**Adult Enteral Feeding guidelines**

<table>
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<tr>
<th>Full Title of Guideline:</th>
<th>Adult Enteral Feeding guidelines – Section 3.0 Fine bore nasogastric tube feeding</th>
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<tbody>
<tr>
<td><strong>Author (include email and role):</strong></td>
<td>Anne How (Therapy Service Manager in Dietetics) <a href="mailto:anne.how@nuh.nhs.uk">anne.how@nuh.nhs.uk</a> Tracey Buchanan (Nutrition Nurse) <a href="mailto:Tracey.Buchanan@nuh.nhs.uk">Tracey.Buchanan@nuh.nhs.uk</a></td>
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<tr>
<td><strong>Division &amp; Speciality:</strong></td>
<td>Clinical Support (Therapy Services) Surgery (Nutrition)</td>
</tr>
<tr>
<td><strong>Scope (Target audience, state if Trust wide):</strong></td>
<td>Trust Wide</td>
</tr>
<tr>
<td><strong>Review date (when this version goes out of date):</strong></td>
<td>01/04/2022</td>
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<tr>
<td><strong>Explicit definition of patient group to which it applies (e.g. inclusion and exclusion criteria, diagnosis):</strong></td>
<td>All adult patients who are being considered for or are receiving enteral nutrition</td>
</tr>
<tr>
<td><strong>Changes from previous version (not applicable if this is a new guideline, enter below if extensive):</strong></td>
<td>Structural changes Some changes made in some sections based on recently published NHS Improvement documents</td>
</tr>
<tr>
<td><strong>Summary of evidence base this guideline has been created from:</strong></td>
<td>See references</td>
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**This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date or outside of the Trust.**
3.0 FINEBORE NASOGASTRIC TUBE FEEDING

Fine bore nasogastric tube (FBNGT) feeding remains the most common and the simplest method of providing relatively short-term artificial nutritional support for intervals of 4 – 6 weeks. The decision to start tube feeding, which type of tube to use, the type of feed and diet and the feed regimen should be a team decision involving doctor, nurse, dietitian, speech and language therapist and patient. Unless specifically required/requested, the NST would not normally be involved in these decisions. The role of the ward team is crucial, because it is often the nurse who administers the feed and observes the patient for signs of improvement and/or complications. Therefore excellent communication between the nurse and the other members of the team is essential.

‘Before a decision is made to insert a nasogastric tube, an assessment is undertaken to identify if nasogastric feeding is appropriate for the patient and the rationale for any decision is recorded in the patient’s medical notes’ (NPSA, 2011).

Nasogastric feeding via a wide-bore tube is possible but is not recommended as:

- It is uncomfortable for patients
- Has increased risk of complications (reflux & aspiration)
- Can impair normal swallowing
- Can cause nasal and oesophageal erosions.

Feeding via a wide bore tube usually only takes place in specialist areas such as critical care and ENT. Some areas may have specialist specific guidelines for managing this. For critical care guidance – see Widebore nasogastric tubes in critical care.

**Nasogastric (NG) feeding will be considered for:**
- Who cannot maintain nutrition by oral means
- In whom feeding is appropriate and in line with their wishes
- Whose small intestines are functioning
- Who have normal gastric motility or respond to prokinetic agents
- Who are known not to be at excessive risk of vomiting or gastro-oesophageal reflux
- Who are estimated to require feeding for six weeks or less

Feed can be given intermittently and a break of at least 4 hours each day is common practice. During the rest period, the tube is usually flushed with freshly drawn drinking tap water, how often and how much depends on the individual patient.

**Always refer to the individual's feeding regimen provided by the dietitian or, if unavailable, consult the dietitian or the appropriate out of hours standard regimen for your patient's clinical condition.**
3.1 INDICATIONS FOR NG FEEDING (This list is not exhaustive)

1. Physical problems such as:
   - Dysphagia as a complication neurological disease e.g. stroke
   - Inflammation of the mouth / throat / oesophagus e.g. following radiotherapy/ severe candidiasis
   - Unconsciousness
   - Facial / jaw trauma under guidance from specialist team

2. Depressed appetite caused by:
   - Severe systemic illness

3. Hypercatabolic states such as:
   - Major sepsis
   - Burns
   - Major trauma / surgery

4. Other patients unable to meet their nutritional needs via the oral route

3.2 CONTRAINDICATIONS FOR NG FEEDING

1. Physical injuries or deformities such as:
   - Confirmed or suspected basal skull fracture (in such cases an orogastric feeding tube should be passed by an anaesthetist)
   - Laryngectomy unless under guidance/approval of ENT department

2. Gastro – intestinal such as
   - Stasis (gastric stasis or ileus)
   - GI Obstruction

3. Withdrawal or refusal of consent

4. Other (NNNG 2016)
   - Maxillo facial disorders
   - Unstable cervical spinal injuries
   - Nasal/pharyngeal /oesophageal obstruction or ulceration
   - Choanal atresia
   - Trachoesophageal fistula
   - Oesophageal/pharyngeal pouch
   - Oesophageal stricture or other abnormalities of the oesophagus
• Oesophageal tumours or have undergone oesophageal surgery
• Oropharyngeal tumours or have undergone oropharyngeal surgery
• Post laryngectomy
• Actively bleeding oesophageal or gastric varices

This list is not exhaustive.

