



## Septal perforation

### ABOUT THE CONDITION

#### What is a nasal septal perforation?

The nasal septum forms the middle partition wall of the nose. It separates the right and left side of the nasal cavity. The septum is made of cartilage in the lower two-thirds and solid bone in the upper third covered by skin and mucosa on both sides. Thus, it has three layers.

A hole can develop in the septum if there is loss of all three layers in the same area. This is also called a Nasal **septal perforation**.

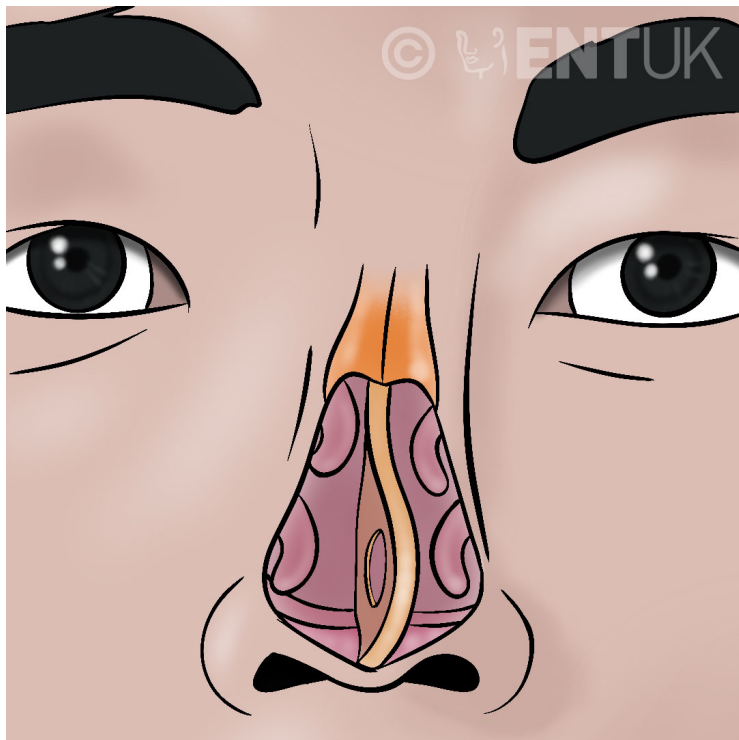


Figure 1. A hole in the nasal septum



Figure 2. A large hole can cause a change in the shape of the nose (saddle nose)

#### What symptoms can I have?

Most people do not have any symptoms. They may have seen a hole in the septum in the mirror, felt a hole with their finger whilst cleaning the nose, or been told by a doctor that there is a hole in the septum during an examination.

A hole in the nasal septum disrupts the normal flow of air passing in and out of the nose. Large holes in the septum causes a lack of support to the nose.

You may have the following symptoms, to varying degrees:

- a feeling of blockage (even though the nose is not physically blocked)
- crusting in the nose (dry nasal mucus)
- recurrent nosebleeds
- foul-smelling discharge from the nose
- whistling noises when breathing through the nose (especially if the hole is small)
- change in the shape of the nose (if the hole is very large). From the side, the nose can look like a saddle. (Figure 2.)

The most troubling symptoms for some patients are often crusting and nosebleeds.

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## What causes a hole in the nasal septum?

There are a number of causes that can create a hole in the nose.

### Traumatic causes

Physical damage and trauma come in many forms. This is the most common cause of a septal perforation (39%). Anything that causes repeated rubbing of the inside of the nose can damage the nasal lining and underlying cartilage by forming ulcers that could break down and become a hole.

- a blow to the nose, picking your nose
- feeding tubes (nasogastric tubes)
- tubes delivering oxygen to the front of your nostrils (oxygen nasal cannula)

Foreign objects stuck in the nose can cause trauma and sometimes create a hole. Button batteries in the nose are especially dangerous as they immediately cause corrosion and damage to the inside of the nose, particularly nasal septum.

Surgery on the nasal septum ([septoplasty](#)) is a common cause of septal perforation (especially if there has been a blood clot or abscess in the septum after the operation).

Occasionally, repeated cautery for recurrent nose bleeds can cause a hole.

### Medication

Prescription drugs (for example corticosteroids and some over the counter nasal decongestants sprays or drops) can cause irritation to the lining of the nose.

Illegal drugs like cocaine, illegal highs and “cutting” substances can cause holes in the nose. The impurities can cause a lot of crusting and damage to the nasal lining. Cocaine also narrows blood vessels and slows the flow of blood and nutrients to the cartilage or gristle of the nasal septum.

