

# Pediatric Sleep Disorders

FACTS ABOUT PEDIATRIC SLEEP DISORDERS FROM CLEVELAND CLINIC

Children spend a substantial part of their lives asleep. In fact, in infancy and early childhood, the developing brain seems to need more time asleep than it does awake. This underscores the importance of sleep in the overall well-being of a child. Children may suffer from lack of sleep simply by not sleeping an adequate number of hours or they may lack good quality sleep.

Unfortunately, even as the scientific literature on childhood sleep disorders rapidly advances, there are still gaps in the delivery of this knowledge to the end user — the child. For instance, only about half the doctors taking care of children address sleep-related issues in their clinics and well-trained pediatric sleep specialists are still a rarity.

## What are the implications of a sleep disorder?

Sleep disorders in children may lead to daytime moodiness, irritability, lack of focus in class, sleepiness in school, inability to get up in time for school and significant behavioral and learning problems. Some sleep disorders are serious enough to cause adverse cardiovascular and metabolic effects as well as failure to thrive.

## How common are they?

Sleep disorders are common in children, but often are under recognized. Sleep disturbances in some form are seen in as many as 25 to 30 percent of infants and children. They may range from insufficient sleep, bedtime settling problems and sleep walking to sleep apnea and narcolepsy. These disorders manifest as symptoms that are easily misleading to the casual observer. It is not uncommon to misdiagnose mood, attention or motivational problems and entirely miss the true underlying sleep problem.

## What causes sleep disorders in children?

The cause of sleep disorders is not always clear and sometimes more than one reason is thought to be a factor. Some sleep disorders are considered developmental. For example, nighttime settling issues are common in infants and toddlers, while sleep

terrors and sleep walking are seen in older children. These disorders often resolve with time and require intervention only if they are particularly alarming in frequency or worrisome in behavior complexity.

In other disorders, a familial component plays a strong role. These may include restless legs, bedwetting and sleep apnea. Sleep apnea in premature babies is a problem that usually goes away with maturity. This is different from sleep apnea seen in the older, snoring child, where large adenoids and tonsils, abnormal dentition, upper airway allergies, cranio-facial abnormalities and obesity all may play a significant role.

Micronutrients such as folate and iron seem to be important in limb movement disorders. Many other sleep disorders, including insomnia and daytime sleepiness, can be influenced by external factors such as the home and bedroom environment (TV, cell phones, electronic gaming), social stress, medications (including drugs of abuse) and even seemingly innocuous substances like caffeine and nicotine.

Psychiatric, neurological and developmental disorders, if present, often interplay intimately with sleep problems. Sometimes, treating one sleep disorder (e.g. sleep apnea) may benefit another (e.g. sleep walking).

## How can I determine if my child has a sleep disorder?

If your child has difficulty sleeping, discuss the matter with your

### What are the most common pediatric sleep disorders?

- Bedtime struggles
- Night awakenings
- Sleepwalking
- Sleep terrors
- Nightmares
- Headbanging
- Insomnia
- Snoring
- Sleep apnea
- Bed-wetting
- Narcolepsy
- Restless legs syndrome
- Circadian (biological clock) rhythm disorders
- Nocturnal seizures



pediatrician. Your child may benefit from a referral to a pediatric sleep doctor to further investigate the problem.

At Cleveland Clinic, our pediatric sleep specialists will conduct a thorough medical and sleep history, as well as a physical examination to identify any medical problems.

In some cases it may be necessary to observe your child's sleep overnight in our sleep laboratory. Here, in a comfortable, bedroom-like setting that allows the parent to room-in, children are able to sleep without much difficulty while a polysomnogram test is conducted. This test records brain activity, eye movements, muscle activity, tissue oxygen, carbon dioxide, oro-nasal airflow and breathing patterns in sleep.

You can watch a complete video explaining the polysomnogram test on our website at [clevelandclinic.org/pediatricsleep](http://clevelandclinic.org/pediatricsleep).

Children with excessive daytime sleepiness in whom narcolepsy is suspected are also typically given a multiple sleep latency test (MSLT). This test provides an objective measure of daytime sleepiness. It usually follows the overnight polysomnogram and involves five sequential daytime nap opportunities at two-hour intervals. If your child has been asked to undergo this test, you should be prepared to come on the previous night (for the overnight polysomnogram test) and stay through the next day until the evening.

Other tools your sleep doctor may use include actigraphy (a small motion detector device worn on the wrist to assess sleep-wake rhythms) and sleep logs. Sometimes blood and urine and very rarely spinal fluid or genetic tests may be ordered.

### How can you treat sleep disorders in children?

Sleep disorder treatment decisions depend on the cause. Sleep disorders in general can be treated in a variety of different ways using surgery (e.g., obstructive sleep apnea), micronutrient supplementation, bright light therapy or medications.

Behavioral techniques and adjustment of children's sleep schedules can be helpful in managing many instances of sleep disorders. Not only can psychosocial issues be the cause of sleep disorders, but they may be the result of sleep disorders as well. Therefore, it is not surprising that psychological, cognitive and behavioral interventions (with or without medications) can be very beneficial in some cases.

### CLEVELAND CLINIC'S PEDIATRIC SLEEP PROGRAM

At Cleveland Clinic's Sleep Disorders Center, our multidisciplinary program is dedicated to the diagnosis and treatment of sleep disorders in children and adults. Our team approach unites adult neurologists, internal medicine, family medicine and pediatric sleep experts, pulmonary and critical care medicine specialists, psychologists, psychiatrists and otolaryngologists, under one roof.

Cleveland Clinic's Sleep Disorders Center is accredited by the American Academy of Sleep Medicine. The center is part of our Neurological Institute, whose neurology and neurosurgery services for adults and children are ranked best in Ohio. Adult neurology and neurosurgery are ranked #5 in the United States, and pediatric neurology and neurosurgery are ranked #3 in the nation by *U.S. News & World Report*.

Call **216.636.5860** or toll-free **866.588.2264** to make an appointment with any of our experts in Cleveland Clinic's Sleep Disorders Center. To speak with a sleep technologist after hours (5 p.m. to 8 a.m.), please call **216.444.8536** or toll-free, **800.223.2273**, ext. **48536**. For more information, call **216.444.2165** or visit [clevelandclinic.org/sleep](http://clevelandclinic.org/sleep).