

# A practical guide to tube feeding your child at home



## Nasogastric tube

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## Feeding your child via a nasogastric tube

**Nasogastric feeding has been suggested for your child to maintain or improve their nutritional status and growth. Nasogastric feeding involves passing a fine tube up the nose and down the throat into the stomach.**

If your child enjoys food and drink and there is no problem with their swallow, they should continue to eat and drink with the nasogastric tube in place.

Your dietitian will advise you / provide a plan on the type and volume of feed to give. Part or all of your child's nutrition can be given down the tube depending on how much food and fluids they are able to manage themselves.

To help monitor progress, it is helpful to have your child's weight and length checked on a regular basis. The frequency will depend on their age, general health and tolerance of feeds. Your dietitian will be able to give specific advice for your child.

## Preparing your child for a nasogastric tube

### **Passing a tube can tickle, feel strange and may cause a feeling of nausea.**

Your child will probably take a while to get used to how the tube feels, but will settle once it is in place. It is important that you and your child feel prepared before it is passed. Children need the procedure explained to them in a way which they understand.

The ward nurses and community nurses will be able to help you feel prepared by explaining everything to you beforehand. The ward and/or community nurses can train and support parents on how to pass a nasogastric tube if you wish to learn.

To reduce the risk of children pulling their tube out, guide the tube down their back under their clothing so that they cannot reach it. If your child requires a pump feed, they must be continuously observed throughout the feed to ensure their safety.

### **Troubleshooting**

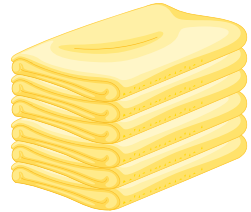
**The following information is for support. Always seek help or telephone advice if you are concerned about your child. This particularly applies to babies who, due to their small size, may need support sooner.**

## Handwashing

It is very important that your hands and work surface are washed effectively before you use your child's tube as this will reduce the risk of infection.

### Equipment required for hand washing

Water, liquid soap, a dry clean towel or paper towels.



### How to wash your hands effectively:

1. Remove all rings and watches, wet hands, add soap and rub your palms vigorously.
2. Ensure all the skin areas are wet and soapy, paying particular attention to fingers, thumbs and back of hands.
3. Follow the diagrams on the next page. Rinse thoroughly to ensure all soap is removed. Always dry hands on a dry clean towel or paper towel.

## Handwashing



**1** Palm to palm.



**2** Right palm over the back of your left hand, and left palm over the back of your right hand



**3** Palm to palm, fingers interlaced.



**4** Backs of fingers to opposing palms with fingers interlocked.



**5** Rotational rubbing of right thumb clasped in left palm and vice versa



**6** Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.

## Supplies of feed and equipment

### Homeward delivery system

**If your child's GP is within Nottingham City or County NHS, Nutricia Homeward will deliver all your child's feed and feeding equipment every month for as long as needed. With the first delivery you will receive an information pack explaining how and when the deliveries will be made. It will also contain contact numbers of the people you will be dealing with.**

Before each delivery, Nutricia Homeward will contact you to do a 'stock take'. They will check how much stock you have and what products you need to be delivered. Alternatively, you can register for online stock checks at [www.homewardonline.co.uk](http://www.homewardonline.co.uk).

You can order less than the recommended amounts to maintain a full stock level but if you want to change or add extra items to your child's order, you will need to contact your dietitian.

If your GP is not within Nottingham City or County NHS you will require monthly prescriptions from your GP. Your dietitian will discuss

Your dietitian will discuss these arrangements with you before you go home.

## Storing tube feed and equipment

### How to store tube feed and equipment

Store unopened ready to use tube feed and equipment in a cool, dry place. Any opened bottles of tube feed should be re-capped and stored in accordance with manufacturers guidance. Infant formula should be prepared in accordance with manufacturer's or dietitian's guidance.

Avoid storing tube feed and equipment near a radiator or fire. Avoid the storing of tube feed in or near extremes of temperature.

Always use older supplies of tube feed and equipment before the delivery of new stock, as this will ensure tube feed and equipment is used before the expiry date.

Please do not build up additional stocks of equipment for your child as their requirements may change and equipment may go out of date leading to wastage. In most cases, equipment can be delivered within seven days if needed. Once tube feed and or equipment has been delivered to your home it cannot be sent back to Nutricia or used for other children.

