

# Tracheostomy

Information for families and carers



A tracheostomy is an opening created at the front of the neck allowing a tube to be inserted into the windpipe (trachea) to help with breathing.

This booklet contains information about caring for a baby, child or young person with a tracheostomy, in hospital and at home. Before your child leaves hospital, we will teach you everything you need to know to safely care for them at home, and you will complete training on the key skills outlined on page 15. This will help you to feel confident in your abilities.

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Child's name:

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Date of birth:

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Hospital number:

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Address:

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Telephone number:

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Parents/carers name/s:

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Date of formation of tracheostomy:

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Size of tracheostomy:

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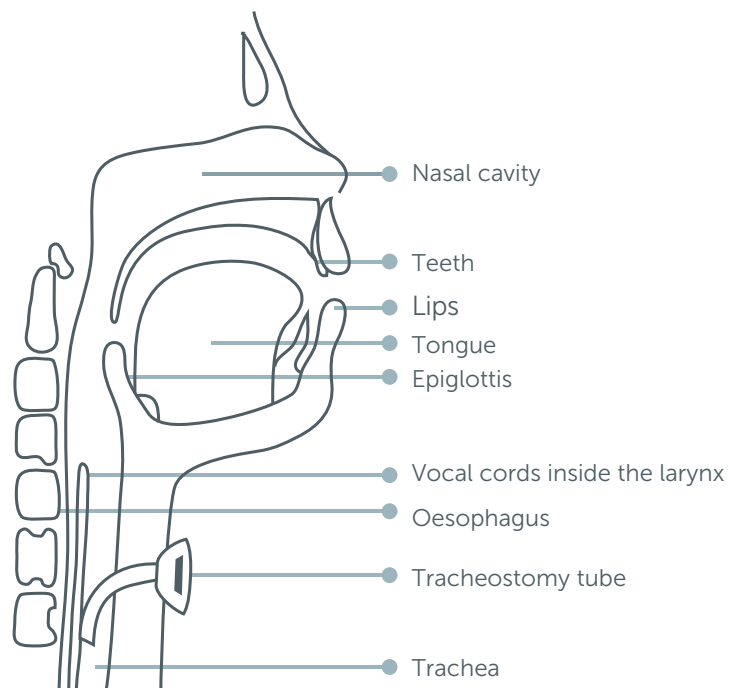


## What is a tracheostomy?

A tracheostomy is an artificial opening into the windpipe (trachea), which is held open by a tracheostomy tube. This helps your child to breathe more easily. Air goes in and out through the tracheostomy tube and bypasses the nose and mouth. There are a variety of reasons why a child may need a tracheostomy; your doctor will explain the reason for your child. A tracheostomy may be temporary or required permanently.

## Before the operation

A doctor will explain the operation in detail, discuss any questions or concerns you may have and ask you to sign a consent form. An anaesthetist (specialist doctor) will visit you and your child and explain the anaesthetic and pain relief. They will also answer any questions you may have. A play specialist or nurse will help you prepare your child for the operation. He or she will show you and your child a special doll who also has a tracheostomy, and they will help prepare your child for the anaesthetic.



## After the operation

After the operation your child will return to the ward. The tracheostomy will be held in place with cotton tapes and temporary stay sutures. These are long stitches brought out through the wound and taped down onto your child's chest. The opening in your child's neck is called a stoma and the stay sutures will keep this open if the tube has to be changed in the first week.

After the operation your child will not be allowed to eat or drink until they have recovered from the anaesthetic. After this they will be allowed to have their normal diet. Occasionally some children experience difficulties with swallowing. This is normally a temporary problem that resolves itself. In the meantime your child may need help in receiving enough fluids and/or nutrition via a feeding tube or directly into a vein (known as IV, short for intravenous). If problems with swallowing do persist, a speech and language therapist may help in assessing and managing any problems.

After the operation your child will be closely monitored. They may need some oxygen or help from a ventilator to breathe (respiratory support). They will also be given regular pain relief to ensure they are comfortable.

Your child will be under constant supervision for the first two to three days after the operation. During this time it's possible that you may feel overwhelmed by the amount of care your child requires. This is because the tracheostomy is new and needs special attention at this stage.

Children requiring respiratory support from a ventilator may have this level of nursing for much longer. As you become more familiar with the equipment and routines, you will feel more comfortable with the special care your child needs.

