

The Risks of Sleep-Disordered Breathing in Children

Pay attention to your child's breathing while they sleep.

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Does your child snore? Does he breathe through his mouth when he sleeps? Do you ever notice pauses in your child's breathing while she's asleep? If you've answered yes to any of these questions, your child may be suffering from sleep-disordered breathing.

Sleep-disordered breathing in children is disruptive to their nightly rest, which can result in other health problems. Scientists are still working to get a sense of how prevalent the disorder is among children. We're also still learning about the risk factors that contribute to sleep-disordered breathing in children, as well as the health consequences for kids who suffer from it. Increasingly, it appears that both the risks and the health effects of sleep-disordered breathing are different in children than they are in adults. A new study examines both the prevalence of sleep disordered breathing in children, and the particular risk factors they face.

Researchers in Finland examined sleep-disordered breathing in 491 children ages 6-8. Their study, which was part of a larger research project on child health, analyzed the prevalence of sleep-disordered breathing among the children. The study also examined risk factors that might contribute to the sleep disorder, including tonsil size, jaw position, and facial proportions. For the purpose of this study, sleep-disordered breathing was defined as frequent or loud snoring, mouth breathing during sleep, and sleep apnea.

Here are some important highlights of their results:

- 9.9% of children had some type of sleep-disordered breathing. This rate was the same for both boys and girls in the study
- Average body-fat percentage was 20.6 for girls and 15.0 for boys
- 11.4% of boys and 15.6% of girls were overweight or obese
- Body fat was not associated with an increased risk of sleep-disordered breathing. Sleep-disordered breathing was no more frequent among obese and overweight children in this study than among children at normal weight

Several craniofacial features were associated with elevated risk for sleep-disordered breathing:

- Children with enlarged tonsils were 3.7 times as likely to experience symptoms of sleep-disordered breathing
- Children with cross bite were 3.3 times a likely to have sleep-disordered breathing. Cross bite is a dental condition where teeth are out of alignment with corresponding teeth above or below.
- Children with convex facial profiles were 2.6 times as likely to suffer from sleep-disordered breathing as children with other facial types. Convex facial features include prominent forehead and brow line and receding chin.

These results suggest that **the risk factors for sleep-disordered breathing in children may be very different than those for adults.** The most significant risk factor of sleep-disordered breathing in adults is excess body weight.

Research indicates that 70% of people who are morbidly obese have obstructive sleep apnea. This study indicates that excess weight may not be a risk factor for children. For them, features of the head, neck and throat, as well as certain dental conditions, may be more significant indicators of risk for sleep-disordered breathing.

The health problems for children who develop sleep-disordered breathing also appear to be different than those for adults. A growing body of research indicates that children who experience sleep-disordered breathing are at greater risk for problems with behavioral, emotional, and cognitive development:

- This large-scale study of more than 11,000 children found that kids with sleep-disordered breathing were significantly **more likely to exhibit behavioral and emotional problems, including hyperactivity, anxiety, depression, social issues with peers, and conduct problems including aggressiveness.**
- **Children who exhibit aggressive and bullying behavior in school were twice as likely to have some form of sleep-disordered breathing,** according to this research
- Children with sleep-disordered breathing demonstrated lower intellectual abilities than those without, in this study. This cognitive impairment existed regardless of the degree of severity of the sleep disorder. **Even children with mild forms of sleep-disordered breathing experienced cognitive difficulties.**

A recent large-scale study in the United States examined the prevalence for sleep disordered breathing among children. Researchers evaluated more than 12,000 children between the ages 6 months and 6.75 years, and found:

- 1-2% of children across all ages suffer from chronic sleep apnea
- As many as 21% of children in this age range snore habitually
- Children ages 1.5-2.5 years are especially vulnerable to snoring: researchers found a significant increase in rates of snoring among children at this age
- By the age of six, 25% of children are mouth breathing during sleep

These latest results from Finnish scientists add to the body of research that indicates how significant an issue sleep-disordered breathing is for children. We need to know more about the prevalence of the disorder among children, as well as the risk factors and health consequences. We also need to further explore how the risks to children may differ from adults.

To avoid the behavioral, cognitive and emotional problems associated with sleep-disordered breathing, we also need to get better at identifying the problem. Early intervention can help avoid more serious problems that can occur if the disorder is left untreated. The most effective treatment strategy will involve the cooperation among doctors and dentists. But the process starts with parents. Paying attention to your child's breathing during sleep, and bringing attention to any signs of irregular breathing, is the first and critical step.

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