# Complex Care Hub Manual: Nasogastric Tube and Nasojejunal Tube Management

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1. **What is a nasogastric tube?**

A nasogastric (NG) tube is a thin soft tube that is passed through the child’s nose, down the back of the throat, through the food pipe (oesophagus) and into the stomach. Children can be given their specially made liquid food and liquid medications through this.

![Image 1: Example of child with nasogastric tube in-situ](image1.png)

![Image 2: Example of the position of the nasogastric tube from the nose to the stomach](image2.png)

2. **The reasons a child may need a nasogastric tube**

- Can’t swallow safely
- Not able to eat or drink enough on their own
- Unable to swallow the medicines they need

3. **Positioning of the nasogastric tube**

The most important part of caring for a nasogastric tube at home is checking that it is in the right place (sitting in the stomach). Coughing, vomiting or movement can move the tube out of the correct position. If the tube has moved into the windpipe (trachea) the feed would go into the lungs, rather than the stomach.

4. **When does the position of the tube need to be checked?**

- Before each feed
- Before each medication
- Before putting anything down the tube
- If the child has vomited
5. How is the position of the tube checked?

Procedure

1. Wash your hands (can use ABHR)

2. Ensure that you put on gloves if at any time you may come in to contact with the child’s body fluids

3. Attach a 5 or 10 ml syringe to the end of the tube (20ml syringe as per RCH clinical practice guideline)

4. Pull back on the syringe

5. If gastric juices (liquid stomach contents) come into the syringe, squirt a small amount (½ ml) on the test strip provided

6. Acid from the stomach juices will cause the litmus paper to turn pink, or the pH indicator strip to read between 0-5

7. A reading of 0-5 means the other end of the tube is sitting in the stomach – where it should be

8. If the litmus paper or pH indicator does not give the expected result, re-test and if the result is still not right inform the parents and do not use the tube until directed by medical staff (or the family)

9. Remove gloves and dispose

10. Wash your hands (can use ABHR)

NB: Some medicines and formulas can affect the reading. Refer to child specific pages for variations

5.1 Tips for double-checking the position of the nasogastric tube

- Look at the taping of the tube; is it in its usual position?
- Check the marker on the nasogastric tube; is the mark on the tube at the same distance from the nostril that it usually is?

5.2 What if it is hard to get gastric juices out?

If it is hard to get gastric juices into the syringe, the following are suggested ways to try to get some gastric juices out:

Procedure

1. Wash your hands (can use ABHR)

2. Ensure that you put on gloves if at any time you may come in to contact with the child’s body fluids

3. Position the child so they are lying on one side, as able

4. Use a 5 ml syringe to gently push some air into the nasogastric tube

5. Try to gently draw back a small amount of gastric juices (aspirate) with the same syringe

6. If this does not work, repeat step 1, using a 5 ml syringe to draw back
7. If still unsuccessful, repeat step 1 using a 5 ml syringe, but leave attached to the tube for 10-15 minutes

8. Remove gloves and dispose

9. Wash your hands (can use ABHR)

Pushing air in may move the tube away from the wall of the stomach; it will also clear the tube of any leftover fluid. If the child burps immediately after putting air in, the tube’s tip is probably in the food pipe (oesophagus) and will need to be reinserted into the stomach

5.3 Other suggestions

- Reposition the child
- Rotate the nasogastric tube
- If possible, offer the child a drink and wait to aspirate (only if the child is allowed to drink and can do so safely)
- Wait 15-30 minutes and aspirate again, this will allow time for fluid to accumulate in the stomach
- If the above steps fail, contact the child’s parent

5.4 How is the tube held in place?

The child will have a piece of tape on the side of their face, near the nostril. The tube is placed over the tape and then held in place by another piece of tape on the top of the tube. If the tapes become loose you may need to apply new tape to secure the tube. The child’s face should be dry when applying the tapes.

