



## Trans-nasal oesophagoscopy (TNO)

### ABOUT THE PROCEDURE

#### What is trans-nasal oesophagoscopy?

Trans-nasal oesophagoscopy (TNO) is a procedure used to examine the throat, voice box and food pipe. Sometimes, your surgeon may look inside your stomach.

A flexible tube with a camera at the tip (called an endoscope) is inserted into your nostril to look at these areas. The procedure usually takes less than ten minutes, but your appointment may last up to 30 minutes. If other actions are required, the endoscopy may take longer.

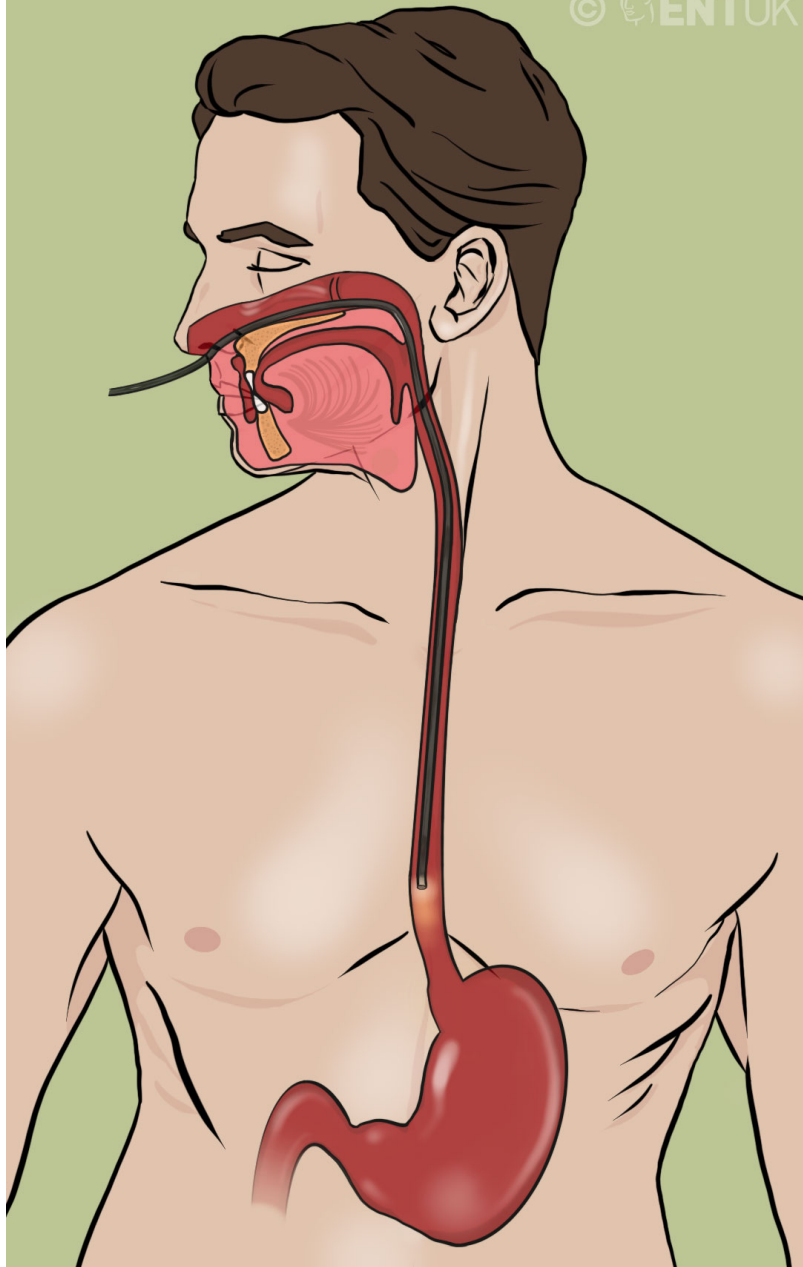


Figure 1. Position of the endoscope through the nostril and into the food pipe.

