

# Sleep-Disordered Breathing: The Hidden Sleep Problem Linked With ADHD and Even Orthodontics

If your kid still wakes up in the middle of the night or is irritable during the day, they may have an underlying breathing issue. Treatment can help them get the rest they need.

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Vanessa Lutz, of Henderson, Nevada, grew concerned when her then 18-month-old son, Teddy, developed nasal congestion, [severe nosebleeds](#), and dark circles under his eyes. The family tried solution after solution for years, including prescription allergy treatments, high-end air filters, and nasal rinses, but nothing helped. "Teddy came across as an angry and depressed individual, which is pretty sad considering he was 4," recalls Lutz. "He would say things like, 'I hate school. I don't want to go to school.' "



Half of all kids have some symptoms of sleep-disordered breathing. SASHA GULISH

Finally, a doctor connected Teddy's daytime symptoms with his frequent snoring and nighttime mouth breathing. They're signs of an under-the-radar sleep disorder associated with [problems including depression](#), ADHD, obesity, and poor grades. Sleep-disordered breathing, as health professionals call it, is often the result of underlying mouth, jaw, and throat problems created by a narrow airway.

"Half of all kids have some symptoms of sleep-disordered breathing"

The condition is more common than parents might suspect. About half of all kids experience at least some symptoms, which typically appear between ages 4 and 8. And while some children may be going undiagnosed, the disorder is gaining attention from doctors, speech pathologists, and dentists, who are zeroing in on strategies to manage or even prevent the problem.

## Signs of Sleep-Disordered Breathing in Children

Research shows that half of all parents think a child's snoring is harmless, even a tip-off that they're sleeping soundly. But it's actually a red flag, says *Parents* advisor Judith Owens, M.D., director of sleep medicine at Boston Children's Hospital. "The louder the snoring is, the more concerned we are," she says. "If your child snores three times a week, even without any other symptoms, they need an evaluation."

Snoring is a signal of a breathing problem that can stem from multiple causes: the length of a child's jaw and width of their palate; the shape of the skull; or [congestion in the nose](#) and upper airway, which is commonly due to oversized tonsils and adenoids. Often, kids experience a combination of factors. At night, when kids lie down and their throat muscles relax, the airway narrows. Of particular concern are gasping, snorting, and choking noises, or working hard to breathe, says Stephen Sheldon, D.O., director of the sleep medicine center at Ann & Robert H. Lurie Children's Hospital of Chicago. These are signs of sleep apnea, when breathing is repeatedly blocked or partially blocked for a split second and then starts again.

When Teddy was 4 years old, a test confirmed he had sleep apnea. He had his tonsils and adenoids removed to create more space in the airway. (That's the main reason kids get their tonsils out these days. Imagine trying to drink a thick milkshake—it's much easier to draw the liquid through a wider straw.) Shortly after surgery, his sleep, mood, and behavior turned around. "You could see things clicking for him," Lutz recalls. "His love of art grew, he fidgeted less, and he had more energy for activities." Unfortunately, his adenoids and tonsils regrew and he had to undergo another surgery. He now uses a CPAP machine to help manage his sleep apnea.

Nolan Knepper, of Cheyenne, Wyoming, also had his tonsils and adenoids removed when he was 4 to create more space in his narrow airway. But his severe, year-round allergies and asthma have still been hard to manage. Now 11, he struggles with sleep and is irritable in the morning and wired in the afternoon. "It's like waking the dead to get him up, but by the afternoon, his energy is on overdrive and sometimes he's bouncing off the walls," says Nolan's mom, Ciara. Dr. Owens points out that [hyperactivity is another common sign](#) of poor sleep in children, noting that up to 60 percent of kids with ADHD have trouble getting a good night's rest. Still, many parents are surprised by the connection. Says Dr. Owens, "Hyperactivity, large tonsils,

allergies, asthma, and being overweight are red flags that a sleep disorder may be affecting a child's behavior."

If you notice any of these issues, discuss them with your child's pediatrician and ask for a referral to a specialist, whether it's a sleep expert; an ear, nose, and throat doctor; or a dental professional familiar with the sleep-mouth connection.

- Routine snoring more than three nights a week
- Chronic mouth breathing
- Recurring nasal congestion
- In profile, a chin that doesn't align with nose and mouth
- Narrow or long face
- Flat cheeks
- Sleeping with head and neck hyperextended
- Crooked or crowded teeth
- Trouble falling asleep or frequent waking
- Daytime sleepiness, attention problems, difficulty concentrating, or hyperactivity
- Sleepwalking, restlessness, or sweating while sleeping
- [Bedwetting in a school-age child](#) who previously was dry at night
- Frequent morning headaches
- Excessive morning thirst



Proof that kids may try to sleep in the most awkward positions. SASHA GULISH

## Risk Factors for Sleep-Disordered Breathing

For one clue to a possible sleep problem, look at your child's face. In profile, the chin should align with the nose and mouth. Kids with a narrow face, a recessive chin, or crowded, crooked teeth—[even baby teeth](#)—are more likely to have a short jaw, a narrow palate, and a small airway. The floor of the nasal airway is also the roof of the mouth, known as the palate. Since they are physically connected, the width of the palate influences the width of the airway. Dr. Owens helps pediatricians identify craniofacial features that predispose children to breathing and sleep problems. Doctors can look for features on a checklist to identify kids at higher risk. "In order to plan appropriate and timely treatment, we need to be intervening much earlier," Dr. Owens says. "That's going to require a paradigm shift in the way we screen and identify kids."