### Chemical Irritants

Dusts and certain chemicals at work or created during your hobbies (e.g. woodwork), can also irritate the lining of the nose. It is important that your employer ensures protective masks are available to use if this is a risk.

### Inflammation

There are some diseases that cause inflammation and scarring of tissues that can affect the nasal septum. These conditions are **rare**. Your doctor might ask about diseases like sarcoidosis, granulomatosis with polyangiitis (GPA), systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), Crohn’s disease and anti-phospholipid syndrome, which have been linked to holes in the septum. Sometimes, finding a hole in the nose makes your doctor organise a series of tests which may lead to the diagnosis of the above conditions. You may feel very tired if you have the above conditions.

# Infections

Viral infections can occasionally cause ulcers and ultimately a hole in the septum, as can a severe bacterial infection. Tuberculosis, syphilis, AIDS and fungal infections have been known to cause holes in the nose.

# Cancer

Whilst extremely rare, cancer in the nose can sometimes present itself as an ulcer that does not heal and gets bigger. You may also have bleeding and pain.

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## Do I need any tests?

Your doctor will ask about your symptoms, ask about your general health, medication, your nasal cleaning routine and questions relevant to any possible cause for a hole in the septum. They will examine the inside of the nose using a light. Occasionally an examination of the whole of the inside of the nose is needed with a [flexible nasal endoscopy](#).

## Blood tests

Blood tests will be taken to look for signs of an infection, inflammation, vasculitis or any other autoimmune cause. An autoimmune condition occurs when one's own body creates antibodies against one's own organs.

## Urine tests

You may be asked to provide a urine sample, which can help detect if the hole is caused by an autoimmune condition.

## Scans

Sometimes a chest x-ray is performed, as holes in the nose can be associated with problems in the chest. Very rarely, we may need to do a scan of the nose and sinuses in the form of CT or MRI scans. Your doctor will tell you the specific reasons for any scans.

## Biopsy

If the lining around the edge of the hole looks irregular, then we may need to take a sample of tissue to be examined under the microscope. This can be done under local anaesthetic in the clinic or as part of any future surgical procedure under general anaesthetic. If the hole has a nice smooth edge and the lining of the nose is healthy then a biopsy is not required.

## Other tests

A swab from the inside of the nose or tests for specific infections may be taken.

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## How is a septal perforation treated?

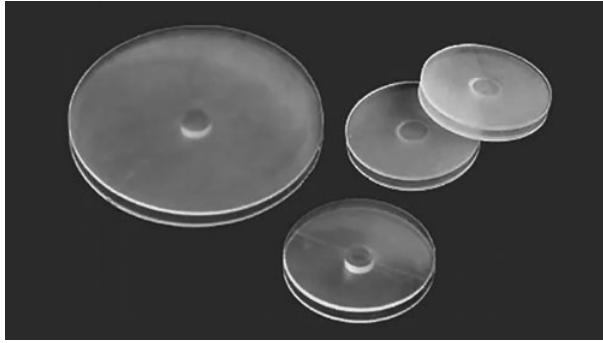
You will be referred to a rheumatologist or kidney specialist if your tests show any autoimmune or other vasculitis conditions.

Many of the symptoms can be reduced or controlled by keeping the inside of the nose moist and clear from crusts.

- Avoid picking your nose as pulling on the crusts may cause the fragile nasal lining to bleed.
- Use daily nasal washes to remove crusts.

- Applying petroleum or water-based jelly around the edges of the hole helps moisturise the nasal lining and traps any nasal irritants.
- In some patients, a course of antibacterial cream is prescribed, especially if nose bleeds are a troublesome symptom.

If symptoms are still troublesome despite the above, surgery may be required. The hole can be blocked using a silicon septal button. The button can be trimmed to the correct size. The button bridges the hole and acts like a new nasal septum. It can remain inside the nose for years without causing any problem. It is still important to follow the instructions above to keep the inside of the nose moist and clear of crusts.



*Figure 3. Septal buttons*

Surgery to close the hole using your body's tissue has a high risk of breaking down (this means that the hole reforms). The larger the hole, the more difficult it is for the graft to take, hence the lower the success rate.

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***Disclaimer:*** This publication is designed for the information of patients. Whilst every effort has been made to ensure accuracy, the information contained may not be comprehensive and patients should not act upon it without seeking professional advice

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