



## NASAL ENDOSCOPY

### WHAT IS NASAL ENDOSCOPY?

Nasal Endoscopy is a procedure that allows a physician to look at the inside surface of the nose. It is done by inserting an endoscope into the nostril. Endoscopes are rigid or flexible optical devices that are similar to a telescope. The endoscope is connected to a light source. Your doctor may look directly through the endoscope or attach it to a video camera. The video camera projects magnified images on a screen. Many cameras also have the ability to take photographs and record videos.

### WHAT ARE THE BENEFITS OF NASAL ENDOSCOPY?

Without an endoscope, the nasal cavity is examined using a speculum and a head-light. This is referred to as anterior rhinoscopy. Unfortunately, anterior rhinoscopy only allows your doctor see a small portion of the nasal cavity. Nasal endoscopy, however, allows for better visualization of the nasal cavity and the drainage pathways of the sinuses. There are also endoscopes that have angled lenses which help to look at structures around bends and corners. These benefits have made the nasal endoscope integral in the management of nasal and sinus conditions.

### WHY IS NASAL ENDOSCOPY PERFORMED?

Nasal endoscopy is most commonly performed by Otorhinolaryngologists (Ear Nose & Throat or ENT doctors). The procedure is routinely done in outpatient clinics. It is used to evaluate patients with nasal or sinus complaints. Stuffiness, facial pain or pressure, nose bleeds and loss of smell are among the symptoms that may lead your doctor to recommend the procedure. He/she is looking for signs of infection, inflammation, bleeding, anatomic abnormalities, and abnormal growths/tumors. Nasal endoscopy is also used to perform procedures in the nose and sinuses. These may be done in the office or in the operating room.

### WHAT PROCEDURES CAN BE PERFORMED WITH NASAL ENDOSCOPY?

The following procedures are conducted with the nasal endoscope, often in the office setting.

**Control of epistaxis:** Nose bleeds (epistaxis) are a common problem. In some cases, small blood vessels can be cauterized to treat the problem. Nasal endoscopy may be necessary to identify and treat the source of bleeding.

**Nasal debridement:** After surgery, a commonly performed procedure is called debridement. Suction, small instruments and the nasal endoscope are used to clean the nose and sinus cavities. Debridement is important after nasal and sinus surgery to limit scar tissue and optimize healing.

**Foreign body removal:** Objects that are inappropriately placed in the nose are called foreign bodies. When difficult to remove or placed deep in the nose, an endoscope may be used for retrieval.

**Sinus balloon dilatation:** A balloon device may be used to enlarge the natural openings of the sinuses (ostia). It may be offered by your doctor to treat recurrent sinus infections or mild chronic sinusitis (See Balloon Sinuplasty).

**Endoscopic sinus surgery:** Sinus surgery is now almost always performed with the use of endoscopes. However, as opposed to other procedures, it is typically done in the operating room. The endoscope provides surgeons with a magnified view of the inside of the nose and sinuses. This allows for safer and more precise surgery. Common procedures include sinus surgery (See Endoscopic Sinus Surgery), septoplasty and turbinate reduction (See Septoplasty and Turbinate Surgery). Recently, surgeons have begun using the nasal endoscope to treat diseases outside of the nose and sinuses. These minimally invasive techniques are performed through the nose, to reach the orbits, base of skull, brain and upper spine. The endoscope has made these procedures less invasive, less morbid and more effective.

### **HOW IS NASAL ENDOSCOPY PERFORMED?**

Nasal endoscopy is usually performed in a seated position. Prior to the procedure, your doctor may spray your nose with a numbing (anesthetic) medication and a decongestant. This allows for better visualization and minimizes your discomfort. The nasal endoscope is passed into each nostril, one at a time. The endoscope travels in the direction of the floor of the nose (not going towards the eye or brain).

### **WHAT ARE THE RISKS OF NASAL ENDOSCOPY?**

Nasal endoscopy is very safe. It can cause some minor discomfort but is usually not painful. Nonetheless, in rare cases, complications can occur.

Trauma to the membrane that lines the inside of the nose (mucosa) can cause bleeding. This risk is higher in patients susceptible to bleeding. Blood thinners (Aspirin, Coumadin, etc.) and clotting disorders (Hemophilia, Von Willebrand disease, etc) increase the risk of bleeding.