## Going home with a tracheostomy

Before your child goes home there will be a discharge planning meeting. Here you will meet all the professionals who will be involved in your child's care once they are back at home. You will have the opportunity to ask any questions or discuss any problems. When your child is ready to leave hospital, a letter will be sent to their GP. We will also contact their health visitor and a community paediatric nurse (if there is one in your area) so that support is available for you when you get home.

Sometimes plans for going home are made once your child has been transferred back to your local hospital.



In certain circumstances you may need extra support at home to help you care for your child. Your paediatric respiratory nurse will discuss this with you and an application will be made to your local Integrated Care Board (ICB).

A list of recommended equipment and supplies will be sent to your health visitor or community paediatric nurse. The first two weeks' supply will be provided by the hospital and given to you on discharge but after that supplies will come from your local health authority. Always ensure that you have at least two weeks' worth of supplies at home.

Before you take your child home, at least one person in your household must be confident in the main activities involved in caring for the tracheostomy.

#### These include:

- Care of the stoma
- Suctioning
- Changing tracheostomy ties
- Changing a tracheostomy tube
- Care of equipment and supplies
- How to deal with difficulties
- Resuscitation

You may feel that this is an awful lot to learn, but we will make sure you are confident before you go home. Most parents feel like this but with practice they become experts in their child's care. Every child is different and in time you will find a routine that suits you. Remember, there is always someone available on the telephone to advise and reassure you. See page 21 for contact details.

After seven days your child's tracheostomy will be changed for the first time (unless it has needed to be changed before this). This is always carried out by the doctor that inserted the initial tracheostomy. The stay sutures will also be removed at this time.

### Communication

When your child has a tracheostomy their speech or production of sound may be temporarily affected, because there is no passage of air over the vocal cords. Your child will be seen by a speech and language therapist (SALT) who will assess them and discuss communication options and ways to develop their speech and language skills.

### Humidification

Our upper airway (nose and mouth) provides warmth, filtering and humidification for the air we breathe. Your child's tracheostomy tube bypasses this function, so another means to heat, filter and humidify the air they breathe must be provided. The easiest way to do this is for your child to wear a heat and moisture exchanger (HME), sometimes called a Swedish nose. This is a kind of filter device which fits over the end of the tracheostomy tube. It uses layers of foam or paper encased in plastic, meaning that when the child exhales (breathes out), heat and moisture are deposited into the filter. When the child inhales (breathes in), the heat and moisture are returned to the lungs. If your child needs oxygen this can also be given through the HME.

The HME should be changed daily or more frequently if it is wet or soiled. Another type of HME is a Buchanan Bib, featuring layers of foam in the form of a bib which is worn over the tracheostomy tube. Bibs can be washed three times and should be changed daily.

If your child does not wear a HME their mucus or phlegm (secretions) may become thick and sticky and difficult to remove. The tracheostomy tube may become blocked and they could be at increased risk of a chest infection or pneumonia.

Another form of humidification that some children find helpful is to give a solution of salty water (0.9% sodium chloride) in a mist (nebulised) that the child will breathe in through the tracheostomy. This may help loosen the secretions.

### Good hygiene practice

- Always wash your hands in warm soapy water and dry them thoroughly before carrying out any care on your child's tracheostomy (however, if they need suction urgently this may not be practical).
- Ensure any cuts or grazes you may have are covered with a waterproof plaster.
- Ensure you have all the equipment available for the care you are about to give.
- Make sure you use up old stock, such as suction catheters, medicines and dressings, before you use stock from a new delivery.
- All suction catheters must be used once only and then thrown away.
- Ask your child's community nurse about reusing other equipment. In hospital most stock is single-use only but this may be different when you are at home.



## Key skills for caring for your child safely at home

### Care of the stoma

The opening in your child's neck (stoma) needs daily care to reduce the possibility of soreness or infections. Initially the site may be sore and red but this will heal in time. The tapes that keep your child's tracheostomy in place will need to be changed daily. When you are changing the tapes, check the skin around, above and below the stoma for red or irritated areas. If the skin is sore, a sterile keyhole dressing can be applied between the skin and flanges, taking care not to cover the tracheostomy tube.

