British Society of Interventional Radiology
Paediatrics

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The Royal College of Radiologists
63 Lincoln's Inn Fields
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Gastro-jejunostomy tube Insertion

This information sheet explains about the procedure to insert a gastrojejunostomy tube, what it involves and what to expect when your child comes to the Interventional Radiology department for this procedure.

Please note that this leaflet is not meant to replace discussion between you and your child's doctor. You should raise any questions you may have with the doctor who has referred your child for, or is performing, the procedure.

What is a gastrojejunostomy (GJ) tube?

This is a feeding device passed through the stomach and into the jejunum (first part of the intestines). The feeding device allows your child to be fed directly into the jejunum, bypassing the mouth, throat and stomach. The GJ tube also allows access to the stomach to draw off excess air or test the contents of the stomach.

A GJ tube is rarely the first method of 'enteral feeding' (feeding directly into the stomach) used, as naso-gastric (NG) and gastrostomy (G) feeding are usually tried first.

There are different sorts of GJ tubes. Some of these include Freka® GJ tubes, AMT® GJ buttons and Avanos® GJ buttons. Although they all do the same job, your child may have a specific type for a certain reason. Your medical team will explain to you the reason for the choice of tube.

Why does my child need a gastrojejunostomy tube?

A GJ tube is usually suggested after gastrostomy feeding has been unsuccessful. Some children cannot tolerate feeding directly into the stomach, so a GJ tube can be helpful as it bypasses the stomach.

Children with gastro-oesophageal reflux may benefit from GJ feeding as the feed is delivered directly to the jejunum rather than the stomach. This stops stomach contents travelling back (reflux) up the oesophagus (food pipe), causing pain and potentially chest infection, if the liquid is breathed into the lungs (aspiration).

How does my child prepare for GJ tube insertion?

If your child is to have a general anaesthetic for the procedure then instructions will be given about fasting. It is vital that these instructions are followed to prevent complications. Many cases are performed without a general anaesthetic and in these cases no specific preparation is required.

How is a gastrojejunal tube placement performed?

This depends on the type of tube your child requires or what they currently have in place:

a) Insertion of new Freka® GJ tube / conversion of existing Freka® gastrostomy to GJ tube:

Your child will need to have a general anaesthetic to either insert the feeding tube or to remove their existing gastrostomy tube and replace it with the new gastrojejunal tube. It is very important that your child's stomach is as empty as possible on the day of the procedure, as this reduces the risk of vomiting during and after the anaesthetic. If someone vomits during an anaesthetic, there is a chance that the stomach contents could get into the lungs, damaging them. Your child's nurse will explain exactly what time your child can last eat or drink before the procedure.

Once your child is deeply asleep, the first step is to place a gastrostomy tube or to change his or her existing gastrostomy tube to one of a larger size. The old tube is removed via the mouth and a new tube inserted by pulling it down into the stomach, also through the mouth.

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Once the larger Freka® device is in place, a thinner jejunal tube is threaded through it. The doctors use X-rays to guide the jejunal tube out of the stomach and into the small bowel, leaving the tip in the jejunum. They will check the tube's final position with contrast dye, to make sure it is safe to use the tube. The inner jejunal tube and the outer gastrostomy tube lock together. The final device has two 'ports' – one of which ends in the jejunum and the other in the stomach. These are clearly labelled so you will know which is which. The nurses will show you how to access each 'port', to check the position of the tube before feeding and how to draw off samples of stomach contents for testing.

b) Changing an existing gastrostomy button device to a button GJ or routine change of button GJ tube:
This is usually done while your child is awake without the need for a general anaesthetic. You can usually stay with them during the procedure, if you would like. Your child will need to lie still during the procedure which lasts about 20 minutes and usually some distraction is helpful to take their mind off things. The nurses will help your child to lie still, but if you think this could be a problem, please discuss it with your doctor before the procedure starts.

