

ENTERAL FEEDING

Clinical Nutrition, is an area of medicine that seeks to identify and treat medical disorders in humans that result from improper or inadequate diet, or from diseases that make the body unable to handle the nutrients delivered to it in the normal diet. The usual treatment is dietary, but can be the delivery of nutrients by other means, such as by intravenous line (UPMC, 2005)¹. This includes enteral and parenteral (intravenous) nutrition. Enteral feeding refers to any method of nutrient ingestion involving the gastrointestinal tract and includes oral and tube feeding. Oral feeding may be by sip feeding ready-made artificially prepared formulations that can be both supplement or replace a patient's normal diet. Tube feeding may include nasogastric, gastrostomy or jejunostomy, but more commonly nasogastric feeding. Rarely, nasojejunal feeding is prescribed where the nasogastric tube is inserted further down the stomach till the jejunum, the first part of the small intestine. Nasogastric feeding can be a very useful method of providing a liquid diet to patients. Semi-solid or solid foods may also be provided², for example by using thickeners to alter the consistency of a liquid enteral feed when a patient's swallowing reflex starts to recover following a period of aphasia (inability to swallow), such as after a patient suffers from a stroke or trans-ischaemic attack.

Equipment

- Clinically clean tray
- Nasogastric tube
- Topical gauze
- Water-based lubricating jelly
- Hypo-allergenic tape
- 50ml nozzle-tipped syringe
- Blue lithmus or pH paper
- Receiver
- Spigot
- Stethoscope

¹ University of Pittsburgh Medical Centre (UPMC) (2005). Available at: <http://weightloss.upmc.com/Tools/Glossary.htm>. Accessed on 14th November 2005.

² Payne-James, J., Grimble, G. & Silk, D. (2001). *Artificial Nutrition Support in Clinical Practice*. Second edition. London: Greenwich Medical Media Limited.

Choosing the size of nasogastric tube

Keep this in mind: Always choose the smallest size that is appropriate to feed a patient!

For totally liquid feeds, a size CH12 (white colour) or size CH14 (green colour) is adequate. If a patient is on treatment, such as tablets (that are crushed to go through the tube), syrups (e.g. antibiotics) or is given home-made soups, a size CH14 is more indicated as it is wider and gets blocked less easily. If a nasogastric tube is required to drain a patient's stomach contents, its size has to be CH16 (orange) or CH18 (red) depending on what one expects to drain. An example of one's need to drain a stomach is in cases of intestinal obstruction or food malabsorption.

Procedure

1. Explain the procedure to the patient.
2. Arrange a signal by which the patient can communicate if he/she wants the nurse to stop, e.g. by raising his/her hand.
3. Assist the patient to sit in a semi-upright position in the bed or chair. Support the patient's head with pillows.
4. Measure the approximate distance of the tube that is to be inserted, by measuring the distance on the tube from the patient's ear lobe to the bridge of the nose plus the distance from the bridge of the nose to the bottom of the xiphisternum. Calculate the approximate length with the markings on the nasogastric tube.
5. Wash hands and assemble equipment needed.
6. Check that the patient's nostrils are patent by asking him/her to sniff with one nostril closed. Repeat with the other nostril.
7. Lubricate the tube for about 5-10 cm with a thin coat of lubricating jelly that has been placed on a topical swab.
8. Insert the proximal end of the tube into the clearest nostril and slide it backwards and inwards along the floor of the nose to the nasopharynx. If an obstruction is felt, withdraw the tube slightly and try again in a slightly different direction or, if unsuccessful, use the other nostril.
9. As the tube passes down into the nasopharynx, ask the patient to start swallowing. This will direct the nasogastric tube into the stomach rather than into the lungs.

10. Advance the tube through the pharynx as the patient swallows until the approximate required length of the tube reaches the point of entry into the external nares. If the patient shows signs of distress, e.g. gasping or cyanosis, remove the tube immediately.
11. Ascertain whether the tube is in the stomach with a syringe. The aspirate should turn blue litmus paper pink or red. The pH paper should be up to 5.
12. Tape the tube to the patient's nose and secure the distal end in a suitable position.
13. Secure the tube.

Care of the patient with a nasogastric tube:

- Mouth care
- Check nasogastric tube position before feeds or at least once before every start of shift.
- Check markings on the tube. If the 55cm mark || (2) is visible, stop feeding as the tube needs to be inserted further or re-inserted. Normally a tube needs to be inserted between marks || (2) and ||| (3), in order to be in place in the stomach.
- Maintain strict fluid balance and intake-output charting.
- Maintain a stool chart.