CONDITION

# Infantile sleep apnea

Infantile sleep apnea causes abnormal pauses or reductions in a baby's breathing during sleep.

**WHAT IT IS**
Abnormal breathing pauses during sleep in babies

**BODY SYSTEM**
Breathing and nervous systems

**MAIN SYMPTOMS**
Breathing pauses, snoring, color change, restless sleep

**WHAT CAUSES IT**
Immature breathing control, narrowed airway, or underlying illness

**HOW IT IS DIAGNOSED**
Overnight sleep study with oxygen and carbon dioxide monitoring

**MAIN TREATMENT**
Cause-directed care and breathing support

**CAN IT BE CURED?**
Sometimes - resolves with growth or cause treatment

**IS IT AN EMERGENCY?**
Sometimes - blue, limp, or unresponsive during a pause

**LONG-TERM OUTLOOK**
Often improves, but some causes need ongoing care

## Overview

Infantile sleep apnea means that a baby repeatedly stops breathing or breathes too little during sleep. It is a condition rather than one single disease. It can happen when the airway becomes blocked, when the brain does not send steady breathing signals, or through a combination of both.

In obstructive apnea , the baby continues trying to breathe, but air cannot move freely through the upper airway. In central apnea , breathing effort temporarily stops because the brain's breathing signals pause. Mixed apnea includes both patterns.

Young babies sometimes have periodic breathing . This is a pattern of several quick breaths followed by a short pause. It can be normal, especially in babies born early, if the baby's color and comfort remain normal. A sleep study is often needed to distinguish normal immature

breathing from clinically important apnea.

Sleep apnea matters because repeated episodes may lower oxygen levels, raise carbon dioxide levels, disturb sleep, or place extra strain on the heart and lungs. It is not the same as sudden infant death syndrome, or SIDS, and home breathing monitors have not been shown to prevent SIDS.

## Symptoms

Symptoms may be subtle, and not every baby with sleep apnea snores. Possible signs include:

A brief breathing pause does not always mean sleep apnea. Videos can help show what you are seeing, but they cannot measure airflow, oxygen, or carbon dioxide and cannot rule the condition in or out.

- Repeated pauses, gasps, snorts, or choking sounds during sleep
- Frequent snoring or noisy breathing
- Chest or neck pulling inward while the baby tries to breathe
- Restless sleep, sweating, or frequent waking
- Pale, bluish, or gray skin during an episode
- Feeding difficulty, tiring during feeds, or poor weight gain
- Unusual sleepiness or irritability while awake

## Causes and risk factors

A baby's airway is small and flexible. Even mild narrowing can make breathing harder during sleep. Obstructive apnea may be linked to a floppy voice-box structure called laryngomalacia , nasal blockage, a small jaw, a large tongue, or other differences in the face and airway. Low muscle tone and conditions affecting muscles or nerves can also allow the airway to narrow.

Central apnea may happen because breathing control is still developing. This is especially common in babies born prematurely and is called apnea of prematurity . It usually begins before a premature baby reaches the age they would have been born.

Other possible causes of central or mixed apnea include:

Spitting up and reflux are common in infancy. They should not automatically be assumed to cause apnea. If both are present, the timing and cause need careful assessment rather than routine reflux treatment.

Some babies have more than one contributing factor. For example, a baby born early may have immature breathing control as well as a narrow or flexible airway.

- Infection or serious illness
- Problems affecting the brain or brainstem
- Heart or lung conditions
- Seizures or metabolic disorders
- Medicines that slow breathing, including opioid exposure
- Rare genetic conditions affecting automatic breathing

## Diagnosis

Assessment usually begins with a detailed history and physical examination. The clinician may ask what the episodes look like, how long they seem to last, whether the baby's color changes, and whether there are feeding or growth concerns. They may examine the nose, mouth, jaw, chest, heart, muscle tone, and pattern of breathing.

The main test is an overnight polysomnogram , commonly called a sleep study. Sensors record:

These measurements show whether pauses are obstructive, central, or mixed and how they affect the baby. Infant results must be interpreted using age-appropriate rules because normal breathing changes as babies mature.

Depending on the findings, other tests may include airway examination with a small camera, heart testing, brain imaging, an electroencephalogram for possible seizures, blood tests, or genetic testing. These are not needed for every baby.

An unexplained event involving color change, altered breathing, or reduced responsiveness may be assessed separately as a brief resolved unexplained event , or BRUE. That term is used only after the baby has returned to normal and no explanation is found during the initial assessment.

- Air movement through the nose and mouth
- Chest and abdominal breathing effort
- Blood oxygen and carbon dioxide levels
- Heart rate
- Sleep stages and body movements

## Treatment and management

Treatment is based on the type and severity of apnea, its effect on oxygen and carbon dioxide, and the underlying cause. Mild cases may only need planned follow-up while the baby's breathing system and airway mature.

Possible treatments include:

Caffeine may be used in neonatal care for apnea of prematurity. Its use, monitoring, and stopping point are managed by the baby's clinical team. It is not a home remedy for other forms of infant apnea.

CPAP uses gentle air pressure through a fitted mask. Infants need careful fitting and follow-up because their faces and airways grow quickly. Oxygen also requires supervision because improving the oxygen reading does not always correct shallow breathing or high carbon dioxide.

