

Obesity Linked With Sleep Disordered Breathing

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NEW YORK (Reuters Health) - Waist size and body mass index are independently associated with sleep disordered breathing in school-age children, according to new research published in the current issue of Sleep.

Sleep disordered breathing takes in a wide spectrum of sleep-related breathing abnormalities, including minor upper airway resistance causing snoring, upper airway resistance syndrome, and obstructive sleep apnea syndrome.

The authors suggest that, as in adults, metabolic and inflammatory factors may be implicated in the development of snoring and obstructive sleep apnea in children.

To investigate, Dr. Edward O. Bixler and associates at Penn State University College of Medicine in Hershey, Pennsylvania, examined the prevalence of and risk factors for sleep disordered breathing "based on the largest population-based sample of elementary school-aged children available to date."

Parents of 5740 children in kindergarten through grade 5 completed questionnaires regarding their children's sleep and behavioral patterns. A random selection of 700 children, stratified by grade, gender, and risk for sleep disordered breathing, underwent physical evaluations and 9-hour overnight sleep monitoring.

Severity levels were classified as primary snoring, mild sleep disordered breathing or moderate sleep disordered breathing. The prevalence was 15.5 percent for primary snoring, 25.0 percent for mild sleep disordered breathing and 1.5 percent for moderate sleep disordered breathing.

Upon further analysis, Bixler's group found that waist size was a significant predictor of sleep disordered breathing at all three levels of severity.

By contrast, tonsil size was not a significant independent risk factor at any degree of severity, suggesting that removal of the tonsils and adenoids may not always be the best first-line treatment.

In children with primary snoring, there was also a negative association with increasing age, and minority status (Black or Hispanic), and a positive association with enlargement of the cervical lymph nodes on both sides of the neck. For mild sleep disordered breathing, nasal abnormalities, including chronic sinusitis, rhinitis, nasal obstruction and minority status were also significant predictors.

Aside from waist size, long soft palate was the only identified risk factor for moderate sleep disordered breathing.

Factors not associated with sleep disordered breathing included middle ear effusion, abnormally large tongue, underdeveloped the jaw, chronic cough and wheeze, the authors note.

"Risk factors for sleep disordered breathing in children are complex and include metabolic, inflammatory and anatomic factors," Bixler remarked in a prepared statement.

"Because sleep disordered breathing in children is not just the outcome of anatomical abnormalities, treatment strategies should consider alternative options, such as weight loss and correction of nasal problems."

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