

What are the Consequences of Sleep Apnea in Children?

Developmental Problems Include Loss of IQ, Growth

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Updated March 28, 2011

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Though relatively rare, [sleep apnea](#) does occur in children and it can have serious adverse effects and consequences.

As in adults, sleep apnea involves brief partial or complete collapse of the upper airway leading to disrupted sleep. Each of these events is associated with a drop in the oxygen level of the blood and an arousal from deep sleep as the brain attempts to awaken the body to resume normal breathing. This may occur hundreds of times during the night and the result is non-restorative sleep.

Approximately 1% to 3% of preschool-aged children have sleep apnea, which peaks between the ages of 2 and 6 because of enlargement of the tonsils and adenoids and a proportionately small airway. This crowding makes the airway more prone to obstruction and resulting apnea. The risk increases again in adolescence, but this may relate to obesity. Children with asthma or allergies are also more at risk of developing sleep apnea.

Until recently, snoring was believed to be a relatively benign condition in children. Unfortunately, recent research suggests that snoring, even without measurable apneas, is associated with cognitive, behavioral, and psychosocial problems. Children who snore do poorer on standardized tests of mental development. More specifically, they have been shown to have lower scores on learning and memory tests including some types of intelligence quotient (IQ) tests.

It is thought that sleep apnea increases sleep fragmentation, meaning that rather than prolonged periods within the [sleep stages](#) as would normally occur, there is a constant shifting as the affected child moves between deep and lighter sleep. Unlike in adults who become sleepy and sedate with sleep deprivation, children have the opposite response and become more [hyperactive](#) and unruly. As a result, this sleep fragmentation may cause difficulties with attention, hyperactivity, social problems, and anxiety and depressive symptoms.

Finally, sleep-disordered breathing in children is associated with growth deficiency. Affected children may lose ground among their peers, and will even slow along their previous growth path, perhaps not reaching their full developmental potential. It is believed that frequent arousals from deep, [slow-wave sleep](#) may disrupt the hormonal secretion which occurs at this time, including the production of growth hormone. As a result, less hormone is available to promote normal growth.

Sleep apnea can have serious, long-lasting consequences in the growth of a child both mentally and physically. Therefore, it is important to recognize that snoring may not be as benign as it was once thought and may require careful evaluation by a pediatrician or sleep specialist.