always be prevented. Inherited facial structure, jaw position, ageing, and other anatomical features cannot be fully changed through lifestyle choices.

Maintaining a weight that supports your health may reduce the likelihood or severity of OSA linked with excess body weight. Limiting alcohol near bedtime and not smoking may also reduce factors that worsen airway narrowing.

Do not stop prescribed sedatives, opioids, or other medicines suddenly. If a medicine may be affecting breathing during sleep, discuss its risks and alternatives with the prescriber.

Side sleeping may reduce breathing events in position-dependent OSA, but it does not prevent every form of the condition. Preventive steps also do not replace testing when symptoms are present.

Living with it and what to expect

OSA is often a long-term condition, although its severity can change. Weight changes, ageing, menopause, surgery, alcohol use, medicines, and sleeping position may all affect it over months or years.

Many people notice less snoring and better alertness after effective treatment. Some improvements can appear quickly, while recovery from prolonged sleep disruption may take longer. Treatment does not always remove every symptom, so persistent tiredness may need further assessment.

PAP works only while it is being used. Regular use, including during naps and travel, gives the best control. Mask needs and pressure requirements may change, so discomfort should prompt practical troubleshooting rather than silent abandonment of treatment.

Oral appliances need periodic checks for fit, wear, jaw discomfort, bite changes, and effectiveness. Surgical or weight-related improvements may also require another sleep study before treatment is reduced or stopped.

Routine follow-up may review symptoms, PAP data, blood pressure, equipment condition, and changes in weight or health. Seek an earlier review if snoring or sleepiness returns, the mask becomes difficult to use, or there is a major weight change.

Most people can work, travel, exercise, and sleep normally with effective management. Some driving or job-related rules may apply when untreated sleepiness could create a safety risk.

When to get medical help

Arrange a routine appointment if you have frequent loud snoring, witnessed breathing pauses, nighttime choking, unrefreshing sleep, morning headaches, or ongoing daytime sleepiness. Assessment is especially important if these occur alongside high blood pressure, atrial fibrillation, or another heart condition.

Seek prompt medical advice if sleepiness is affecting driving, operating machinery, or safety at work. Do not drive when you feel likely to doze. Stop somewhere safe and arrange another way to travel.

Get emergency help for symptoms that are not typical of uncomplicated OSA, including:

- Severe difficulty breathing while awake
- Blue, grey, or unusually pale lips or skin

- New chest pressure or severe chest pain
- Sudden facial weakness, arm weakness, or speech difficulty
- Collapse, a serious crash, or inability to wake someone normally

Common questions

Does snoring mean I have sleep apnea?

No. Snoring can happen without OSA, and some people with OSA do not snore noticeably. Pauses in breathing, gasping, unrefreshing sleep, and daytime sleepiness make assessment more important. Only a sleep study can confirm the condition.

Can obstructive sleep apnea go away?

Sometimes. OSA may resolve after substantial weight loss or treatment of a specific airway blockage, such as very large tonsils. It often persists because jaw shape, tongue size, ageing, and other anatomical factors remain. Repeat testing is needed before stopping treatment.

Will losing weight cure my sleep apnea?

Weight loss can reduce OSA severity in people who are overweight or obese, but it may not cure it. Some people still need PAP or another treatment after losing weight. Others may need their PAP settings reviewed as their weight changes.

Do I have to use CPAP forever?

Not always, but many people need long-term treatment. CPAP controls airway blockage while it is being used; it does not permanently reshape the airway. A repeat assessment may be appropriate after major weight loss, airway surgery, or a significant change in symptoms.

Can I travel with a PAP machine?

Yes. Most machines are portable, and travel models are available. Check the manufacturer's instructions for power supplies, batteries, humidifier use, and cleaning. Airlines may have specific rules, so contact the carrier before flying.

What happens if I leave sleep apnea untreated?

Possible effects include continued tiredness, impaired concentration, driving risk, and strain on the heart and circulation. The level of risk is not the same for everyone. Symptoms, oxygen changes, event frequency, and other health conditions all matter.

Sources



- National Institute for Health and Care Excellence. Obstructive sleep apnoea/hypopnoea syndrome and obesity hypoventilation syndrome in over 16s (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 Oral Appliance Therapy . Journal of Clinical Sleep Medicine, 2015
- National Heart, Lung, and Blood Institute. Sleep Apnea
- U.S. Food and Drug Administration. FDA Approves First Medication for Obstructive Sleep Apnea , 2024