If you feel you are likely to run out of tube feed or equipment before your next scheduled delivery, please contact your child's dietitian as soon as possible so additional supplies can be organised.



## How to check the nasogastric tube is in position

**Before** giving any tube feed or medicines by your child's nasogastric tube it is important to check the tube is in the stomach. Never give a tube feed unless you are able to obtain a pH of 5.0 or less. This indicates that your child's tube is correctly positioned in the stomach. It is dangerous to feed if the correct position is not confirmed, as the tube may be in your child's lung. It is essential that the tube position is checked after coughing or vomiting, as the tube may move out of position following coughing or vomiting.

### Use the following instructions to check the tube's position:

- Use a 20ml or 60ml purple syringe when aspirating. A larger purple syringe puts less pressure on a tube than a smaller one.
- Open the cap on the end of the nasogastric tube and attach to the syringe.
- Slowly pull on the plunger until some fluid appears in the syringe. Draw up sufficient fluid to drop onto a pH strip and cover all three colours (approximately 0.5-1ml of aspirate).
- Detach the syringe from the tube and close the cap.
- Squirt a little of the fluid onto a pH testing strip to cover all three colours. Wait for the colour to develop, then match the colour on the strip to the same colour on the strip's chart.

## How to check the nasogastric tube is in position

**If the reading is 5.0 or less, flush the tube with 5ml water or enough to clear the tube then start feeding.**

**If no fluid appears in the purple syringe:**

1. Lie your child on their left side and try again.
2. If your child has a safe swallow, give your child a small drink of water and try again.
3. If your child is not able to take anything orally, give mouth care as this can stimulate gastric secretions.
4. Use the syringe to push 1-5 ml of air into the tube.
5. If you have been trained and are competent to re-pass, advance or withdraw the tube 1-2cm and try again.
6. If you are still unable to obtain fluid, telephone the ward or your community children's nurse for advice.

**If you are unable to get a pH reading of 5.0 or less:**

1. Wait 30 minutes and retest.
2. If you are still unable to obtain fluid with a pH of 5.0 or less, telephone the ward or your community children's nurse for advice.

## Giving top up feeds

**After food / milk has been given orally, check the position of the tube by checking pH before offering a top up tube feed:**

- If the pH is 5.0 or less, give the top up feed.
- If the pH is 5.5 or greater, wait for 30 minutes and retry until a reading of 5.0 or less is obtained.

## Care of the nasogastric tube

### Secure the tube to your child's face

A soft plaster is attached to the cheek (providing a protective layer between the skin and the tape) to secure the tube. It allows the tape to be pulled off the protective plaster and changed when wet or dirty, without any pain or discomfort to your child's skin. If your child's skin becomes sore ask your child's GP or community nurse for advice.

### When to change a nasogastric tube

Various types of nasogastric tubes are available, and some can stay in place for up to 90 days. Your dietitian or community nurse will advise when it will require changing. It is advisable to use alternate nostrils when changing the tube to prevent irritation and soreness to the nostril and cheek.

## Giving your child a tube feed

**There are two methods of giving tube feed and water through your child's tube. They are:**

- **Bolus feeding:** Where the tube feed and/or water is given using a feeding syringe. A bolus feed means giving a set amount of feed over a short period of time, usually 20-30 minutes. The tube feed is poured into a syringe and allowed to run down the nasogastric tube by gravity. The advantage of bolus feeding is that it fills your child's stomach and leaves it to empty as normally happens when eating meals.
- **Pump feeding:** Where the amount of feed is given over a longer period, using a pump, to help improve tolerance of feed. However, some parents find a pump useful to give a smaller bolus feed over 30-60 minutes.

Your dietitian will help you to decide which method will be the most suitable for your child, bearing in mind daily activities and the amount of tube feed and fluid required.

The method of feeding can be changed if required to suit your child's nutritional needs and daily activities. Your dietitian will be able to advise you further.

## Giving feeds safely

**To ensure your child is safe during feeding it is important to observe them whilst the tube feed is being delivered. Children can accidentally pull out or dislodge their tube. If no action is taken, the feed will continue to be delivered but this may not be into the correct place, which can lead to serious problems.**

Watch your child's breathing and colour during tube feeds. STOP the tube feed immediately if your child becomes distressed, has difficulty breathing, or if it looks as if their tube has been pulled out of place. Any vomiting, retching or coughing can also dislodge their nasogastric tube, so always check the nasogastric tube is correctly positioned in the stomach before starting to tube feed again. For these reasons it is recommended to give the tube feed during the day or early evening whilst your child can be observed and the tube feed given safely. Your child should never be left unsupervised whilst having a tube feed.

