

## Treatment of Enlarged Turbinates in the Nose Pre-operative Information

### What are the turbinates?

The turbinates are structures located on the nasal sidewall that function to humidify and filter air. They jut out into the nasal airway and can block the nose if they become diseased or enlarged.

### What are the symptoms of enlarged turbinates?

Enlarged turbinates cause nasal blockage or stuffiness. They can also secrete large amounts of mucus. They can also be the cause of snoring in some people.

### What causes turbinates to enlarge?

Common causes of turbinate enlargement are –

- Allergic rhinitis (hay fever) – most commonly house dust mite, pollens, grasses or mould
- Chemical irritants including cigarette smoke
- Long-term use of over-the-counter decongestant sprays
- A persistent (chronic) sinus infection
- A bent septum which allows the inferior turbinate to grow into the space left in the wider airway.
- Abnormal growth of the middle turbinate which grows with a large hollow air cell within it (a concha bullosa)

### How is inferior turbinate enlargement treated?

Many techniques are used to treat enlarged turbinates and most do shrink the size to some degree. It is very important not to remove too much turbinate tissue because this can leave the nose dry and patients can develop troublesome crusting within the nose. If the procedure is too conservative and the turbinate is not sufficiently reduced in size the patient may not notice much of a difference in their breathing.

In most patients Dr Roth recommends a type of inferior turbinate reduction called a submucous resection of the turbinate. Here the mucosa overlying the turbinates is carefully and precisely lifted. The bone is then removed and the mucosa is carefully preserved and curled into a smaller new turbinate structure. This provides an excellent airway but maintains the ability of the turbinates to humidify and filter air. No skin incisions are made and the shape of the nose remains unchanged.

### How is middle turbinate enlargement treated?

Enlargement of the middle turbinate can partly block the nasal airway and drainage from the sinuses into the nose. This is usually caused by development of an abnormal air cell within the turbinate called a “concha bullosa”.

Dr Roth treats an enlarged middle turbinate with keyhole endoscopic sinus techniques. This involves leaving sufficient support for the turbinate but removing the obstructing component.

### Are there alternatives to surgery?

There are a number of things that can be done to treat enlarged turbinates that may prevent surgery being necessary. These include the following –

- Avoidance of triggers – allergies, cigarette smoke.
- Long-term and regular use of a steroid nasal spray.
- Avoidance of over-the-counter decongestant sprays
- Treat any infected sinuses appropriately
- Allergy assessment and treatment – this may include antihistamine tablets or sprays, steroid sprays, saline sprays or immunotherapy.

### **What are the risks involved in turbinate surgery?**

- The turbinates have a rich blood supply and most patients experience some bleeding over the first week. Occasionally this requires them to come back to hospital for treatment but most of the time settles down quickly.
- In a small number of patients, the removal of turbinate tissue can cause chronic dryness of the nasal cavity. This may cause crusting, a sensation of nasal stuffiness or in some cases disturbances in the sense of smell.
- Adhesions (strands of scar tissues) may form across the nasal cavity which could require further minor surgery.
- As the surgery is a balance between removing enough tissue and not too much occasionally patients may need further surgery if there is persistent or recurrent swelling of the turbinates.
- Sensation of continued blockage and discomfort may occur even though airflow through the nose is more than adequate. This may be due to poor sensation from airflow receptors because some have been removed from the turbinates during surgery.