

# BALLOON SINUPLASTY



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## TREATING SINUSITIS WITH BALLOON SINUPLASTY

Sinusitis is an inflammatory condition of one or more sinuses. Whether it's acute or chronic, sinusitis can be a painful and often wearying nasal condition. It's actually surprisingly common, and affects thousands of people in the UK. Where antibiotics and or other topical treatments have provided minimal relief, sinus surgery, and specifically Balloon Sinuplasty, is effective for chronic sinusitis symptoms or to treat those suffering from recurrent episodes of acute sinusitis

Allergic and non-allergic nasal inflammation (*rhinitis*) can also be associated with chronic sinusitis. Healthy sinuses can often make 'rhinitis' easier to manage and patients should be referred to an ENT (*ear, nose and throat*) specialist, who specifically has expertise in treatment for the condition with modern surgical techniques, specifically balloon sinuplasty.

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### WHAT IS BALLOON SINUPLASTY?

- Balloon Sinuplasty is a modern, less invasive method of dilating obstructions associated with many types of sinus disease. It has been FDA approved since 2005.
- It's faster and less-invasive than other forms of surgery to treat mild to moderate chronic or recurrent acute sinusitis
- The procedure takes around 30 minutes and can be performed under general or local anaesthetic dependent on patient preference. It's performed as a day case procedure and no nasal packing is required post operatively.
- Balloon sinuplasty can also be combined as a hybrid procedure with traditional surgical techniques to manage patients with nasal polyps and frontal sinus symptoms, or more severe sinusitis.

### HOW CAN BALLOON SINUPLASTY HELP SUFFERERS OF SINUSITIS?

Balloon Sinuplasty offers a safe technology and is excellent at reducing the symptoms of sinusitis for patients. In some cases, chronic sinusitis can make nasal breathing problems worse, but patients generally find these problems are improved significantly with treatment.

Of course, not all nasal obstruction is caused by the sinuses. Other nasal problems like a deviated nasal septum and enlarged nasal turbinates or polyps can also cause obstruction, so seeing an ENT surgeon for an endoscopy is important, as determining the true cause for the problem is an important part of treatment planning.

## DO PATIENTS NEED ANY TESTS PRIOR TO SURGERY?

Patients will routinely undergo a nasal video-endoscopy under local anaesthesia in clinic at the first appointment. This can quickly identify any anatomical contributing factors for recurrent sinusitis such as a deviated nasal septum or rhinitis causing turbinate hypertrophy (these may not be apparent on anterior rhinoscopy with a headlight). A CT scan of the sinuses is vital prior to any form of sinus surgery. The shape and pattern of the nasal sinuses is as unique as your fingerprint, and the scan helps us as surgeons to plan and carry out the operation safely by identifying any anatomical variations. We like to review the images of scans in person with patients to fully explain the procedure. If there are symptoms of allergy, we can check what may be allergic triggers with a simple blood test (serum IgE and RAST for inhaled aeroallergens). This is also helpful to identify those patients that may need long term treatment for allergy following surgery.

## WHAT HAPPENS DURING BALLOON SINUSPLASTY FOR CHRONIC SINUPLASTY?

The procedure can be performed either under general or local anaesthesia. The nasal mucosa is first decongested and then topical anaesthesia applied. An endoscope is inserted via the nose to give the surgeon clear vision and access to the sinuses. An illuminated guide catheter is then passed through the natural ostium in to the relevant sinus (frontal or maxillary) and its correct placement is confirmed with the glow of transillumination through the facial bones (*FIGURE 1*).

A medical balloon is then inserted over the illuminated catheter. The balloon is inflated with saline in a controlled way, which will slowly dilate the sinus openings and widen the walls of the sinus passageway. This causes microfractures in the natural bony channels that drain the sinuses. The result is a durable and permanent change in the shape of these channels. As the procedure is gentler than traditional sinus surgery, it is associated with less internal scarring, less bleeding, faster recovery and a permanent relief of most symptoms. People who have rhinitis (inflammation in the lining of the nose) may still need to use some steroid nose sprays long term to treat this, although they tend to work better following surgery. This is because the surgery improves access and penetration of the sprays to the affected area.

Widening the sinus walls should resume normal drainage in the area, and clear the symptoms of chronic sinusitis or recurrent acute sinusitis (*FIGURES 2 and 3*).

