

PATIENT INFORMATION

NASOGASTRIC (NG) TUBES FOR PAEDIATRICS



Aim of the leaflet

This leaflet has been developed to inform and support parents whose baby / child requires a nasogastric (NG) tube for short or long term feeding, or for the administration of medicines.

If you have any concerns or queries regarding anything in this leaflet please speak to your child's doctor or nurse.

Alternatively, contact the Orchard Community Nursing Team.



What is nasogastric (NG) feeding?

An NG tube is a thin, soft plastic tube that is inserted through your child's nose, down the back of their throat, down the oesophagus and into the stomach. It allows a child to be fed directly into their stomach. Having feeds this way is known as 'enteral feeding'.

Some babies / children are unable to sufficiently feed through their mouths and therefore do not receive enough nutrition for them to grow adequately. The reasons preventing your child from taking sufficient feeds may be a short or long term issue: some children only need an NG tube for a few days whilst in hospital but some may need to be discharged home with an NG tube.

Some examples of why a child may need this feeding help are:

- They may have difficulty with normal sucking, chewing and swallowing.
- They may have a medical condition that causes them to become breathless and tire easily when feeding or eating.
- They may have a medical condition where extra nutrition is needed for adequate growth and development and may be unable to take all of this by mouth.
- They may not be able to take medications by mouth.
- They require a special feed or milk to improve symptoms they are experiencing due to an underlying medical condition.

Some children can feed by mouth as well as having NG feeds. This will depend on what your child's feeding difficulties are.

What are the advantages and disadvantages of an NG tube?

Advantages:

- Provides a safe method of feeding
- Can be safely inserted without the use of an anaesthetic
- Can be removed easily when no longer needed

Disadvantages:

- Is visible on your child's face
- Insertion can sometimes cause distress and can be uncomfortable
- Can be dangerous if tube is inserted into the lungs (airway) instead of the stomach
- Can increase nostril secretions when first passed or if the child has a cold
- Can sometimes lead to redness or a pressure area where tube lies on the face

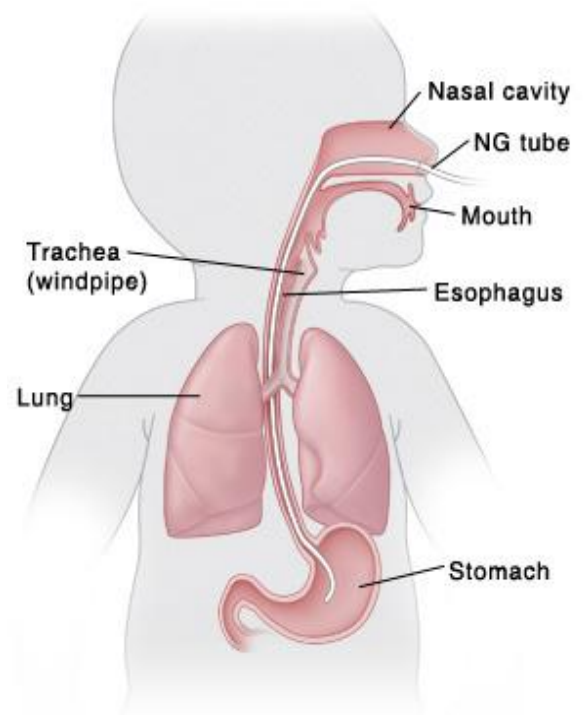
Inserting the NG tube

The NG tube will be inserted by a registered nurse; the initial insertion will be whilst your child is an inpatient on the ward. The length and size of the tube needed depends on your child's size and this will be measured by the nurse before insertion. Young infants or children may be wrapped securely in a blanket to stop them pulling at the tube as it is passed.

The nurse will insert one end of the tube into your child's nostril. If your child has previously had an NG tube in situ, the other nostril will be used in order to alleviate and prevent pressure areas.

As the tube is passed down the back of your child's throat they will be encouraged to swallow. This could mean letting them suck on a dummy or take sips of water if they are able to.

Once the tube has been passed to the correct length as measured, it will be secured to your child's cheek with some adhesive dressing. Some soft dressing may have been placed on your child's cheek prior to the tube insertion in order to protect the skin on their cheek from the tube.



Your child will be awake during the insertion of the tube. It is not a painful procedure but can sometimes be uncomfortable and distressing.

You will have the option to be present with your child during the insertion of the tube but if you do not wish to observe that is okay. The procedure is quick and children recover very well shortly afterwards. It may make your child sneeze, cough or retch as it tickles their throat. This will soon pass.

In some circumstances, and with older infants / children, sedation can be used to help alleviate their anxiety and ensure a smooth tube passing.