## Why do I need to have a TNO?

The procedure is recommended by your surgeon to help work out the cause of your symptoms. These may include:

- swallowing problems in your throat or upper food pipe
- problems with your voice
- pain in your throat
- a chronic cough, suspected to be the result of silent acid reflux
- feeling like you have a lump, or something stuck in your throat.

TNO is used to find some types of throat cancer. It is also used by some surgeons to take a tissue **biopsy** or as part of an additional treatment or investigation. For example, a balloon guided by the endoscope can be inflated to gently widen a tight area of the food pipe. Or TNO can be used to cut scar tissue from the upper food pipe with a laser.

Your surgeon can tell you more about these procedures, and any associated risks, if required.

## What happens at your appointment?

During your appointment, your surgeon will make sure you wish to go ahead and will check that you are not allergic to the local anaesthetic used.

A nurse will take your observations (pulse, blood pressure, respiration rate, oxygen level and blood sugar level if you are diabetic).

- Local anaesthetic will be used to numb the nose, mouth and throat. Once you swallow the anaesthetic, the upper food pipe will become numb as well.
- The surgeon will insert the slim endoscope (which is about half a centimetre wide) through one nostril, down into your throat and food pipe to perform the examination.
- Gel will be applied to the scope to make it feel more comfortable inside your nose.
- The procedure is usually performed while you are sat in a chair. You may prefer to lie down on your side.
- Throughout the procedure, you will be able to breathe in through your nose and out through your mouth or nose.
- During the procedure you may be asked to sniff, say 'ee' or 'aa', puff out your cheeks or swallow a sip of water.
- The TNO scope can puff air and suck up any fluid, which helps your doctor get a good view on the camera.
- Puffed air might make you to feel bloated and might make you burp. This is normal. You should let the burps out to avoid a tight feeling in your food pipe.
- Your surgeon will record the examination and can show you the video afterwards to help explain the cause of your symptoms.
- A **biopsy** (a small piece of the lining of the food pipe) may be taken during the test. You will be contacted with the results.

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## Am I awake during the examination?

Yes. TNO is usually performed under local anaesthetic. Your nose and throat are numbed with local anaesthetic before the procedure.

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## Will I feel the endoscope?

You will feel the endoscope moving inside your nose and at the back of your throat. It should not be painful. Sometimes it can feel a bit uncomfortable. More local anaesthetic and more gel in the nose can be used if needed.

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## What happens before the appointment?

Before the TNO takes place, the surgeon will explain the aim of the procedure, what it involves, and what the risks are. The surgeon will provide you with a consent form if you wish to proceed.

### Eating

Please do not have anything to eat or drink for three or four hours before your procedure. You are, however, allowed to take sips of clear fluids such as water.

## Medications

- Stop taking any anti-acid medication two days before the test.
- If you are diabetic and take either blood sugar lowering tablets or insulin, your surgeon will tell you if you should stop your medication, or if you should take sugar water to keep your blood sugar level normal.
- Your surgeon will tell you if you need to stop your blood thinning medication (or anticoagulants) before your appointment.
- Take the rest of your daily medication as usual before going in for the procedure.
- Please bring a list of all your medications.

## Smoking

Smoking makes you more likely to feel sick during the procedure. It can also irritate the lining of your nose and make you more sensitive to the procedure. It might also be responsible for your medical problem. It is advisable that you stop smoking altogether. The hospital, your GP or local pharmacist will be able to support you if you would like to stop.

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## What happens after the procedure?

After the procedure, you will be observed in the waiting area for between ten minutes and half an hour, depending on whether you have had a biopsy or not. It can take up to an hour for the local anaesthetic to wear off, so you should not eat or drink for an hour after having the local anaesthetic spray.

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## Can I drive after the procedure?

Yes. The local anaesthetic should wear off in about an hour.

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## Do I need other procedures?

Your surgeon may refer you to a stomach specialist called a gastroenterologist. This could be because something was found in the lower food pipe or the stomach, or because the surgeon thinks your symptoms might be caused by an issue with your stomach.

