



Nissen Fundoplication

Parent/Caregiver Information



Why does gastro-oesophageal reflux occur?

One of the main control mechanisms of the movement of food and fluids down the swallowing tube (oesophagus) is a valve at its lower end where it joins the stomach. If this valve is weak, food and acid can reflux back up the oesophagus from the stomach (gastro-oesophageal reflux). A small amount of reflux is common and normal. Reflux is especially common in babies because the valve is under-developed at this age and only becomes stronger as they grow. This is why babies frequently 'spill' after feeds.

When does reflux need to be corrected by surgery?

There are several reasons why surgery may be required to treat reflux:

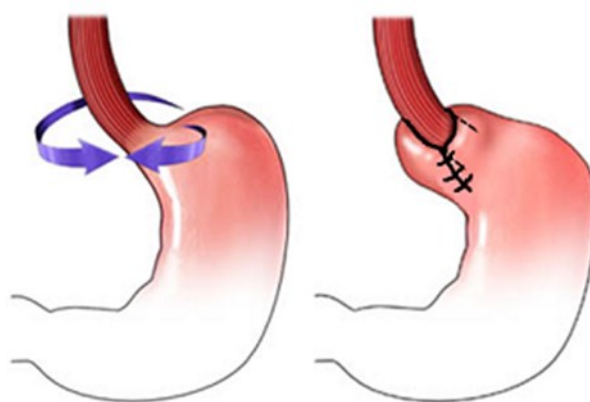
- If symptoms are severe and not controlled with medicines
- If the oesophagus becomes very inflamed and narrowed from persistent reflux of stomach acid
- If there are chest infections from overspill of refluxed fluid into the lungs
- If vomiting is so troublesome that the child fails to gain enough weight (failure to thrive)

How is reflux corrected by surgery?

During the operation, a valve is created around the lowermost part of the oesophagus – this valve allows the food to pass down but not back up. The valve is made by wrapping the upper part of the stomach around the lower end of the oesophagus. The wrap is held in place by stitches. The opening in the muscle (the diaphragm) through which the oesophagus passes from the chest into the tummy may also need to be tightened with stitches. This 'anti-reflux' operation is known as a Nissen Fundoplication.

The operation is usually done by 'keyhole surgery' using a thin telescope connected to a

camera (a laparoscope). The laparoscope is inserted through the belly button. Four or five other small puncture holes are made in the skin to pass surgical instruments. Occasionally, it is not possible to complete the operation with keyhole surgery and the operation must then be done through a larger cut in the upper part of the tummy.



Will my child also need a gastrostomy tube?

If your child eats and drinks normally and is not underweight, then he/she should not need a gastrostomy tube when they have their anti-reflux surgery. If your child is fed via a nasogastric tube, a gastrostomy tube inserted into the stomach at the time of their anti-reflux operation will be helpful. If your child already has a gastrostomy and needs anti-reflux surgery, then the gastrostomy tube will be retained.

When is my child able to eat and drink after the operation?

It may take a day or two for the oesophagus and stomach to work normally after the operation. If your child does not have a gastrostomy, then he/she will have a nasogastric tube inserted at the time of surgery. This is removed a day or two after the operation. It helps to keep the stomach empty and prevent vomiting whilst the stomach is recovering its function. Your child will be allowed to start taking some fluids by mouth the day after surgery and, if these are well tolerated, he/she can gradually move on to a soft diet.

If your child has a gastrostomy, clear feeds are usually started through the gastrostomy the day after the operation. If these are well tolerated, milk feeds will be reintroduced and gradually increased in amount.

If my child was eating and drinking before the operation, will this be normal after the operation?

Because the upper part of the stomach is wrapped around the lower oesophagus, the amount of food taken at mealtimes is at first likely to be less than before. The capacity of the stomach returns to normal within a few months.

The new valve creates a slight resistance at the bottom end of the oesophagus. Occasionally, this causes mild difficulties with swallowing in the first week or two after the operation, which almost always improves.

Are any dietary precautions necessary?

Your child should take soft foods for the first week or two after the operation - lumps of meat, sausages, lumps of apple and carrot should be avoided. After this time, these foods can be gradually reintroduced but your child should be encouraged to chew well before swallowing.

Will my child be able to burp and vomit?

By preventing reflux, the wrap restricts burping and vomiting. If your child tries to vomit he/she will retch. Over time, many children with a successful operation are able to burp and may also be able to vomit on occasions. Some children retch a lot after anti-reflux surgery but this usually settles down with time. Sometimes, retching is triggered by swallowed air collecting in the stomach (gas bloat). If your child has a gastrostomy tube, then releasing the air through the tube (venting) can relieve this problem.

Will my child need to remain on anti-reflux medicines after surgery?

No. These are usually stopped before you go home or soon after.

What are the possible complications of the operation?

A Nissen Fundoplication is a good operation, but not perfect. Some children experience the following symptoms after the operation:

- Gas bloat and dry retching (see above).
- Difficulty swallowing - this tends to get better by itself but a soft diet may need to be continued for longer than two weeks. If a particular solid piece of food gets stuck, encourage your child to stay calm. Sips of water may help. If the food remains stuck then you will need to go to the hospital.
- Recurrent reflux e.g. vomiting, heartburn or pain. In these cases, an X-ray with swallowed dye is often done to check that the new valve at the bottom end of the oesophagus has not become loose. If the valve is no longer working, a repeat operation may be required. If the valve seems to be working okay but your child has troublesome reflux symptoms then they can often be treated successfully with anti-reflux medicines.
- Gastrostomy tubes can cause minor problems such as overgrowth of pink fleshy tissue (granulation tissue) around the hole where the tube enters the tummy. This can be treated with a steroid cream. A gastrostomy tube needs to be replaced every so often (how often depends on the type of tube).

How long will my child be in hospital?

Your child will stay in hospital until he/she is comfortable and taking reasonable amounts of fluid and food. This is usually two or three days but may be longer. After discharge home, it may take a few weeks for your child's eating and drinking to return to normal. Full physical activity is usually possible within 2-3 weeks of the operation but older children should avoid contact sports until they have been seen in the out-patient clinic.

What follow-up is required?

Your child will be reviewed in the Outpatient Clinic a month or two after surgery. Long term follow-up is not routinely required.