The NG tubes that are used on the ward can remain in situ for up to 90 days. If required after this, a new tube will need to be passed.

Checking the tube

When putting the tube down there is a risk of it passing into the lungs instead of the stomach. The tube can also move if it is accidentally pulled or if your child is vomiting, retching or excessively coughing. If this happens, milk can accidentally go into your child's lungs where it will cause breathing difficulties and could lead to a life threatening incident or infection.

For this reason, the tube position **must** be checked to be in the stomach after it is passed and before the tube is used to give any feed, water or medicines. It is also important to check the position of the tube after periods of coughing, vomiting or retching.

The tube position is checked by measuring the acidity of the stomach contents. If the tube is in the correct position in the stomach, the fluid drawn back through the tube should have a pH (acid level) of 5 and below (which indicates acidity). Some medicines can alter the pH of the stomach, such as anti-reflux medicines, but you will be informed if this is the case with your child.

The NG tube should not be used if the pH reading is above 5 unless guided by a nurse or doctor.

Process of checking the tube

This process will be completed by your nurse before the tube is used. If your child requires the tube for long term and is likely to be discharged with the tube, you will be taught this process and assessed to be competent.

1. Before starting, gather all the equipment you will need:

- pH testing strips
- Correct size syringe (20-60ml)
- Feeding set (+ pump if required)
- Milk feed, water or medicine as needed.

2. Wash your hands before and after checking the tube.
3. Check that the tube has not appeared to have moved. You can do this by checking the number visible at the nostril – it should be the same as when the tube was first passed. Check that the tape is not loose.
4. Attach syringe to the tube and draw back the syringe plunger to collect fluid, approx. 2-5ml is needed. This process is called aspirating the tube.
5. Place those drops onto the coloured end of the pH strip.
6. Match the colour change on the pH strip to the colour chart on the bottle and identify the pH.
7. A pH of 5 and below identifies that the tube is in the correct position in the stomach and so the tube is safe to use.

Do not put anything down the tube if you are unsure of the tube position and correct placement cannot be confirmed.

If you are unable to correctly aspirate the tube, **do not** proceed to put anything down the tube. Follow the steps below or contact the Orchard community nursing team or Riverbank Ward. You may need to come into hospital / the ward for the NG tube position to be checked.

What to do if you cannot aspirate the tube:

- Turn your child onto their left side and try aspirating the tube again.
- Try sitting or holding your child upright and try aspirating the tube again.
- If your child is **safe and able** to take drinks orally, try offering them a sip of milk or water and try aspirating the tube again.

What to do if the pH reading is 5.5 or above:

This may mean that the tube is no longer in the stomach. **Do not put anything down the tube.** Contact the Orchard community nursing team or Riverbank Ward.

How to use the NG tube to administer feeds, water or medicines

Small amounts of medicines or water can be slowly pushed into the NG tube using the syringe. You will be shown how to do this by your nurse before discharge.

When administering milk feeds, feeds can be given either by a gravity bolus (letting the milk slowly drip into the stomach) or via a pump over a longer period of time. The way in which your child is fed will be determined by the hospital team including nurses, doctors or dieticians.



Giving a gravity bolus feed

- Wash your hands. Gather all your equipment you may need including feed, water or medicines as required.
- Where possible, your child should be placed in an upright or semi-upright position so that their head is above their stomach.
- **Always** check the tube is in the correct position before proceeding to put anything down it.
- Prime the feed giving set with the milk feed as you have been shown by the nurse.
- Connect the feed giving set to the NG tube and hold the syringe up to allow the milk to drip into the stomach (you will see the amount of milk in the syringe decrease).
- If it appears the feed is running too quickly, lower the height of the syringe slightly. If it appears the feed is running too slow, raise the height of the syringe.

The feed should take approx. 15-20 minutes (depending on how much milk your child is receiving). If the feed is given too quickly it may cause your child discomfort and increase the risk of vomiting.

Using a pump to feed

- Wash your hands. Gather all your equipment you may need including feed, water or medicines as required.
- Where possible, your child should be placed in an upright or semi-upright position so that their head is above their stomach.
- **Always** check the tube is in the correct position before proceeding to put anything down it.
- Turn on the pump by holding down the on/off button until it beeps. Set up the bottle of feed and connect to the feeding line.
- Place feeding set into pump and prime line by holding down 'fill set' until it beeps. The milk should move to fill the set.
- Set up settings on the pump to establish the amount of feed ('dose/vol') and how fast it will go ('rate'). The nurses will show you how to use the pump and go through all the settings with you.
- Connect the end of the feeding set onto the NG tube and press the start/stop button.
- Allow the feed to run through and press 'start/stop' when it has finished.

