

Simple nasal spray shown to significantly reduce snoring and breathing difficulties in children

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A simple nasal spray significantly reduced snoring and breathing difficulties in children and halved the number needing to have their tonsils removed, according to a new study. Credit: Nenad Stojkovic

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The research, led by the Murdoch Children's Research Institute and published in *JAMA Pediatrics*, found a saline ([salt water](#)) nasal spray was just as effective as an anti-inflammatory steroid nasal spray at easing sleep disordered [breathing](#) in children after six weeks of treatment.

The findings stated both [nasal sprays](#) cleared symptoms while asleep in about 40 percent of cases and those assessed by a surgeon as needing their tonsils and/or adenoids removed was reduced by half. The randomized-controlled "MIST" trial of the sprays involved 276 children, aged 3-12 years, and was carried out at The Royal Children's Hospital and Monash Children's Hospital.

Tonsillectomy is the most common pediatric elective surgery for children in Australia with more than 40,000 performed each year. Commonly used to treat children's snoring, the procedure is costly, painful and a significant burden on hospital resources.

Murdoch Children's Dr. Alice Baker said Victorian children typically waited more than a year in the public system for surgery to remove tonsils and adenoids, prompting a need to look for an alternative treatment for sleep disordered breathing. Some children may also be having their tonsils and adenoids out unnecessarily, she said.

"Nasal sprays work by cleaning the nose and/or reducing inflammation not just in the nose but all the way down the back of the throat to the adenoids and tonsillar tissue to alleviate the symptoms," Dr. Baker said.

Snoring and breathing difficulties during sleep affect about 12 percent of children and can cause significant long-term issues impacting

cognitive function, behavior and cardiovascular health.

Murdoch Children's Associate Professor Kirsten Perrett said the study found a substantial number of children with sleep disordered breathing could initially be managed by their GP and may not require referral to specialist services as currently recommended.

"A large proportion of children who snore and have breathing difficulties could be managed successfully by their [primary care physician](#), using six weeks of an intranasal saline spray as a first-line treatment," she said.

"Using this cheaper and readily available treatment would increase the quality of life of these [children](#), reduce the burden on specialist services, decrease surgery waiting times and reduce hospital costs."

Stephen Graham and Emily Tuner-Graham said their son, Thomas, 7, had stopped snoring and no longer needed his tonsils removed since taking part in the trial.

"From three years of age Thomas started snoring and we were concerned that he would eventually need surgery," they said.

"Prior to joining the trial, a specialist recommended having his tonsils out. It's a such huge relief that by just using a nasal spray his breathing difficulties have cleared."

More information: Alice Baker et al, Effectiveness of Intranasal Mometasone Furoate vs Saline for Sleep-Disordered Breathing in Children, *JAMA Pediatrics* (2023). [DOI: 10.1001/jamapediatrics.2022.5258](https://doi.org/10.1001/jamapediatrics.2022.5258)

Provided by Murdoch Children's Research Institute

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