Very rarely, it might not be possible to pass the endoscope through your nose or into your food pipe. In this situation, you will be referred for other tests described on the next page.

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## Are there any alternative procedures?

TNO is one way to examine the movement and health of the throat and food pipe. However, not all hospitals have this equipment. Alternatives include:

### Flexible gastroscopy

A flexible gastroscopy uses a slightly wider endoscope to look at the food pipe, stomach and beginning of the bowel. The standard gastroscope is inserted through the mouth and the slim one may also be inserted through the nose.

This procedure is usually performed by gastroenterologists in the endoscopy suite. The procedure may be done under sedation (medication to make you drowsy) or local anaesthetic. This test may also be organised after your TNO if it is suspected there is a problem beyond the food pipe (for example, in your stomach or the start of your bowel).

### Flexible nasendoscopy

A flexible nasendoscopy is a very slim endoscope inserted through the nose that allows a good view of the back of the throat and the voice box. This test is carried out in the outpatient clinic, and local anaesthetic is not usually needed. This endoscope cannot puff air or suck up fluid, so it is not used to look inside the food pipe.

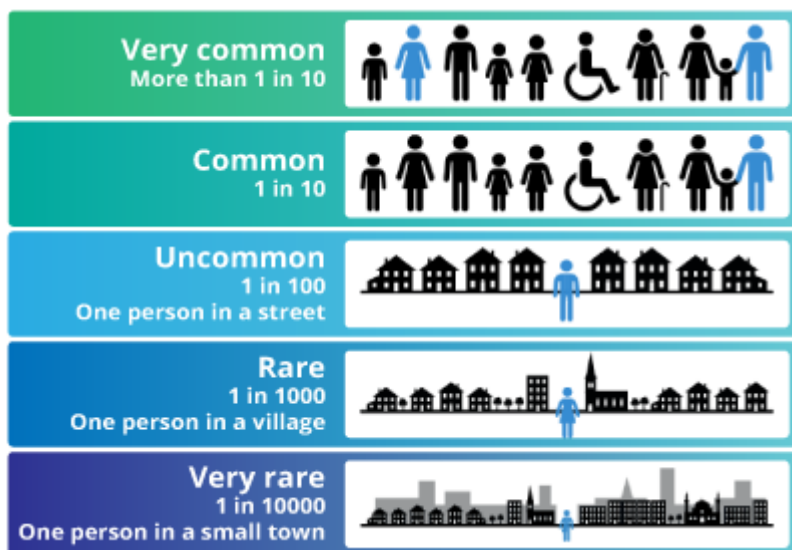
### Rigid panendoscopy

Another way to look at the throat, voice box and top part of the food pipe is an operation using a rigid metal endoscope. A general anaesthetic is needed for this procedure, which may involve some risks. There is also a risk of piercing the food pipe. This operation may be recommended to you after your TNO procedure. Please refer to the ENT UK information leaflet 'Pharyngoscopy and upper oesophagoscopy'.

## WHAT ARE THE COMPLICATIONS?

### Are there any complications?

The complications and risks of any procedure are grouped as follows:



TNO is very safe. However, at times your nose may feel uncomfortable, and you may feel something in the back of your throat. Occasionally, patients may have a **nosebleed**.

If **biopsies** are taken, you might feel some **discomfort** where the tissue samples were taken from, and you might experience some bleeding. Any bleeding usually settles by itself. You may see some blood in your saliva. If there is more blood than flecks in your saliva, or if there is a lot of fresh blood, you must go to your nearest A&E department.

You will feel slightly **bloated**, as air has been pumped into your food pipe and stomach. It is normal to want to burp or pass wind.

**Gullet tear:** this is an extremely rare and serious complication. There are currently no reported cases in the UK.

These are the signs and symptoms to look out for:

- You develop trouble breathing.
- You have chest pain or back pain between your shoulder blades.
- You develop a fever.

If these occur, do not eat or drink and seek medical attention.

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**FEEDBACK SURVEY**



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