## Water used for flushes

It is important to flush your child's tube to prevent it from blocking:

- Before and after every tube feed.
- Before, between and after any medications.

For infants use cooled, boiled water.

For children over one year of age use freshly run tap water.

**If your child has a fluid restriction water flushes may not be appropriate - follow clinical advice.**

## Via a syringe

### Equipment required:

- 20ml or 60ml purple syringe
- Tube feed
- Water for flushing
- pH paper.

### How to bolus feed:

1. If the tube feed is in the fridge, remove from the fridge about 15 minutes before required, to ensure it is not too cold. It can feel uncomfortable if a tube feed is given straight from the fridge.
2. Check the label of the tube feed to ensure it is the correct feed. Discard if it is past the expiry date.
3. Wash your hands before and after bolus feeding as explained on **pages 5 and 6.**
4. Check the position of your child's tube as explained on **pages 9-10.**
5. When ready to feed, settle your child comfortably and place in as upright a position as possible. This will reduce the risk of reflux and regurgitation. Avoid giving your baby / child a tube feed whilst lying completely flat.
6. Refer to your child's individual plan for volume of tube feed and flushes recommended.
7. Using 20ml or 60ml purple syringe, flush the tube with a least 5ml of water or enough to clear the tube before and after each feed.

Then follow the method that you have been shown as follows:

- When using a Kangaroo / bolus feeding set with an extension set, pour the tube feed into the syringe section and run it through to the end of the extension set, before attaching to the nasogastric tube.
- If using a purple syringe only, remove the plunger from the syringe, attach the syringe to the nasogastric tube and fill the syringe with the feed.
- Allow the feed to drip through, and keep topping up the syringe until you have given the required volume of feed. Top up the syringe before the feed reaches the bottom to avoid introducing air into the stomach.

### **At the end of feeding:**

- Flush the nasogastric tube with water using 20ml or 60ml purple syringe to clear the nasogastric tube of milk/feed and to prevent it from blocking.
- Clean or dispose of your syringe as explained in the accompanying leaflet you will have been provided with

### **Note**

If you are giving a bolus feed via a syringe, you can slow the rate at which the tube feed is given by lowering the syringe and speed up the rate by holding the syringe higher. Never attempt to rush bolus feeding as this may cause nausea or reflux. If you feel that the nasogastric tube is not long enough to safely give a bolus tube feed, please ask your dietitian for advice.

## Using a feeding pump

### Equipment required:

- Feeding pump and stand
- Giving set
- 20ml or 60ml purple syringe
- Water for flushing
- pH paper
- Feeding container and tube feed or pack of prescribed tube feed.

### How to use a feeding pump:

1. Check the label of the tube feed to ensure it is correct for your child.  
Discard the feed if it is past the expiry date.
2. Wash your hands as explained on **pages 5 and 6**.
3. Check the position of your child's tube as explained on **pages 9- 10**.
4. When you are ready to start the tube feed, settle your child comfortably, as upright as possible. Avoid your child lying completely flat.
5. Using a 20ml or 60ml purple syringe, flush the tube with water.  
Refer to your child's feeding plan for the amount of tube feed and water you should give.
6. Place the required amount of tube feed in a suitable container, if using a 'ready to hang' product, place on the stand.



7. Check the expiry date on the giving set, open the packaging and take out, holding each end.
8. Use a new giving set for each pack of 'ready to hang' feed. One of these packs can last up to 24 hours and then the pack and giving set should be thrown away.
9. Use a new giving set for each new container of tube feed. Decanted or powdered tube feed should be used within four hours unless advised otherwise by your dietitian.

**Continue to tube feed in line with the training you have been given.**

### **At the end of tube feeding:**

1. Wash your hands again.
2. Disconnect the giving set from the feeding tube. If not needed again, giving sets and feed packets can be thrown away with your household waste / recycling. If using again later, replace the cap onto the end of the giving set to seal the system.
3. Using a 20ml or 60ml purple syringe flush the tube with at least 5ml of water or enough to clear the tube to prevent it from blocking.
4. Clean or dispose of the syringe as explained in the accompanying leaflet.

### **Note**

Giving sets should be changed as advised by your dietitian.

