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**WILEY**

[Intervention Review]

# Inferior turbinate surgery for nasal obstruction in allergic rhinitis after failed medical treatment

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## ABSTRACT

### Background

Allergic rhinitis is a highly prevalent disease that results from an IgE-mediated hypersensitivity reaction of the nasal mucosa to inhaled allergens. It is primarily treated by allergen avoidance and medical treatment, but when these measures fail to control symptoms then surgery to the inferior turbinates of nose is often performed. It is unclear whether these procedures are beneficial in the long term or indeed whether the risks outweigh the benefits.

### Objectives

To assess the effectiveness of inferior turbinate surgery on unrelieved or partially relieved nasal obstruction in patients after maximal medical treatment of proven allergic rhinitis, to compare the results using different surgical techniques and to measure short and long-term results.

### Search methods

We searched the following databases from their inception for published, unpublished and ongoing trials: the Cochrane Ear, Nose and Throat Disorders Group Trials Register; the Cochrane Central Register of Controlled Trials (CENTRAL) (*The Cochrane Library* 2010, Issue 2); PubMed; EMBASE; CINAHL; LILACS; KoreaMed; IndMed; PakMediNet; CAB Abstracts; Web of Science; BIOSIS Previews; CNKI; mRCT (Current Controlled Trials); ClinicalTrials.gov; ISRCTN; ICTRP (International Clinical Trials Registry Platform); Cambridge Scientific Abstracts; Google and additional sources for published and unpublished trials. We modelled subject strategies for databases on the search strategy designed for CENTRAL. The date of the most recent search was 6 July 2010.

### Selection criteria

Randomised controlled trials of inferior turbinate surgery versus continued medical treatment for proven allergic rhinitis, or comparisons between one technique of inferior turbinate surgery versus another technique, after maximal medical treatment.

### Data collection and analysis

Both authors independently screened the search results and assessed the full text of potentially relevant studies. We attempted to contact trial authors for additional information.

### Main results

There were no studies that fulfilled the inclusion criteria of the review.

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**Authors' conclusions**

This review highlights the need for randomised controlled trials to evaluate the role of inferior turbinate surgery for nasal obstruction in allergic rhinitis after failed medical treatment. Future trials need to be rigorous in design and delivery, separate adults from paediatric patients, not combine allergic with non-allergic patients and last long enough to determine long-term results and complications.

**PLAIN LANGUAGE SUMMARY****Surgery to the inferior turbinate (lining of the nose) in order to relieve nose block in allergic rhinitis after failed medical treatment**

Inferior turbinate (lining of nose) surgery is a commonly performed procedure in ENT as shrinking the lining may reduce some of the symptoms of allergic rhinitis, particularly nose blockage. This procedure is carried out using a multitude of techniques including cauterisation, laser and plasma knife. Although unusual, there is the potential for complications such as excessive bleeding and dry nose from these procedures.

We set out to identify randomised controlled trials (RCTs) of inferior turbinate surgery compared to continued medical treatment in allergic rhinitis patients in whom medical treatment had failed to relieve symptoms. We also looked for RCTs comparing one technique of turbinate surgery with another. Although our search was extensive, we were not able to find any RCTs which met our inclusion criteria.

Research, in the form of properly conducted trials comparing various techniques and assessing long-term results and complications, has not yet been done in this field. We therefore conclude that the evidence in the literature is not robust enough about the usefulness of surgery using any technique for this condition.