In rare cases, a vasovagal reaction may also occur. This reaction is a reflex that causes the heart rate and blood pressure to decrease. A patient may feel nauseous, light headed or briefly pass out. Many patients will have experienced this reaction in the past, often at the sight of blood. Medical procedures and stressful situation may also trigger the response. If you have experienced this in the past, it is best to notify your doctor prior to the procedure. Treatment is simple as symptoms typically resolve when the head is laid flat.

Although extremely rare, allergic reactions to the numbing and decongesting medications may occur. It is important to notify your physician of any drug allergies you have prior to the procedure. The risks of sinus surgery are described in a separate section (See Endoscopic Sinus Surgery).



Figure 1. Example set-up and positioning for rigid nasal endoscopy

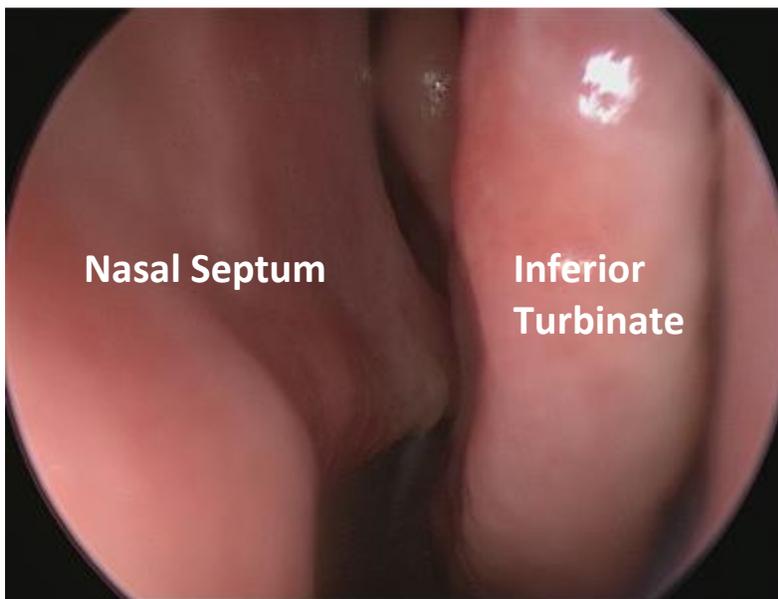


Figure 2. Example of the left nostril. During nasal endoscopy, the septum and inferior turbinate are seen as you enter the nose. The (deviated) nasal septum is noted on the left of the image. The inferior turbinate is located on the right of the image.

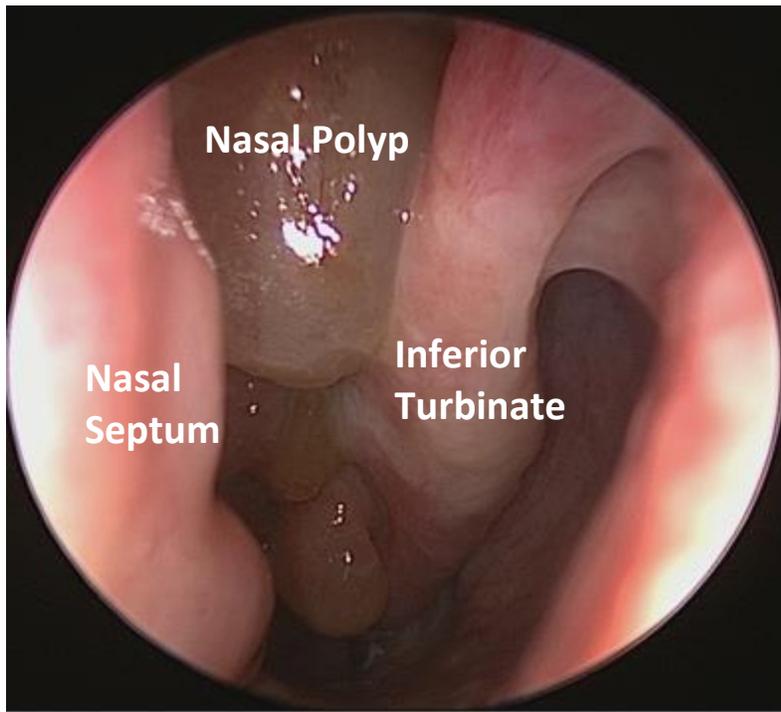


Figure 3. Nasal polyps are a sign of chronic inflammation in the nose. Here is an image of the left nasal cavity filled with nasal polyps.

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