The amount of milk required and the speed at which it runs will be established by the hospital team before you go home, i.e. nurses, doctors, and dietician.

During a feed

- Watch your child during the feed in case they attempt to pull on the tube. For babies and small infants you can wrap them in a blanket during the feeds to ensure they cannot reach their arms up to pull at the tube.
- If the NG tube moves out of place or is pulled by your child during a feed it is important to stop the flow of milk or the pump and re-check the position of the tube.

Stop feeding if you also observe:

- Vomiting
- Coughing
- Choking
- Changes in colour – any paleness or blueness

Flushing the tube

The NG tube should be flushed using water at the end of feeding / administering medicines to ensure that there is no feed or medicines sat in the tube. A pulsatile flushing action ('push/pause technique') should be used in order to create a turbulence effect within the tube, which can help prevent blockages.

Freshly drawn tap water can be used as a flush for older infants and children. For babies, young infants, and those who are immunocompromised, cooled freshly boiled or sterile water should be used.

If your child required additional hydration, i.e. on warmer days or if the child has not had a lot of fluid in a day, then extra water can be added as a flush to increase hydration.

Medicines

If your child is receiving medications through the NG tube it is important that the medicines are suitable and safe to go down the tube. Most medicines are available in a liquid suspension that can be easily pushed down the tube. If a liquid suspension is unavailable, some tablets can be crushed and dissolved in water to then be passed down the tube. It is important that you check with the doctor who is prescribing the medicine and the pharmacist dispensing it that the tablets are safe to be crushed and that they can be given enterally.

Some medicines are **not safe** to be crushed:

- Buccal and sublingual tablets – are designed to avoid absorption via the stomach be broken down by the liver.

- Sustained / Modified release tablets – are designed to release the drug dose gradually. If crushed, the full amount of the drug will be released, exposing the patient to higher than normal levels of the drug.
- Enteric coated (EC) tablets – have a special coating to prevent the drug dissolving in the stomach. If crushed, there is an increased risk of side effects and possible decreased drug absorption.
- Chewable tablets – are made to allow partial drug absorption in the mouth. If crushed, decreased drug absorption will occur.

Never mix medicines together before administration as there may be adverse interactions.

Flush the NG tube with water before administering medicines, between each medicine, and at the end of medicine administration.

Getting ready to go home

Once it has been established that your child needs an NG tube at home, the nurses will go through a list of competencies with you. This will include some teaching and demonstration of how to use the tube, how to resolve issues regarding the tube, and when to seek medical advice.

The nurse will then supervise and help you use the tube and sign you off as competent when you feel like you are confident and able to use the tube safely.

A referral will be made to the Orchard community nursing team, who will support you when you are at home and can also help to train up additional family members in using the tube.

Orchard will take charge of ordering the syringes and other equipment you will need to use the NG tubes at home and you will regularly receive a delivery of equipment. If your child needs a new NG tube during the daytime, Orchard can visit you at home to place a new tube. If it is out of hours or if Orchard are unable to attend, you may need to bring your child to Riverbank ward where one of the staff nurses can insert a new tube.

How to care for your child and their tube

Mouth care

You should continue to clean your child's mouth regularly and brush their teeth. This is especially important if they do not take anything orally.

Skin care

A protective adhesive pad underneath your child's tube protects the skin from the adhesive tape used to secure the tube and to prevent a pressure area from the tube. It is advisable to replace tapes if they look dirty or are starting to come loose.

Bathing, showering and swimming

Your child will be able to bath or shower safely as long as the cap on the end of the NG tube is securely closed.

When swimming, ensure that the tape securing the tube to your child's cheek is waterproof. Replace the tape as soon as it becomes damp to lessen the risk of the tube becoming dislodged.

Going to school

Your child will be able to go to school as normal. Orchard team will be able to support you with your child attending school.

Holidays

If going on holiday it is important to be organised ahead of time and ensure that you will have sufficient supplies for your trip.

If going abroad, ask your child's doctor for a letter stating that you are carrying medical supplies. This may help with airport security.

If your child has a cold

You may need to pay particular attention to keeping your child's nose clear of secretions. This is important because the presence of the tube means that one of their nostrils is smaller than the other as the tube takes up space within the nostril. This may mean that they work harder to breathe. If you are concerned, contact Orchard or Riverbank Ward.

Contact numbers:

Riverbank Ward - 01905 760588

Orchard (South Worcester) – 01905 681590

Orchard (Redditch, Bromsgrove & Kidderminster) – 01527 503030

If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999 via the main hospital switchboard for advice.

Patient Experience

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

Feedback

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

Patient Advice and Liaison Service (PALS)

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

How to contact PALS:

Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net

Opening times:

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.