The dressing should be changed regularly as wet dressings can cause infection and irritate the skin. Barrier cream should not usually be necessary, but we will discuss this with you. Tracheostomy tubes can cause the skin to develop granulation tissue (excess new tissue) in and around the opening of the stoma. This can cause bleeding and can sometimes make it difficult to change the tube. Discuss this with the respiratory nurse specialist/ community nurse as soon as you notice any problems.

It is also important to report any blood in your child's mucus or phlegm (secretions) to the respiratory nurse specialist/ community nurse.

### Suctioning

Children with a tracheostomy cannot cough properly to get rid of mucus or phlegm (secretions). Suction is used to clear these instead. If secretions are not cleared they may cause infections or block the tracheostomy tube.

Suction is required if your child asks for it or shows any of the following signs:

- Noisy breathing (the sound of air bubbling through secretions).
- Visible secretions at the tracheostomy tube opening.
- A cough with the sound of secretions in the tube.
- Restlessness, crying (crying also increases the amount of secretions).
- Increased respiratory rate, working hard to breathe.

### How to suction the tracheostomy

- Turn the suction unit on and check the vacuum pressure.
- Take care not to touch the end of the catheter.
- You must know the length of the tracheostomy tube to ensure you do not suction beyond the end of the tube.
- Insert the catheter gently into the tracheostomy tube with your thumb off the suction port.
- Never apply suction whilst inserting the catheter into the tracheostomy.
- Suction only to the end of the tracheostomy tube.
- Apply suction and slowly withdraw the catheter straight out of the tube maintaining vacuum.
- Do not rotate on withdrawal.
- Do not suction again with the same catheter.
- Suctioning should be quick and effective. Do not apply suction for longer than five seconds.
- Remove the catheter from the suction tubing and place in the bin.
- Repeat the procedure as necessary, although where possible secretions should be cleared on the first attempt.
- Flush suction tubing with sterile water.
- Connect a new catheter to the tubing.
- Wash your hands.



### Changing tracheostomy ties

A tracheostomy tube is held in place by cotton ties. These need to be changed daily and when soiled or wet. The ties are secured with knots tied either side of the tracheostomy tube. Changing the ties is a two-person technique so you must have someone to help you. It is essential that the knots are secure and the tension of the ties are correct. If they are too tight your child will experience discomfort and the skin may blister. If they are too loose the tube can fall out or be pulled out. Skin that is constantly in contact with wet ties will develop sores or rashes.

Position your child on his or her back with the neck extended over a rolled up towel to give better access to the area around the tracheostomy tube. If your child is very young it may be easier to wrap him or her up in a blanket to prevent you being knocked if they wriggle.

- Pour 0.9% sodium chloride into a clean container or bowl and open the gauze swabs (never use cotton wool).
- Place clean ties behind the neck.

- Your assistant should hold the tube in position using either their thumb and index finger, or index and middle finger.
- You should then cut the ties between the knot and the flange.
- Remove the dirty ties.
- Clean the stoma site (above, below and under each flange) and back of the neck with the sodium chloride and gauze and dry thoroughly.
- Assess the skin looking for signs of infection or soreness.
- Thread the new tie through the flange on the side furthest away from the tie changer and secure with three knots. On the side closest to you secure the ties with one knot and a bow.
- Check the tie tension by raising your child to a sitting position while your assistant continues to hold the tube in position.
- With your child's head bent forward it should be possible to slip one finger comfortably between the ties and your child's neck.

- If the ties are too tight or loose lay your child back down, undo the bow and readjust.
- If the tension is correct, lie your child down and change the bow into three knots by pulling the loops of the bow through to create a second knot.
- Tie one more knot to secure the ties.
- Cut off excess tie to leave half an inch remaining.
- Your assistant may release the tube only when instructed to do so.

### Changing a tracheostomy tube

Your child's tracheostomy tube should normally be changed every four weeks, depending on the make of tube. It may need to be changed more often if it becomes dry and crusty around the end or inside due to the build up of secretions. It is important that you feel confident and competent in tube changing before you take your child home, in case you need to change the tube in an emergency. The procedure is not without risks and in order to do it safely, it is important to plan to do it when two people can be present.

You should not change the tube just after meals as any coughing may make your child vomit. It is best to change the tube when your child is calm, so do not change it if they are tired and irritable.