## Giving medicines

### **Always check the nasogastric tube position by checking the pH.**

Most liquid medications can be given via a nasogastric tube - please check with ward staff, your community nurse or your pharmacist.

Give each medicine individually and flush with at least 5ml of water before, between and at the end of any medications. Please be mindful of the timing of medication administration to avoid medicine interactions. Seek advice from your dietician regarding volumes of water to flush. Children on fluid restriction may be advised on smaller volumes of water.

- For infants use boiled cooled water and for children over one year use freshly run tap water

If your child is given any medication in tablet form, ask your pharmacist if a liquid is available or if they can be crushed and mixed with water to be given via their tube.

**Any additional fluid required in your child's feeding plan can be given as part of the flushes for medication.**

## Troubleshooting - tube problems

### What to do if the tube moves or comes out:

- **Tube partially moved** - Check the pH as explained on page 9. If the pH is 5.0 or less then use the tube as normal. If you are unable to obtain any fluid or the pH is not 5.0 or less then please follow the suggestions on **page 10**.
- **Tube completely out** - If you have been taught, and are competent to replace a tube, pass a new tube. Otherwise contact your community nurse, hospital ward or Emergency Department - as outlined by the discharging hospital.
- **Tube blocked** - Remove the tube, if you have been trained, and are competent to replace it with a new one. Otherwise, contact your community nurse, hospital ward, or Emergency Department - as outlined by the discharging hospital.

Your community nurse can be contacted on the telephone number that is at the end of this leaflet. If your child requires their tube replacing immediately call your ward or attend the Emergency Department, as indicated by the hospital discharging your child.

**Contact your GP, or access your local service as directed by your discharging hospital. In the event of an emergency call 999 without delay.**

## Troubleshooting - pump problems

### Pump problems

If the pump alarms, refer to the trouble shooting guide provided with your pump. This would have been given to you when you received your pump equipment training.

If the pump continues to alarm then contact the Homeward customer services for help during the hours of 9am - 5pm, Monday to Friday, on 08000 933672. Outside of these hours please call the advice line on 08457 623 636.

### Equipment and tube feed from Nutricia Homeward

Nutricia Homeward should contact you on a monthly basis to do a stock check and agree equipment and tube feed required for the following month. Homeward are able to deliver less than the agreed amount but not more.

If you think you will run out of tube feed or equipment before your next delivery, please contact your home enteral feeding dietitian in plenty of time to enable additional supplies to be organised.

If you need to change any of your child's equipment or tube feed delivered by Nutricia Homeward please contact your dietitian who will confirm required changes with the company.

## Useful telephone numbers

If you are ever in doubt or unsure about any aspect of your child's care please do not hesitate to call and speak to the relevant person.

**Children's community nurse:** Telephone number listed at the end of this booklet.  
Working hours: Monday to Friday,  
9am - 5pm

**Dietitian:** Telephone number listed at the end of this booklet.  
Working hours: Monday to Friday,  
8.30am - 4.30pm

**Discharging ward** Telephone:  
Extension:

**Nutricia homeward out of hours advice line:** Tel: 08457 623636

**Homeward Online:** [www.homewardonline.co.uk](http://www.homewardonline.co.uk)  
(Always use your child's name) Telephone: 08452 501 028 (queries)

**Other:** .....  
Telephone:



## **Childrens community nurse contact number:**

**Telephone: 0300 123 3387 (select option 4),**

**Monday to Friday, 9am-5pm**

## **Children's Home Enteral Feeding Team:**

**Telephone: 0115 969 1169, extension 74008**

If you require additional help, support, or information, please contact:

- The Patients Advice and Liaison Service team at Nottingham City Hospital or Queen's Medical Centre on:  
Telephone: **0800 183 0204 or 0800 052 1195**  
**Email:** pals@nuh.nhs.uk
- The Patient Experience Team at King's Mill Hospital on: Telephone:  
**01623 672222**  
**Email:** sfh-tr.pet@nhs.net
- Minicom: **0800 183 0204**

### **Further sources of information**

NHS Choices: [www.nhs.uk/conditions](http://www.nhs.uk/conditions)

Our website: [www.sfh-tr.nhs.uk](http://www.sfh-tr.nhs.uk)

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team at **King's Mill Hospital** on 01623 672222 or email: sfh-tr.PET@nhs.net. Or you can email **Nottingham University Hospitals:** [childrenspreceptorship@nuh.nhs.uk](mailto:childrenspreceptorship@nuh.nhs.uk)

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