

Nissen fundoplication

*Content provided by Mark D Stringer MS FRCS FRCP,
Consultant Paediatric Surgeon, Leeds.*

Reflux: a brief overview

In gastro-oesophageal reflux (GOR), as the stomach empties into the bowel (the duodenum), part of its contents are also squeezed back into the oesophagus. Since the stomach contents are acidic, irritating acid passes into the oesophagus.

Reflux causes frequent vomiting after feeds. This is not the small mouthfuls of vomit ('possets') seen in all babies, but the vomiting of large amounts of the feed. This can happen straight after a feed or repeatedly right up until the next feed. If GOR is severe, the baby has difficulty gaining weight because he/she is unable to absorb all of the feed.

The oesophagus may become sore from the acid (the adult equivalent which is heartburn) leading to irritability and poor feeding. In some cases, bleeding from the oesophagus causes anaemia or signs of blood in the vomit (haematemesis). Strictures (narrowing of the oesophagus) can also be made worse.

Rarely, reflux can happen so quickly that it leads to the baby inhaling vomit, leading to a chest infection or difficulty with breathing. In severe cases, the baby may temporarily stop breathing (called 'apnoea').

Most TOF babies have mild reflux (i.e. a tendency to vomiting after feeds) which gets better by itself or with medicines but a few have severe reflux which needs treatment with several medicines.

For children who do not get better with the medicines or who have major problems such as repeated stricturing, chest infections from overspill of refluxed material into the lungs, persistent severe oesophagitis or inadequate weight gain, antireflux surgery has to be considered

Antireflux Surgery

The usual antireflux operation is known as the Nissen fundoplication.

There are others – for example the Thal fundoplication – but for TOF children the Nissen is usually the one selected.

Nissen fundoplication

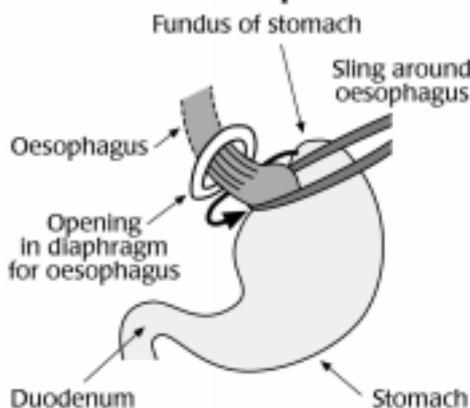
The Nissen fundoplication is a fairly big operation. Many paediatric surgeons do the operation through a cut in the upper part of the tummy but doing the procedure through multiple telescopes ('keyhole surgery') may have some advantages, and is becoming more popular.

PROCEDURE

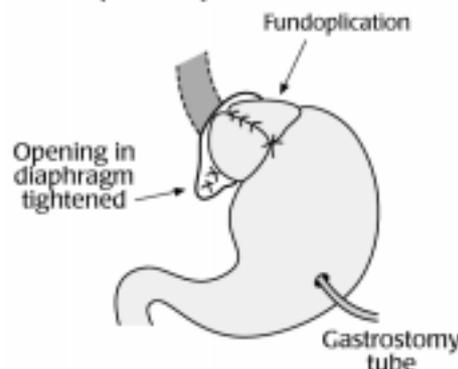
In the Nissen fundoplication, the lower oesophagus is freed up and the top part of the stomach (known as the 'fundus') is wrapped around the lower oesophagus to make a valve at the junction of the oesophagus and stomach. The hole in the diaphragm through which the oesophagus passes is also tightened.

With an experienced surgeon, the operation can be done safely with few serious risks.

Nissen Fundoplication



The fundus of the stomach is wrapped around the lower oesophagus, creating a valve to prevent reflux



This information has been written for the parents of TOF children by TOFS (Tracheo-Oesophageal Fistula Support) – helping children born unable to swallow.

If you have any feedback on this leaflet, please use our leaflets feedback form which is available from either the TOFS office or our web site.

TOFS relies on money from membership fees, voluntary donations and other sources of charitable income to fund its activities.

Web site

www.tofs.org.uk

Address

TOFS,
St George's Centre,
91 Victoria Road,
Netherfield,
Nottingham NG4 2NN

Telephone

0115 961 3092

Fax

0115 961 3097

Email

info@tofs.org.uk

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"Jacob couldn't lie flat, was regularly sick (often blood-stained) and was not thriving. His reflux finally got so bad that he became very unwell whilst awaiting surgery. His condition improved dramatically after the Nissens and gastrostomy, and he became a chubby, happy baby."

Related leaflets from TOFS which you might like to read:

1. Gastro-oesophageal reflux
2. Strictures
3. Gastrostomy tubes
4. Your child in hospital
5. Communicating with medical professional

These are all available from the TOFS web site (www.tofs.org.uk) or from TOFS office.

TOFS also publishes a book, 'The TOF Child,' which is suitable for both parents and medical professionals. Details are available from TOFS.

USE OF A GASTROSTOMY TUBE

Sometimes a feeding gastrostomy is inserted at the same time to provide supplementary feeding afterwards. Gastrostomy feeding may be given as a continuous overnight feed with a pump; or as separate volumes (boluses) during the day; or a combination of both, depending on the needs of your child.

After surgery

Creating a valve at the lower end of the oesophagus prevents reflux of gastric acid, thereby allowing any oesophagitis to heal. Vomiting is abolished and stricturing improves. The operation is usually very successful but has some disadvantages.

GAS BUILD-UP

The child may not be able to burp and can therefore be more 'windy' (called gas bloat); this often improves after a few months.

If there is a gastrostomy tube in place, you may be taught how to 'wind' your child by 'uncorking' the gastrostomy tube and attaching it to a suitable container through which the gas can escape whilst avoiding the loss of milk from the stomach. If there is no gastrostomy, keep the child as quiet and relaxed as possible, and seek medical advice if their condition does not improve.

RETCHING

The child may have some retching instead of vomiting after the fundoplication surgery; again this often disappears after a few weeks or months.

Because part of the stomach is used to create the antireflux valve, the stomach volume is a little smaller to begin with and smaller, frequent meals are needed.

In a crisis, your child may learn to vomit past the valve but if your child is poorly and keeps trying to vomit, it is best to open the gastrostomy tube for relief.

If your child does not have a gastrostomy tube and is unwell with repeated retching, it may be necessary to bring him/her to hospital to have a nasogastric tube passed to relieve the discomfort.

ADHESIONS

It is especially important to seek medical attention if your child has bad tummy pain and retching since this could mean a blockage in the bowel due to an internal scar (adhesions) from previous surgery.

Rarely, a fundoplication causes intermittent diarrhoea or sweaty episodes ('dumping') after a feed. If this problem does not improve you will be given dietary advice in order to lessen symptoms. Another rare complication occurs if the valve is too tight, in which case swallowing difficulties occur and a 'stretch' or dilatation may be required.

Repeat surgery

Nissen fundoplication may stop working properly in some cases after a few months or years because the valve weakens and then some of the symptoms of GOR return.

In this case, antireflux medicines may be effective but if the reflux is severe, the operation needs to be repeated. A 're-do' Nissen fundoplication means undoing what is left of the old stomach wrap and doing the operation again.

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