

Study finds increased 'sibling risk' of obstructive sleep apnea in children

August 1 2009

A study in the Aug. 1 issue of the journal *Sleep* indicates that children have an increased risk of developing obstructive sleep apnea (OSA) if they have at least one sibling who has been diagnosed with the sleep disorder.

Results indicate that after accounting for [socioeconomic status](#), age, and geographic region, the sibling risk of pediatric OSA was extremely high, with a standardized incidence ratio of 33.2 in boys and 40.5 in girls who had at least one sibling with an OSA diagnosis. A total of 854 boys and 627 girls who were 18 years of age or younger had a first hospital diagnosis of pediatric OSA during the study period; there was no significant gender difference in the incidence rate of OSA among those with a sibling history of the sleep disorder.

According to principal investigator Danielle Friberg, MD, senior surgeon in the ENT department at Karolinska Institute in Stockholm, Sweden, early intervention can help prevent the potentially severe consequences of OSA in [children](#).

"Early diagnosis and treatment is important to avoid complications such as learning difficulties, 'failure to thrive,' serious cardiovascular complications and even death," said Friberg.

The individual study population was siblings born between 1978 and 1986, and the study included hospital data on all children in Sweden - 2.7 million individuals - during the study follow-up period between 1997

and 2004. Children 18 years of age and younger were divided into sibling groups, and the presence or absence of a primary hospital diagnosis of pediatric OSA during the follow-up period was determined for each individual. Then children were categorized as positive or negative for sibling OSA based on the presence of the disorder in at least one of their siblings. The incidence rates were computed using standardized incidence ratios with 95-percent confidence intervals. Reference groups were boys and girls with two or more unaffected siblings.

The study also examined the sibling risk of adenotonsillar hypertrophy, an important risk factor for pediatric OSA. A total of 13,656 boys and 11,648 girls had a first hospital diagnosis of hypertrophy of the tonsils, or hypertrophy of the adenoids and tonsils. The overall standardized incidence ratios for adenotonsillar hypertrophy among those who had at least one affected sibling were 4.53 for boys and 4.94 for girls. Although this familial risk was much lower than in the group with OSA, the authors report that the increase was highly significant and the numbers of children were much larger than in the OSA group.

The American Academy of Sleep Medicine reports that the prevalence of OSA is approximately two percent in otherwise healthy young children. OSA occurs when soft tissue in the back of the throat collapses and blocks the airway during sleep. Most children with OSA have a history of snoring that tends to be loud and may include obvious pauses in breathing and gasps for breath. Parents often notice that the child seems to be working hard to breathe during sleep.

According to the authors, the increased risks for both OSA and adenotonsillar hypertrophy could be an expression of genetic or shared environmental mechanisms. Recent genetic studies of both adult and pediatric patients with OSA indicate that genetic mechanisms do play an important role. Possible environmental factors include the increased

medical awareness of sleep disordered breathing over time, both among parents and doctors.

The authors recommend that medical providers ask about sleep-related symptoms in siblings when children present with clinical signs or symptoms of OSA.

More information: More information about obstructive [sleep apnea](#) in children is available from the AASM at www.sleepeducation.com/Disorder.aspx?id=71 .

Source: American Academy of [Sleep](#) Medicine ([news](#) : [web](#))

Citation: Study finds increased 'sibling risk' of obstructive sleep apnea in children (2009, August 1) retrieved 26 April 2024 from <https://medicalxpress.com/news/2009-08-sibling-obstructive-apnea-children.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--