



Great Ormond Street Hospital for Children NHS Foundation Trust: Information for Families

Oesophageal atresia and tracheo-oesophageal fistula

This leaflet explains about oesophageal atresia and tracheo-oesophageal fistula, how they are treated and what to expect when your child comes to Great Ormond Street Hospital (GOSH) for treatment.

What is oesophageal atresia?

Oesophageal atresia (OA) is a rare condition where a short section at the top of the oesophagus (gullet or foodpipe) has not formed properly so is not connected to the stomach. This means food cannot pass from the throat to the stomach.

What is tracheo-oesophageal fistula?

Tracheo-oesophageal fistula (TOF) is another rare condition, which tends to occur alongside oesophageal atresia. This is where part of the oesophagus is joined to the trachea (windpipe).

How are OA and TOF diagnosed?

Both OA and TOF tend to be diagnosed soon after birth. The midwife may try to pass a tube through your baby's nose into their stomach (nasogastric tube or NG tube), and find that it is not possible. Occasionally, OA and TOF might be discovered in an ultrasound scan during pregnancy, particularly if the stomach is not very clear on the scan.

What causes them?

We do not know what causes OA and TOF. It is not due to anything that happened during pregnancy. It is very rare, occurring in between one in 3500 and one in 5000 births. OA and TOF can occur in different forms and combinations - the most common forms are shown on the next page. OA and TOF can be associated with other problems, so doctors will examine your child closely to check if this is the case.

How are OA and TOF repaired?

They are both repaired in an operation, which lasts between two and three hours.

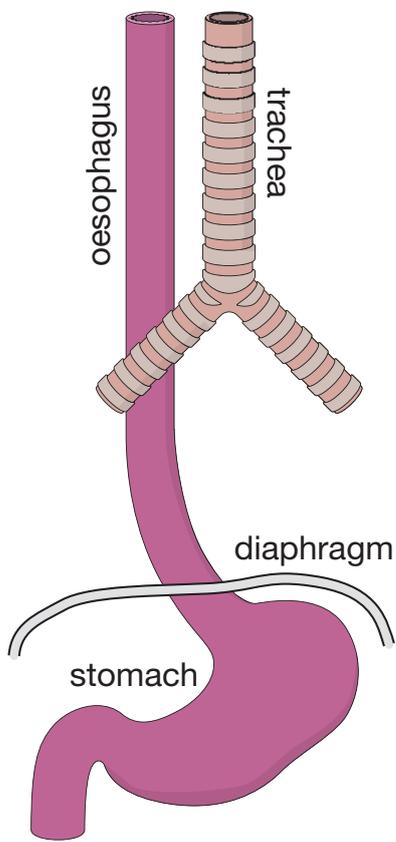
Are there any alternatives?

No. OA and TOF always require treatment, to enable your baby to feed.

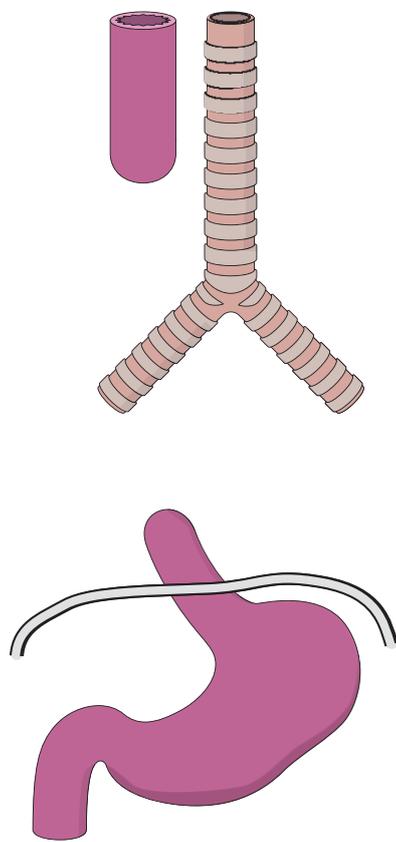
What happens before the operation?

Your baby will be transferred to GOSH from the hospital where he or she was born. To begin with, your child will have a Replogle tube passed through his or her nose into the oesophagus. This will drain off any saliva (spit) which is in the oesophagus. He or she will also have an intravenous infusion (drip) of fluids and medicines. Your child may be nursed in the intensive care unit, depending on his or her general condition.