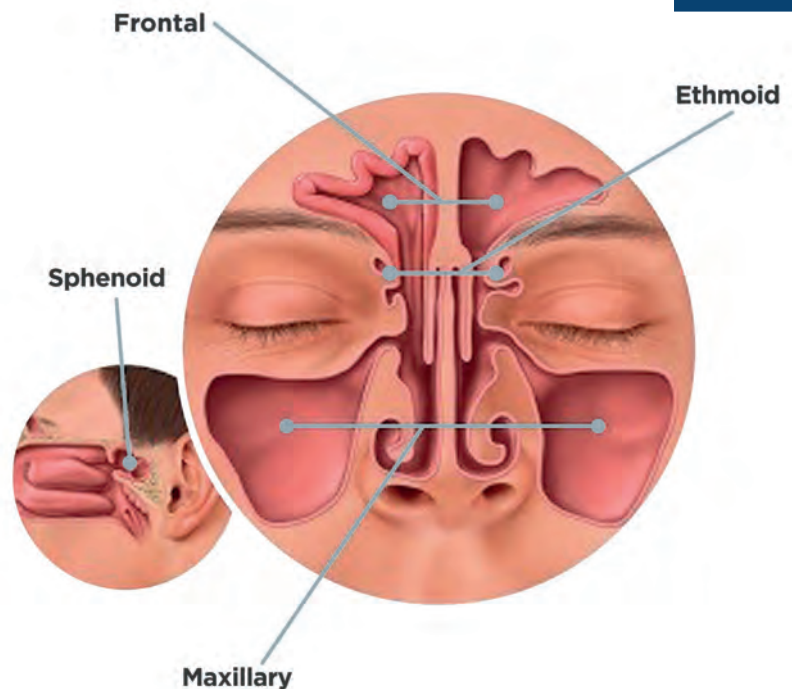
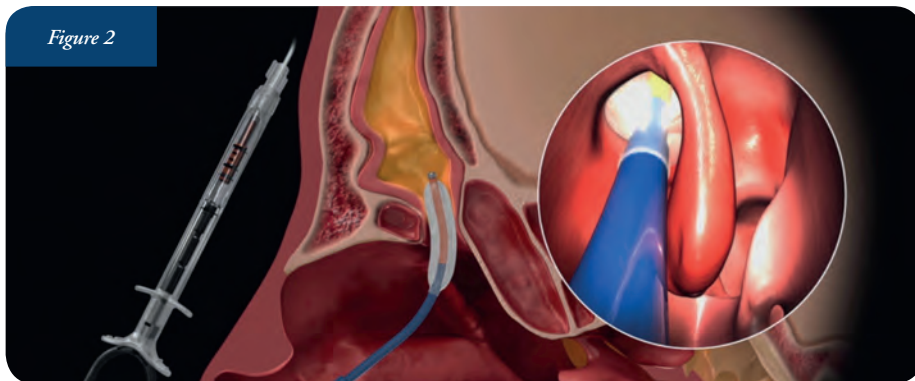


Figure 1

Figure 2



## WHAT'S THE RECOVERY PROCESS LIKE?

Post-operatively, patients should be able to return home on the same day providing the procedure went well and can manage any pain experienced with mild pain relief, such as co-codamol. They will likely experience some swelling in the nasal cavity the following few days. A small amount of epistaxis is usual for the first 2-3 days but this is manageable at home. Most people can return to work within 3-4 days.

Most patients find that after around 3-4 weeks, an improvement to their sinusitis symptoms is noticeable and their quality of life has improved. Offering long term relief from sinusitis, Balloon Sinuplasty is a popular and well-regarded form of treatment.

## WHAT ARE THE RISKS OF BALLOON SINUPLASTY?

In general this is a very safe, predictable technique with a low complication rate. The most common possible postoperative issue is an epistaxis that might require an overnight stay rather than the patient being discharged home the same day. With any sinus

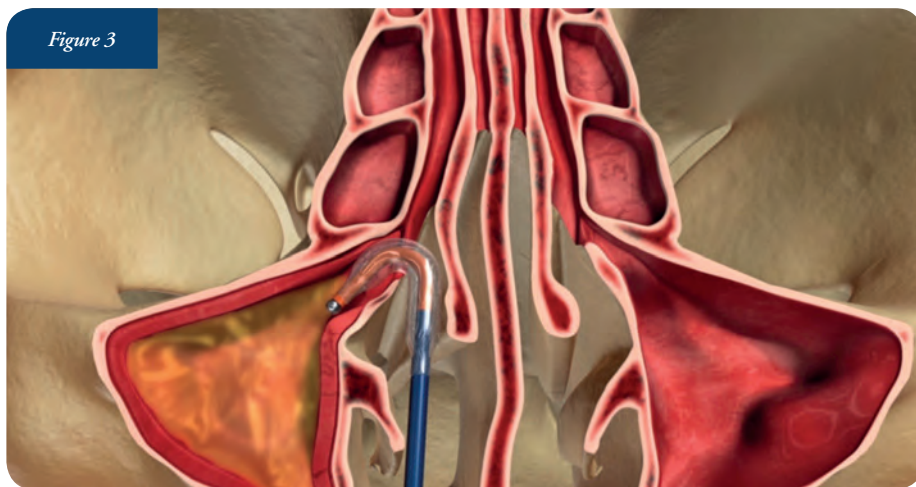
surgery there is a theoretical risk of trauma to the orbit or ethmoid blood vessels affecting vision, or to the anterior skull base causing a CSF leak. The published rate for these more serious complications is about 1% although our local audited rate is much less than that.

## WHAT ARE THE LONG TERM RESULTS?

Balloon dilation is significantly better than traditional endoscopic sinus surgery for short term recovery outcomes of nasal bleeding, recovery time, and duration of postoperative pain medications.

Revision rates for standalone and hybrid (combined with traditional sinus surgery) balloon dilation procedures range from 1.3-9.2%, while traditional sinus surgery revision rates range from 2.4-12.5%.

Figure 3



## SUMMARY

Unlike conventional sinus surgery, Balloon Sinuplasty preserves the normal anatomy of the sinuses and mucosal tissue, and does not require the removal of bone and tissue. This means recovery is faster and better tolerated than with traditional techniques. For selected patients with recurrent acute sinusitis or mild chronic sinusitis, this means treatment can be completed and

## CASE Study:

**History:** A 45 year old lady was referred by her GP for symptoms of nasal congestion, recurrent facial pain, pressure and discoloured nasal discharge. She was also reviewed by a neurologist who organised a CT scan demonstrating mild/moderate chronic disease of the lining of the maxillary sinuses.

**Examination:** Nasendoscopy showed mucosal oedema around the middle meatus (drainage pathway of the maxillary and frontal sinuses) and a nasal septal deviation.

**Treatment:** She underwent a septoplasty and bilateral frontal and maxillary sinus balloon dilatation under general anaesthetic. Three months following the procedure she reports continued improvement in sinonasal symptoms and had minimal downtime for recovery from surgery.



normal life resumed much faster.

### Patient information websites:

<http://www.thefacesurgeons.co.uk/treatments/nose-2/balloon-sinuplasty/>

<http://www.sinussurgeryoptions.com/>