

# Children with developmental delay undergoing tonsillectomy have heightened complication risks

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Children with developmental delay may be at risk for higher complication rates following tonsillectomy compared to children without developmental delay, according to research published in *International Journal of Pediatric Otorhinolaryngology* by Anthony Sheyn, MD,

FACS, chief of Otolaryngology at Le Bonheur Children's Hospital.

Developmental delay (DD) refers to a broad group of conditions that involve impairments in communication, gross and [fine motor skills](#), [problem solving](#) and social interactions. Children with DD often have complex medical histories with comorbidities, increasing their need for more health care treatment than children without DD.

"We have a limited amount of literature studying the effect of DD in pediatric surgical patients," said Sheyn. "We wanted to further investigate the role that DD has on the outcome of our most performed [pediatric surgery](#), tonsillectomy."

Researchers reviewed chart data from 400 [tonsillectomy](#) patients to compare post-operative complication rates between children with and without DD. Of these patients, 56 (13.9%) had a DD diagnosis.

Results showed that patients with DD had a significantly increased risk for post-operative complications and experienced significantly more respiratory complications, such as respiratory arrest and overnight oxygen desaturation. Where 32.14% of patients with DD had a complication after surgery, only 8.72% of patients without DD had a complication. Other complications included post-operative hemorrhage, dehydration and vomiting.

Furthermore, patients with moderate to severe DD had a higher risk for post-operative complications compared to patients with mild DD. Patients with Down syndrome, Global Developmental Delay or two or more delays in developmental milestones were classified as severe. Within the severe DD subgroup, 9 out of 13 patients (69.23%) experienced a complication after surgery.

This study emphasizes the need for in depth pre-operative planning for

patients with DD to lower risk of complications post-operation. Researchers suggest this need is heightened for patients with moderate to severe DD, but more research is needed to define DD severity and how it affects surgical outcomes.

"This elevated risk of complications should be included in pre-operative counseling and has potential implications for pre-operative decision making and treatment plans in this high-risk population," said Sheyn.

"We suggest in depth counseling and close follow up after [surgery](#) for these patients to help reduce the current findings of an increased complication rate."

**More information:** Jordan B. Luttrell et al, Outcomes and considerations in children with developmental delay undergoing tonsillectomy, *International Journal of Pediatric Otorhinolaryngology* (2022). [DOI: 10.1016/j.ijporl.2022.111393](https://doi.org/10.1016/j.ijporl.2022.111393)

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