5.5 What happens if the nasogastric tube comes out?

Sometimes a nasogastric tube may come out when a child vomits and sometimes the child may pull out their tube. If this happens, stop the feed (if the feed is going). Tell the child’s parents. The nasogastric tube should be put back in by a trained parent or medical/nursing staff. If the tube can’t be re-inserted straight away it should be placed in a clean plastic bag and kept in the freezer. Remember that the position of the tube needs to be re-checked if the tube is reinserted.
6. Nasojejunal tube

A nasojejunal (NJ) tube is similar to a nasogastric tube but the end of it sits in part of the small bowel (jejunum) instead of in the stomach. The care of a nasojejunal tube is very similar to looking after a nasogastric tube. Do not need to test the pH of a nasojejunal tube before feeds:

- Check the position by noting the taping of the tube (it is in its usual position)
- Check the marker on the nasojejunal tube (is the mark on the tube at the same distance from the nostril that it usually is)

Some important points to note regarding nasojejunal tubes

- The tube is longer and thinner than the nasogastric tube, so more easily prone to blockage
- The nasojejunal tube should never be rotated
- Feeds should be given slowly and continuously
- Give regular gentle flushing with sterile water, approximately every four hours.
- If a medicine mixture is viscous, flushing or dilution with water may be required during the administration.
- Administer each medicine separately with a water flush in between.

If the tube comes out it must be replaced in hospital by trained medical staff.
7. Feeding procedures

Tube feeding gives liquid food to the child who is unable to eat or drink enough. This helps them to grow and stay healthy. A variety of specially made liquid feeds are available. Each child has been nutritionally assessed and is managed by a dietician who is responsible for developing an appropriate individual feeding plan. In most cases the tube feeds will give the child all the nourishment that they need.

7.1 Common problems with tube feeding

Sometimes feeds may cause the child to:
- Be uncomfortable and/or have bloating during or after the feed
- Feel sick or vomit
- Have diarrhoea or constipation

8. Care of feeding equipment

8.1 Giving sets and accessories

Wash all containers and feeding equipment in warm soapy water. Rinse well and drip-dry thoroughly before storing. It is recommended that they are stored in an airtight container in a cool dry place or in the fridge, ready for use with the next feed. The feeding sets should be changed every 2 days (daily if the child is immune system is affected or if they are under the age of one year).

8.2 Formula

- Ready to feed formula packs can be hung for a maximum of 24 hours or stored in the fridge for the same period of time
- Ready to feed formula bottles can be decanted and hung or stored in the fridge for up to 12 hours
- Formula prepared from powder for can be hung for 2 hours or can be stored for 12 hours in the refrigerator
- Bring formula to room temperature before feeding

8.3 Pump

Not all children have a feeding pump. The outside of the pump can be cleaned with a damp cloth and warm soapy water. When cleaning the pump it should be turned off and unplugged. If the pump is not working, follow the trouble shooting guide or tell the child’s parents.

8.4 Preparing the child for feeds via a nasogastric tube

Procedure

1. Tell the child that you are going to get their feed ready
2. Wash your hands (can use ABHR)
3. Prepare equipment
4. Prepare formula (feed)
5. Fill the feed container with the right amount of formula
6. Vent stomach (if applicable)
7. Wash your hands (can use ABHR)
8.5 Bolus feeds

Bolus feeding involves giving a feed over 10-30 minutes. Feeds can be given using a syringe (with the plunger removed) or using a gravity feeding set.

8.6 Procedure using a syringe

Procedure

1. Wash your hands (can use ABHR)
2. Connect the tip of the syringe into the end of the feeding tube or extension set. Fill the syringe with formula
3. Hold the syringe to regulate how fast the feed is given. If the syringe is held up high, the feed will be fast. If you want the feed to go slower hold the syringe lower
4. Refill the syringe when 5-10 ml of feed remains to stop air getting into the stomach
5. At the end of the feed flush the tube with water
6. Wash your hands (can use ABHR)

8.7 Procedure using a gravity set

Procedure

1. Wash your hands (can use ABHR)
2. Put the right amount of feed into the feed container
3. Connect the feed container to the gravity giving set
4. Hang the container and run the formula through the gravity giving set line until almost at the end then clamp off the giving set
5. Connect the tip of the giving set to the nasogastric tube
6. Release the clamp on the gravity set until you get the right drip rate for the child
7. At the end of the feed flush the tube with water
8. Wash your hands (can use ABHR)