A home monitor may be recommended for selected babies as part of a medical plan. It does not treat the underlying apnea, and false alarms can occur. Monitoring should not replace safe sleep practices or scheduled follow-up.

- Treating an infection, seizure disorder, or other identified illness
- Addressing an airway blockage when one is present
- Supplemental oxygen prescribed and monitored by a specialist
- Continuous positive airway pressure, or CPAP, to hold the airway open
- Surgery for a specific structural airway problem
- Temporary assisted ventilation for babies who cannot breathe effectively
- A tracheostomy in uncommon, severe cases requiring long-term airway support

## Complications

Frequent or severe apnea can repeatedly lower oxygen or interfere with carbon dioxide removal. Over time, this may contribute to poor growth, feeding problems, disturbed sleep, or strain on the heart and lungs.

The effect on development is influenced by the cause, severity, and presence of other medical conditions. Many babies improve without lasting problems. Babies with persistent breathing difficulties may need ongoing developmental, respiratory, sleep, or feeding support.

## Prevention

Many causes of infantile sleep apnea cannot be prevented. Prematurity, inherited conditions, and structural airway differences are not caused by ordinary parenting choices.

Good prenatal care and avoiding tobacco, cannabis, alcohol, and non-prescribed drugs during pregnancy can reduce some risks to infant health, but they cannot prevent every case. Keep babies away from tobacco smoke and do not give medicines that cause drowsiness unless they have been specifically recommended for the baby.

Safe sleep practices reduce the risk of sleep-related infant death, but they do not cure apnea. Place the baby on their back for every sleep, on a firm, flat surface without pillows, loose bedding, positioners, or wedges. A baby with reflux or noisy breathing should still sleep on their back unless their specialist gives a different medical plan.

## Living with it and what to expect

The course depends mainly on why the apnea is happening. Apnea related to immature breathing control often becomes less frequent as a premature baby's nervous system develops. Flexible airway conditions such as laryngomalacia may also improve as the airway grows and becomes firmer.

Structural differences, muscle or nerve conditions, and disorders of automatic breathing may continue for longer. Treatment may need adjustment as the baby grows. Some children require repeat sleep studies to confirm that breathing has improved before oxygen, CPAP, monitoring, or other support is stopped.

At home, follow the agreed safe sleep and equipment plan. Keep routine appointments even if episodes seem less obvious, because oxygen or carbon dioxide changes may not be visible. Tell the baby's care team about changes in feeding, growth, alertness, snoring, work of breathing, or monitor alarms.

Many families find nighttime equipment and alarms stressful. Practical teaching, written instructions, and a clear plan for alarms can make home care more manageable. No monitor can replace checking the baby when something appears wrong.

## When to get medical help

Call emergency services if a baby:

Begin infant CPR if the baby is unresponsive and not breathing normally, if you have been trained to do so. Follow the emergency dispatcher's instructions.

Seek prompt medical assessment for a first unexplained breathing pause, repeated pauses, color changes, feeding difficulty, or increased work of breathing. A baby younger than 3 months with a fever of 38°C or 100.4°F or higher also needs prompt medical assessment.

Arrange routine follow-up for ongoing snoring, restless sleep, sweating, poor weight gain, feeding fatigue, or increasing monitor alarms when the baby otherwise appears comfortable. These signs are not always emergencies, but they should not be ignored.

- Is not breathing or does not quickly start breathing again
- Turns blue or gray around the face, lips, or tongue
- Becomes limp, unresponsive, or unusually difficult to wake
- Has severe chest pulling, choking, or obvious trouble getting air

## Common questions

Is periodic breathing the same as sleep apnea?

No. Periodic breathing consists of short pauses followed by several quicker breaths and is often part of normal breathing development. Sleep apnea involves pauses or reductions in breathing that are more frequent, prolonged, obstructed, or linked to changes in oxygen, carbon dioxide, heart rate, or alertness. A sleep study can distinguish the patterns.

Will my baby grow out of sleep apnea?

Some babies improve as their nervous system and airway mature, especially when apnea is related to prematurity or a flexible upper airway. Other babies need treatment for an underlying airway, neurological, heart, lung, or genetic condition. Improvement should be confirmed through follow-up rather than assumed from fewer visible episodes.

Is it safe for a baby with apnea to sleep on their back?

Back sleeping on a firm, flat surface remains the recommended position for most babies, including those with reflux or apnea. Do not use wedges or sleep positioners. If a specialist recommends a different position for a specific medical reason, follow that individual plan.

Can reflux cause infantile sleep apnea?

Reflux and breathing pauses can happen around the same time, but reflux is not automatically the cause. Treating ordinary spit-up does not necessarily improve apnea. The baby may need assessment for airway, breathing-control, or other medical causes.

Should I buy a breathing or oxygen monitor?

Consumer monitors do not diagnose sleep apnea and have not been shown to prevent SIDS. They may give false reassurance or frequent false alarms. Use a medical monitor only when it is part of a clinical plan, and make sure you understand what each alarm means and what action to take.

Is infantile sleep apnea the same as SIDS?

No. Sleep apnea is a measurable breathing condition. SIDS is the sudden unexplained death of an infant after a complete investigation. Treating apnea does not remove every risk of sleep-related death, so safe sleep practices remain important.

## Sources

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