Interestingly, one reason this may be an increasing problem is that human skulls have been gradually shrinking. Since the Industrial Revolution, our palates have been narrowing and our jaws shortening, according to anthropological research. Eating softer foods than our ancestors did is one possible culprit. Having smaller jaws leads to crowded teeth, but, more important, it impairs breathing.

To help with airway problems that may be associated with crooked teeth and misaligned jaws, Chicago-based pediatric dentist Kevin Boyd, D.D.S., treats children as young as 3 with orthodontic appliances to expand their palate and help their jaws grow forward. "I've seen dramatic results in some of my patients who've had this treatment, including significant changes in the size of their airways," Dr. Sheldon says.

For Lisa Vraniak, a mom in Barrington, Illinois, bedtime with her 2-year-old daughters, Lucy and Kate, used to be a long ordeal. But when she took Lucy, [who has a cleft palate](#), to an appointment with Dr. Boyd, it turned out that both Lucy and her sister needed palate expanders. Lucy began sleeping calmly, and Kate stopped sleepwalking, talking in her sleep, and waking with the bedclothes in a knot. "They fall asleep easier and don't wake up in the night anymore," Vraniak says.

## What Healthy Sleep Looks Like

Good sleepers keep their lips closed and breathe comfortably through their nose. If a child's [mouth routinely falls open](#) during sleep, it could be a sign that their jaws are misaligned (the upper teeth should fit slightly over the lower teeth). Or it could be a heads-up that your child has chronic nasal congestion.

Whatever the cause, the result is the same: Air dries out the throat and can lead to infections and inflammation. Kids also miss out on the benefit of tiny hairs and mucous membranes in the nose that clean the inhaled air, and body temperature that warms and humidifies the air before it reaches the throat. The air flowing through the nasal sinuses creates nitric oxide, an important gas for [brain development](#). Over time, the nasal airway and jaws shrink, making kids rely more on mouth breathing. However, there are steps that can help keep their jaws in good shape:

**Retire the binky:** All kids should [forgo the pacifier after infancy](#), advises Madeleine Goodman, D.M.D., of Harmony Pediatric Dentistry & Orthodontics, in Bethesda, Maryland. "When a child has a foreign object in their mouth for a third to half the time they're awake, it changes the shape of the jaws." Sucking can cause kids to overuse cheek muscles; that puts pressure on jaws, narrowing them. To be sure, pacifier use is only one contributing factor, and not all Binky addicts will end up with misaligned jaws. If your toddler or preschooler is still using a Binky, try to cut back and talk to a pediatric dentist about which brand may best fit the shape of your child's mouth and cause the least amount of trouble. Orthodontics can often take care of bite problems later, if needed.

**Reduce their nighttime exposure to allergens:** Wash sheets at least once a week in water that's 130°F or higher to kill dust mites—you may want to do so even more often if your child is highly allergic. [An air purifier](#) will help remove pollen, dust, and other irritants from the room.

**Give their jaws a workout:** Serve toddlers solid food, like chicken and crunchy fruits, to strengthen their jaws. Limit food pouches, since they encourage sucking, which doctors say can distort the shape of the jaws.



## Getting a Diagnosis for Sleep-Disordered Breathing

If you're concerned about your child's symptoms, you can start by asking your child's pediatrician or dentist if they have experience treating sleep-disordered breathing. Kids with a normal-width palate and jaw [may have allergies](#), asthma, enlarged tonsils, or swollen adenoids. Find your way to the right specialist to guide you through treatment options. That could be an allergist, a dentist, an orthodontist, or a sleep specialist, who is a doctor from a number of related fields, such as pulmonology, otolaryngology, or neurology. Kids with nasal congestion may start with a trial of nasal steroid or decongestants, says Carol Rosen, M.D., a pediatric sleep medicine specialist in Cleveland.

If a doctor sees enlarged tonsils or adenoids pressing on your child's airway and restricting airflow, you may want to consider having them removed. But first, schedule an overnight sleep study to determine whether sleep apnea may be to blame, Dr. Owens advises. A technician will put sensors on your child's face, nose, chest, and finger to monitor respiratory effort, oxygen level, and breathing. It may sound scary, but child life specialists usually supply distractions to make a kid feel comfortable. Plus, you'll be able to stay in the room overnight too. The study results can help determine not only if surgery may be needed but also whether the apnea is mild or severe. Children with more severe apnea pose a higher risk of complications and need to be observed overnight after a tonsillectomy.

Sometimes sleep problems worsen because kids aren't putting their tongue in the right place during speech and eating and when at rest. Ideally, the tongue should sit gently against the palate—not on the floor of the mouth, where it may fall back and block the throat during sleep. A speech pathologist or an informed pediatrician can assess this, or you can consult a myofunctional therapist. After getting his tonsils removed, Teddy did exercises to strengthen his tongue and throat muscles and to encourage proper positioning of his tongue.

Ultimately, you may need to create a team of health-care professionals who can look at the problem from different angles, until one or a combo of these solutions eliminates snoring and mouth breathing and results in a well-rested child. Dr. Goodman works with pediatric dentists, a myofunctional therapist, and [ear, nose, and throat doctors](#). "I see kids every day who are struggling," she says. "The earlier you get everything back in balance, the better chance of success you'll have."