The first stage is to remove your child's existing gastrostomy / GJ button and replace it with a GJ button inserted into the jejunum. Replacing the button device involves deflating the balloon that is holding it in place and then gently removing the whole device. The new gastrojejunostomy button device can then be threaded through the existing opening in the skin and the tube positioned into the jejunum using X-rays to guide the tube into position. Contrast dye is injected into this tube, so that the final position can be checked using an X-ray.

Who performs the procedure and where?

GJ tube placement can be performed by radiologists or specially trained radiographers. These are people who are experts in image guided procedures. The procedure can be performed in a specialist interventional radiology room or in a theatre with X-ray equipment.

What are the potential risks or complications of GJ tube insertion / exchange?

Inserting a gastrostomy tube for the first time carries some specific risks. There is a very small chance that the large intestine could be damaged during the procedure, but using barium beforehand reduces this risk. If your child has not had barium the night before the procedure, the consultant may cancel the operation as the risk of damaging the large intestine would be too great. There is a very small possibility that during the procedure, the radiologist will not be able to insert the gastrostomy using this method, in which case your child would need to have it inserted using another method. This would have to be done on a separate occasion and would be discussed with you.

If your child already has a gastrostomy tube in place, he or she already has a well-developed track through the skin to the stomach, so changing the tube carries very few risks. There is always a small risk that it might be difficult to remove the existing gastrostomy tube if it has been in a while and has become well-attached to the inner stomach wall. Trying to remove the tube might damage the stomach wall, so if the doctors are not happy to continue trying, they might leave the gastrostomy tube in and decide to remove it using another technique on another day.

Every anaesthetic also carries a risk, but this is very small. Aftereffects of an anaesthetic include headache, a sore throat or feeling dizzy or sick, but these are not usually severe and do not last long. The anaesthetist will explain any specific anaesthetic risks for your child when he or she meets you before the procedure.

At any point after the GJ tube has been inserted, the jejunal part of the tube can become dislodged back into the stomach but this usually is not risky to your child. A sign that this may have happened is an increase in your child's reflux symptoms or feed appearing when a sample is drawn from the gastric port. This means the jejunal part of the device needs to be repositioned. This can be done as a short procedure lasting around 20 minutes without needing a general anaesthetic.

What happens afterwards?

This depends on the type of procedure your child has had:

a) If your child has had a new GJ tube inserted under general anaesthetic, they will be taken back to the ward to recover from the procedure. They may remain a bit sleepy from the anaesthetic for a few hours afterwards but this is normal. Crampy stomach pains can also occur during the first few hours after the procedure. This is caused by the stomach being inflated with air during the procedure.

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These crampy pains usually pass in a few hours without treatment. Your child will not be able to have any fluids through the gastrostomy tube for several hours after it has been inserted. The stomach needs this time to settle down and for the tissue to grip tightly around the tube so that stomach contents cannot leak into the abdomen. If stomach contents leak into the abdomen, this can lead to peritonitis, a potentially life threatening condition. Before the gastrostomy is used and while the feeds are being introduced, your child will have an intravenous infusion (drip) of fluids to give them water and sugar. Once the gastrostomy has had time to rest, your child will start to have liquid feeds through it. This is done very gradually over a period of hours, increasing the amount of feed given each time. The team on the ward and at home will explain this to you.

b) If your child has had a change of button gastrostomy to button GJ tube without general anaesthetic, they will usually be taken back to the ward and commenced on jejunal feeds. They may require overnight stay to ensure that they tolerate the feeds.

c) If your child has come for a routine change of a GJ tube without a general anaesthetic, they can usually go home immediately after the procedure and continue with their feeds as previously.

Your child will be prescribed a special liquid feed, which contains all or most of the nutrients he or she needs. Please talk to your dietician if you would like to know more about it. Some children can also continue to eat regular food by mouth, using the GJ tube to 'top up' their nutrient levels, but this depends on the reasons why it is required. Your doctors and dieticians will talk to you about this.

Gastrojejunal tubes need to be routinely changed to help prevent blockages and breakages. This is usually done as a short awake procedure and the interval will depend on the type of tube. Please discuss this with the team looking after you.

Notes