

Functional Endoscopic Sinus Surgery (FESS)

South Infirmary Victoria University Hospital Dept of Otolaryngology.

Indications:

FESS is usually performed to treat chronic or recurrent sinus infections, and / or to remove polyps from the nose. Other indications include tumour removal, repair of skull base defects, and treatment of certain eye conditions.

How it is performed:

Small narrow cameras are inserted through the nostrils into the inside of your nose, similar to what is performed in the clinic to examine the nose. Specially designed instruments are also placed through the nostrils and in this way the surgery is performed. There are no “cuts” on the outside.

Object of surgery:

Sinuses are cavities within the bones of the face, which are usually filled with air. The lining of sinuses produces a secretion which drains via natural pathways into the nose. From here it usually goes to the back of the nose and is swallowed.

The usual cause of sinus infections is diseased tissue in the area where the sinuses are supposed to drain. Thus the sinuses are prevented from draining naturally, leading to retention of secretions, lack of oxygen in the sinuses, and worsening infections. A vicious cycle is created whereby infection within the sinuses causes the diseased tissue to become more swollen and diseased, which further blocks sinus drainage and worsens infections. In addition, many patients with sinusitis also suffer from nasal **polyps**. These are benign swellings which arise from the lining of the nose which can further block the drainage of the sinuses, as well as block airflow through the nose in general.

The object of sinus surgery in this situation is to remove nasal polyps, remove the badly diseased tissue (usually small bits of bone) and open up the natural drainage pathways of the sinuses. Most patients will need **anterior ethmoids** (sinuses between the eyes at the front) and **maxillary** sinuses (large sinus in each cheek) opened. Some patients will also need **posterior ethmoids**, **sphenoids** (sinuses between the eyes at the back of the nose) and **frontal** (forehead sinuses) opened.

Sinus surgery is only half the cure for sinusitis / polyps. This is because the lining of your sinuses will continue to have a lifelong propensity to develop polyps and / or become diseased if not looked after. You will have to continue to use nasal irrigations and sprays for a long time (maybe lifelong) in order to prevent recurrent problems.

What you can expect post-surgery:

Very small packs will be left inside your nose which will be removed at the first post-operative visit, one week post surgery. Initially it is very important to irrigate your nose 2-3 times daily. You will have some

crusts and clots building up in your nose for the first two weeks. If you are not able to blow these out yourself, they will be removed for you in the clinic.

Within a few weeks, you should experience improvement in your symptoms, however, you will have to irrigate your nose with saline twice daily for at least a year, and preferably lifelong.

If your main symptoms are headache and/or post-nasal drip, it is quite possible these symptoms will not improve. This is because many patients with sinusitis also have migraine or other condition causing headache, which is not addressed by surgery. Likewise, the efficacy of FESS in improving post-nasal drip is disappointing.

What are the risks?

The most common problem is further sinus infections or recurrent polyps in the future. This occurs primarily because of the inherent propensity of the lining of the individual patient's sinuses to become diseased again in the future or to grow new polyps. Occasionally, the surgery itself can cause scarring which aggravates sinus problems (this is minimized by using the packs and copious postoperative irrigation). The risk of recurrent problems can be minimized by continuing to use irrigations / sprays as instructed. Most cases of recurrent problems can be managed without recourse to further surgery, however, further surgery within a patient's lifetime may be required in up to 20-30% of patients.

While the risk of serious complications is very low, it does exist. These risks include: permanent loss of vision; permanent double vision; permanent loss of smell; leakage of spinal fluid; and meningitis or other brain infection. The risk of these serious complications is much less than 0.5%. These risks are higher in patients undergoing more extensive sinus surgeries (e.g. frontal and sphenoid sinus surgery), or in patients who have had previous surgery.

Other uncommon, but less serious, complications, include nose-bleeds; black eye; or tearing eye. These problems usually self-resolve or are easily corrected.

Septoplasty

It may be necessary to straighten your septum (the partition which divides the right and left halves of your nose on the inside), if this is crooked and preventing us from performing surgery adequately.

Specific risks which may be inherent to performing septoplasty include the following:

1. Septal perforation: occasionally (<5%) when the septum heals, a perforation (hole) appears (this is on the inside so cannot be seen from the outside). Many patients will not even be aware of this; others may complain of troublesome crusting, bleeding or whistling. Most cases can be managed with simple measures, occasionally further surgery is necessary.
2. Loss of support: Septoplasty involves removing some of the crooked cartilage, however, if there is excessive cartilage removal or loss in the part of the septum which supports the bridge of the nose, then an unsightly change in the appearance of the nose may occur (risk 1-2%).
3. Blood clot within the septum: this will need to be drained promptly to prevent cartilage loss.
4. Nasal blockage: Septoplasty is performed to correct nasal blockage caused by a crooked septum; however, there may be other causes for nasal blockage (e.g. swollen lining of the nose). Furthermore, with time, the straightened septum may spring back to its original crooked shape.
5. Nose bleed
6. Loss of smell; spinal fluid leak; meningitis; eye injury: extremely low risk (<0.5%).