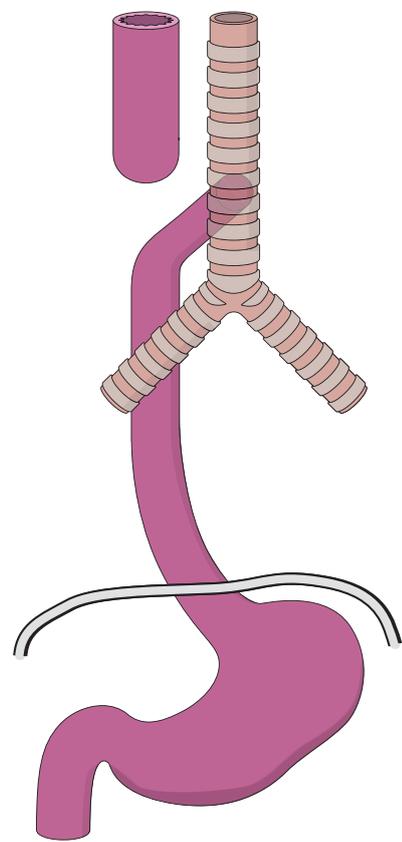
The surgeon will explain about the operation in more detail, discuss any worries you may have and ask you to give permission for your child to have the operation by signing a consent form. An anaesthetist will also visit you to explain about the anaesthetic.



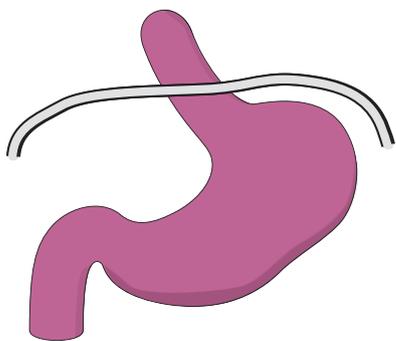
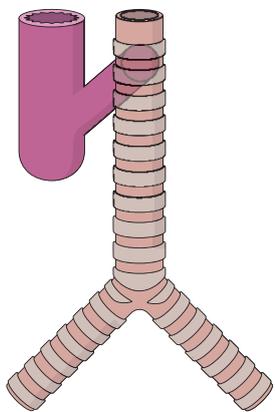
Normal



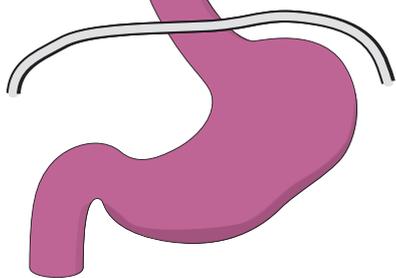
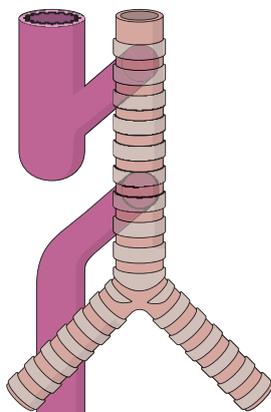
Oesophageal atresia without tracheo-oesophageal fistula



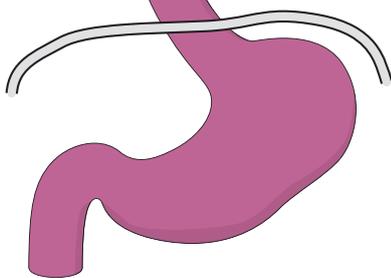
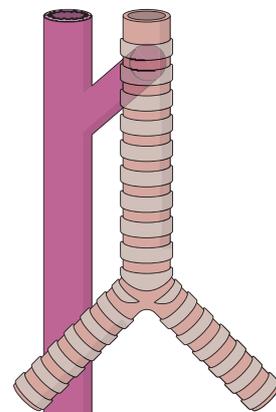
Oesophageal atresia with tracheo-oesophageal fistula at lower (distal) part of the trachea



Oesophageal atresia with tracheo-oesophageal fistulas at upper (proximal) part of trachea



Oesophageal atresia with tracheo-oesophageal fistulas at both upper and lower parts of trachea



Tracheo-oesophageal fistula without oesophageal atresia

What does the operation involve?

The operation is carried out while your child is under general anaesthetic. There are two ways of carrying out the operation: using thoracoscopic (keyhole) surgery or open surgery. The surgeon will discuss the most appropriate method with you. To repair the TOF, the surgeon will separate the oesophagus from the trachea and repair the part of the trachea where the oesophagus was originally joined. The method used to repair the OA depends on the distance between the ends of the oesophagus. In most cases, the surgeons will cut the blind end of the oesophagus and then join the two ends together to form a continuous passage from the throat to the stomach.

