

# Full-length inferior turbinate reduction best improves airflow

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(HealthDay)—The effectiveness of partial inferior turbinate reduction

(ITR) for the treatment of nasal obstruction may depend on individual patient anatomy, according to a study published online Jan. 25 in *JAMA Facial Plastic Surgery*.

Thomas S. Lee, M.D., from Virginia Commonwealth University in Richmond, and colleagues used computational fluid dynamics models to evaluate the effectiveness of ITR techniques to improve nasal airflow. Seven CFD models were created for each of five patients to evaluate total airflow rate and nasal resistance for six potential ITRs.

The researchers found that for all five patients, full ITR over the whole length was consistently most effective to improve nasal airflow and resistance when adjusted for the volume. There was a strong linear relationship between nasal volume changes and nasal airflow seen in regression analysis. There was not a consistently most effective location for partial turbinate reduction. The effectiveness of posterior versus anterior ITR was also not consistent among [patients](#). Even within one individual, the site of most effective partial ITR differed from one side to the other.

"The fact that full ITRs were consistently most effective and the linear regression between flow and nasal volume changes may indicate that the entire length of the IT has a functional impact on nasal [airflow](#) and [resistance](#)," the authors write.

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