- Lay your child on his or her back. If your child is very young your assistant should wrap them in a blanket in case they wriggle.
- Lubricate the new tube with a small amount of water-based lubricant on the outside bend of the tube.
- Ensure the introducer is secure in the middle of the tube (it may be useful to make certain that the introducer moves freely in and out before changing the tube).
- Position a rolled up towel under your child's shoulders.
- Place clean ties behind your child's neck.
- Your assistant should hold the tube in position using either their thumb and index finger, or index and middle finger. They do not need to press hard; this will be painful for your child.



- Remove the tracheostomy tube from the stoma with a curved action.
- Quickly insert the new tube with the introducer in place using a downward curving motion.
- Once the tube is in position the introducer should be removed immediately.
- You should now ensure your child is having no problems breathing.
- The assistant should take over and hold the tube in position.
- The site can now be cleaned and new ties applied.
- Do not let go of the tube until the ties are secure.

**If you are changing a tracheostomy on your own in an emergency** you can temporarily use a set of Velcro ties to secure the tube in place. These should be changed for your normal ties as soon as you have someone to help you.

## Additional information

### Telephone

It is essential that you have a working telephone in the home before your child leaves hospital. It is a good idea to inform the telephone company that you would need urgent attention in the event of a fault on the line.

### Emergency help

Your local ambulance service can put a marker on your address and telephone number so that if you dial 999 they will have some knowledge of your child already.

### Power cuts

Before your child comes home, you should contact your electricity supplier and tell them that you need a continuous supply for medical equipment. They can then put you on their special system for power cuts which offers reassurance that your supply won't be interrupted in the event of a power loss. However, it's always wise to keep a torch handy and to know where your manual suction unit is, just in case of a power cut and to practice suction under these conditions to familiarise yourself.

## Financial help

There are some benefits that are available to families caring for a baby or child who needs more care than another of the same age. You can find details of these at [www.gov.uk](http://www.gov.uk). We can also put you in touch with a social worker who will be able to advise you on benefits.

## Insurance

If your child is going home with oxygen you will need to inform your home and car insurance companies.

## Taking your child out and about

When your child has their tracheostomy inserted you will be given a blue plastic case to keep all the kit they will need when they are out and about. We advise you keep this case near to your child at all times. The case should contain your spare tracheostomy tubes, spare ties, spare HME (heat and moisture exchangers), round ended scissors, gloves, water based lubricant, oxygen connector, sterile gauze and saline. You should also carry your suction unit, suction catheters, manual suction unit, gloves and oxygen (if applicable) at all times.

See the next page for your equipment checklist.



## Equipment checklist

Equipment	Size/comments
Same size tracheostomy	
Smaller size tracheostomy	
Ties	
Suction catheters	
Suction tubing	
Round ended scissors	
Saline and gauze	
Heat and moisture exchangers (HME)	
Water based lubricant	
Suction	
Oxygen (if applicable)	
Feed supplies (if applicable)	
Tracheostomy dressings	

## Key skills checklist

Subject	Required skills & knowledge	I	P	C
<b>1. Carer to be able to carry out suction</b>	Assessing the need for suction. Awareness of suction and how it works. Use clean suction technique. Use appropriate catheter. Knowledge of depth of suction.			
<b>2. Carer to be able to care for stoma</b>	Assessment of skin. Cleaning of stoma site. Dressing of stoma (if applicable).			
<b>3. Carer to be able to change tracheostomy ties</b>	How to check security of ties. Change ties. Use of Velcro ties in an emergency.			
<b>4. Carer to be able to change tracheostomy tube</b>	Knowledge of timings of tracheostomy tube changes. To change tracheostomy tube. (At least three times before discharge).			
<b>5. Carer to be able to carry out safe tracheostomy care</b>	Knowledge of equipment. Delivery of humidification.			





## Key skills checklist

Subject	Required skills & knowledge	I	P	C
<b>6. Carer to be able to carry out care in an emergency</b>	Recognition of an emergency. Basic life support. Knowledge of emergency tracheostomy tube change.			
<b>7. Carer to be able to administer oxygen and monitor its effect</b>	Administration of oxygen. Awareness of safety issues. Use of oxygen saturation monitor (if applicable).			