In rare cases called 'long gap OA' where the distance between the ends of the oesophagus are too large for the surgeon to be able to join them straightaway, different treatment is needed. If this is likely to be the case, the doctors will explain this to you.

Are there any risks?

All surgery carries a small risk of bleeding during or after the operation. Even if the gap between the ends of the oesophagus is quite small, it can still be difficult to join together. After the operation, the join may leak or it may narrow over time, but these can both be treated in another operation. Your child will be reviewed regularly for a long time after the operation.

Every anaesthetic carries a risk of complications, but this is very small. Your child's anaesthetist is a very experienced doctor who is trained to deal with any complications.

What happens afterwards?

Your baby will go to the intensive care unit to recover. You will be able to visit as soon as he or she is settled back in the incubator. For a while after the operation, your baby will need help with breathing so will be connected to a ventilator. Some babies may be kept still with a muscle relaxant for several days in intensive care, particularly if the joins are tight. Reducing their movement allows the joins to heal well. All babies are closely monitored after the operation. Your baby will be connected to monitors to check his or her breathing, heart rate and oxygen levels. He or she will also be given pain relief through the 'drip'.

Your baby will be transferred to a surgical ward at GOSH when he or she no longer needs intensive care. While your baby's intestines recover and start to work, he or she will have an intravenous drip of fluids. Feeding usually starts a few days after the operation, with breast or bottled milk given through a naso-gastric tube (tube passed through a nostril, down the oesophagus and into the stomach). As your baby recovers, you will be able to feed him or her from the breast or bottle. Some babies' intestines take a little longer to recover, so need to be fed through a tube into the veins (total parenteral nutrition or TPN). Naso-gastric feeding is tried when his or her intestines start to show signs of recovery.

Once your baby is feeding properly and gaining weight, you will be discharge home or transferred to your local hospital. Soon after your baby leaves hospital we will send you a letter with details of your outpatient appointment.

You should seek urgent medical help from your family doctor (GP), local hospital or team at GOSH, if your baby:

- is coughing or choking when feeding
- has difficulty in swallowing saliva or feeds
- is failing to gain weight

What is the outlook for children with OA and TOF?

If the OA and TOF occur on their own, with no other associated problems, the outlook for children who have them is good, with the majority growing up to live normal lives. The outlook for children with OA and TOF who have other difficulties varies depending on how severe these other problems are.

However, there are a couple of problems which may occur and which you should know about. They tend to happen most often in the first few years after the operation and improve as the child grows older. Chest problems can occur, which are sometimes serious enough to need a stay in hospital. These tend to improve with age, and have little effect on the child's breathing when older. Some children however, continue to have a distinctive 'TOF cough' but this is not at all serious.

The area of the trachea which was repaired may become floppy (tracheomalacia) which can cause breathing problems. If your child's breathing is very noisy or he or she is having 'blue spells', please take your child to your local hospital and contact the team at GOSH. A further operation called an aortopexy might be needed - we will give you further information about this if needed.

Feeding problems may also occur due to the oesophagus narrowing where it was originally repaired (strictures). Sometimes it needs widening (dilatation) and this will be done in an operation under general anaesthetic. Some children also complain of problems with swallowing and need to have a drink with all food. This is often caused by the oesophagus not being coordinated but it can be investigated by a speech and language therapist, who can suggest treatment (sometimes involving surgery) and exercises. Further information about weaning your child onto solid food is available from your nurse or doctor.

Some children who have had OA and TOF develop a problem with gastro-oesophageal reflux when they are older. This is where the contents of the stomach flow back up the oesophagus causing pain and irritation. In many cases, we start babies on an anti-reflux medicine after the operation to reduce the risk of this developing. For more information about this, please read our *Gastro-oesophageal reflux information sheet*.

Weaning onto solid foods can also be more problematic for children who have had OA and TOF. It can take longer for children to adapt to food with chunks and certain foods, such as white bread, can cause problems. Children should remain on Stage 2 foods (puree with soft lumps) for longer than usual to reduce the risk of choking. Feeding should also be done under close supervision to reduce the risk of coughing and choking. For more information about weaning your child, please ask for a referral to our dietitians.

Is there a support group?

TOFS

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Website: www.tofs.org.uk