I = Initial Training  
P = Practical Training  
C = Competent

## Notes

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## Basic life support for a child with a tracheostomy

**1 SAFE approach**  
Shout for help, Approach with care, Free from danger, Evaluate ABC

**Check your child's level of response** Are you alright?

**2 Check if tracheostomy tube is blocked**  
Tilt head back slightly to expose tracheostomy, insert suction catheter. If blocked replace tube, see the 'blocked tracheostomy' section on page 20

**3 Check for breathing**  
Look, listen and feel for breath for 10 seconds

### If not breathing

**4 Give 5 rescue breaths**  
Use either mouth to tracheostomy or Ambu-Bag to give 5 rescue breaths.

**5 Check for signs of circulation – are there any signs of life?** Check for 10 seconds. Are they responding or moving?

### If no circulation

**6 Give 30 chest compressions**  
Depress the lower half of the sternum to a third of depth of chest wall at a rate of 100 per minute. Then give 2 breaths via tracheostomy. Continue until help arrives or your child shows signs of life.

### After 1 minute

**7 Call emergency services if this has not been done already**  
If no help has arrived or has not been called, you must call for help yourself. Take child with you if this can be done safely.

## What to do if you are unable insert a tracheostomy

**1 Insert a smaller sized tracheostomy**  
Call for help. Try inserting a smaller sized tracheostomy. If unable to insert smaller tube open your child's airway by slightly tilting head back.

**2 Check for breathing**  
Look, listen and feel for breath for 10 seconds

### If not breathing

**3 Give 5 rescue breaths**  
Give 5 rescue breaths either through smaller tracheostomy tube or if no tracheostomy tube use mouth-to-mouth method while occluding the stoma site with a finger or dressing.

**4 Check for signs of circulation – are there any signs of life** Check for 10 seconds. Are they responding or moving?

### If no circulation

**5 Give 30 chest compressions**  
Depress the lower half of the sternum to a third of depth of chest wall at a rate of 100 per minute. Then give 2 breaths via tracheostomy or mouth-to-mouth. Continue until help arrives or your child shows signs of life.

### After 1 minute

**6 Call emergency services if this has not been done already**  
If no help has arrived or has not been called, you must call for help yourself. Take child with you if this can be done safely.

## If you have help

**7 Retry to insert tracheostomy**  
Attempt to insert tracheostomy tube again. If unsuccessful try Railroad technique.

**8 Railroad technique**  
Remove the introducer from the smaller tracheostomy tube. Pass a suction catheter through the middle of the tube and insert the catheter into the stoma by gently pushing and twisting the catheter. Once the catheter is in the stoma push the tracheostomy tube into the stoma. Assess breathing and circulation as before.



## How to deal with a blocked tracheostomy

**1 Attempt suction**  
Try to suction the tracheostomy. If this does not clear the tube or you are not able to insert the suction catheter you will need to replace the tube.

**2 Replace tracheostomy**  
Remove old ties. Remove blocked tube. Replace with a new tracheostomy tube. Use Velcro ties to quickly secure the tube.

**3 Check for breathing**  
Look, listen and feel for breath for 10 seconds.

### If not breathing

**4 Give 5 rescue breaths**  
Use either mouth to tracheostomy or Ambu-Bag to give 5 rescue breaths.

**5 Check for signs of circulation – are there any signs of life?** Check for 10 seconds. Are they responding or moving?

### If no circulation

**CPR**  
**Give 30 chest compressions**  
Depress the lower half of the sternum to a third of depth of chest wall at a rate of 100 per minute. Then give 2 breaths via tracheostomy. Continue until help arrives or your child shows signs of life.

### After 1 minute

**7 Call emergency services if this has not been done already**  
If no help has arrived or has not been called, you must call for help yourself. Take child with you if this can be done safely.

## Contact your child's healthcare team

### Consultant paediatrician:

Name	Telephone
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### Community paediatrician:

Name	Telephone
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### Children's community nurse:

Name	Telephone
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### Dietitian:

Name	Telephone
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### Speech and language therapist:

Name	Telephone
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### Paediatric respiratory nurse specialist:

Name	Telephone
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### GP:

Name	Telephone
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### Health visitor/school nurse:

Name	Telephone
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### Social worker:

Name	Telephone
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For help preparing for your visit, arranging an interpreter or accessing the hospital please visit **[www.uhs.nhs.uk/additionalsupport](http://www.uhs.nhs.uk/additionalsupport)**

**[www.uhs.nhs.uk/childrenshospital](http://www.uhs.nhs.uk/childrenshospital)**

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