3.3 PASSING OF NG TUBES

Before inserting a feeding tube you must ensure that an assessment has been undertaken to identify if nasogastric feeding is appropriate for the patient and the rationale for any decisions is recorded in the patient’s medical notes (NPSA 2011). If this has not and cannot be done or if there is insufficient support to care for a patient with an NGT, the insertion of the tube should be delayed and the reasons documented in the patient’s medical notes.

The procedure for passing a nasogastric tube must only be carried out following formal consent, where patients lack capacity a ‘Best Interest decision’ should be decided by the multi-professional team caring for the patient - Consent to examination and treatment policy (2016). The insertion of a FBNGT can only be performed by a health care professional that has been assessed as competent to perform the procedure and who can demonstrate relevant theoretical knowledge and understanding e.g. for nurses, this is via the completion of “Working in New Ways, Passing fine bore nasogastric tubes (for Adults and Paediatrics), a competency based training package”

If feeding via a nasogastric tube is anticipated to last longer than 4-6 weeks, referral to NST to consider longer-term access for feeding should be considered.

Nasogastric tube feeding MUST only commence when the tube position has been confirmed and documented to be in the stomach and safe for feeding.
3.3.1 GUIDE WIRE

Most FBNGT will have a guide wire to aid with the insertion of the tube. Prior to insertion of the tube, ensure the guide wire moves freely in and out and check the guidewire does not protrude out the end of the NGT. At NUH our risk assessments, indicates that we should leave the guidewire in place until the position of the tube within the stomach has been confirmed. This ensures that the tube can clearly be seen on x-ray, if an x-ray is required to confirm correct tube position. Guide wires should never be reused or reinserted into the tube after placement as this can cause perforation of the tube.

Nasogastric tubes must never be flushed until their position in the stomach is confirmed either by pH testing or Radiology. This is so for all situations including when removing the guidewire. (NPSA 2012; NHS Improvement 2016). Flushing the tube before placement has been confirmed, could cause aspiration pneumonia if the tube is misplaced in the lungs and could contaminate the aspirate and potentially lead to a false positive pH reading.

3.3.2 PROCEDURE: PASSING A FBNGT

EQUIPMENT REQUIRED:

- Dressing trolley
- NPSA/Enfit compliant FBNGT
- Hypo-allergenic tape or commercial “attacher”
- 60ml purple enteral Enfit syringe - see separate guidance: “The Use of Syringes to administer flushes, feeds and medication via the oral and enteral routes policy”
- Drinking straw and glass of water (if patient can swallow safely)
- Water flush (freshly drawn drinking tap water)
- pH indicator strips (CE marked pH determination of human aspirate)
- Lubricating gel
- Disposable non-sterile gloves
- Disposable apron
- Receiver or vomit bowl
- Tissues
<table>
<thead>
<tr>
<th>Principle</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check patients' notes for documentation that NG feeding is appropriate</td>
<td>For patient’s safety</td>
</tr>
<tr>
<td>Check patient's notes and enquire if the patient has a known nasal obstruction e.g. old fracture / polyp / previous operation or contraindications. If an obstruction is present or suspected, discuss with medical staff before proceeding.</td>
<td>Passage of the tube may be more difficult or contraindicated.</td>
</tr>
<tr>
<td>2. Explain the procedure to the patient and gain consent. If informed consent cannot be achieved follow “Best Interest” guidance. Consent to examination and treatment policy (2016) Document consent procedure and outcome in the patient’s notes.</td>
<td>To gain permission (consent) and demonstrate understanding and agreement to proceed with the NGT insertion. ‘Best Interest’ is the decision made for a person who lacks capacity.</td>
</tr>
<tr>
<td>3. Gather together the equipment.</td>
<td>To ensure timely placement.</td>
</tr>
<tr>
<td>4. Wash hands and put on apron and gloves.</td>
<td>To prevent cross infection and protect clothing. Hand hygiene is the single most important factor in reducing the spread of healthcare associated infection (HCAI) (World Health Organisation (WHO) 2009). Hand hygiene decreases the colonisation of transient bacteria and can be achieved by either handwashing or hand disinfection (WHO 2009).</td>
</tr>
<tr>
<td>5. Ask the patient to sniff with one nostril and then the other or to blow their nose. If needed, clean the nostrils before commencing the procedure.</td>
<td>To check if the nostrils are clear and to identify any obstruction which may hamper the procedure?</td>
</tr>
<tr>
<td>6. Arrange a signal by which the patient can communicate if she/he wants to stop the procedure, for example, by raising their hand.</td>
<td>To give the patient a sense of control, gain their co-operation and to ensure the safe passing of the tube.</td>
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<tr>
<td><strong>7.</strong></td>
<td>Sit the patient in an upright position, with head well supported and with the chin 90° to the neck, unless contra-indicated.</td>
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<tr>
<td><strong>8.</strong></td>
<td>Prepare the tube by checking the guide wire moves freely and check the distal end of the tube to ensure that the guide wire is not protruding and lock the guidewire in position. Do not lubricate or flush the inner lumen before insertion.</td>
</tr>
<tr>
<td><strong>9.</strong></td>
<td>Estimate the length of tube required by using the NEX measurement (nose, ear, xipisternum) (NPSA 2011). Place the end of the tube at the patient’s nose and then follow through to ear lobe and down to xiphisternum (NEX). Note the predetermined mark (external tube length) at the xiphisternum.</td>
</tr>
<tr>
<td><strong>10.</strong></td>
<td>Lubricate the distal end of the tube with water soluble jelly. Offer the patient a drink with a straw if the patient is known to have a safe swallow. Where the patient has an unsafe swallow administer mouth care or ask the patient to perform a dry cough.</td>
</tr>
<tr>
<td><strong>11.</strong></td>
<td>Insert the distal end of the tube into the clearest nostril and slide slowly along the floor of the nasopharynx.</td>
</tr>
<tr>
<td><strong>12.</strong></td>
<td>As the tube passes down into the nasopharynx, ask the patient to start sipping water and swallowing (if the patient can swallow safely).</td>
</tr>
<tr>
<td><strong>13.</strong></td>
<td>Advance the tube at a speed acceptable to the patient, until the pre-determined NEX measurement is reached.</td>
</tr>
<tr>
<td></td>
<td>Anchor the tube in position at the nose using a commercial attacher, leaving the guide wire in place until the position of the tube has been confirmed.</td>
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<td>14</td>
<td>Check the tube position in stomach: see figure 1 and table 2. Aspirate the tube using a 60ml enteral Enfit syringe. The pH reading (using CE marked for human aspirate only) must be 5 or below before the tube can be used for feed, flush or medications. If the pH is above 5 please proceed with a X-ray to determine the tube position (see figure 2)</td>
</tr>
<tr>
<td>15</td>
<td>Record in patient’s notes  - Details of how consent was obtained or best interest  - Date and time tube inserted  - Number of attempts made to pass  - The size and of type of tube  - The nostril used  - The cm marking of the tube at the nose (referring to the predetermined distance mark at the nostril)  - Method used to check tube position  - Any difficulty in passing the tube  - If the tube safe to use.</td>
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FIGURE 1: CHECKING NG TUBE POSITION
REDUCING THE HARM CAUSED BY MISPLACED NG FEEDING TUBES:
ADVICE FOR HEALTHCARE STAFF
Confirming the correct position of nasogastric feeding tubes in ADULTS – adapted from NPSA (2011)

- Estimate NEX measurement (place exit port of tube at tip of nose. Extend tube to earlobe, and then to xiphisternum
- Insert fully radio-opaque nasogastric tube for feeding (follow manufacturer’s instructions for insertion)
- Confirm and document secured NEX measurement
- Aspirate with a syringe using gentle suction

Aspiration obtained?

Yes

Test aspirate on CE marked pH indicator paper for use on human gastric aspirate

pH between 1 and 5

Yes

Aspirate obtained?

Yes

PROCEED TO FEED or USE TUBE
Record result in notes and subsequently on bedside documentation before each feed/medication/flush.

No

No

Proceed to x-ray: ensure reason for x-ray documented on request form

Competent clinician (with evidence of training) to document confirmation of nasogastric tube position in stomach

Aspirate obtained?

Yes

No

DO NOT FEED or USE TUBE
Consider re-siting tube or call for senior advice

A pH of between 1 and 5 is reliable confirmation that the tube is not in the lung, however it does not confirm gastric placement as there is a small chance the tube tip may sit in the oesophagus where it carries a higher risk of aspiration. If this is any concern, the patient should proceed to x-ray in order to confirm tube position.

Where pH readings are difficult to distinguish from 5 to 6 it is recommended that a second competent person checks the reading or retest.
3.4 CHECKING AND CONFIRMING SAFE PLACEMENT:
Checking the position of the tube is a shared responsibility between the nursing and medical staff. There are two methods of determining tube placement; aspiration or X-ray.

3.4.1 ASPIRATION – first line method – see table 2
Aspiration and pH testing of the aspirate is a reliable method when determining tube position. (NPSA 2011; NHS Improvement 2016)
Aspirate should be pH 5 or below before commence feeding. There are no known reports of pulmonary aspirates at or below this figure.

UNSAFE METHODS OF CHECKING THE TUBE POSITION:
The ‘whoosh’ test - DO NOT USE
Testing acidity / alkalinity of aspirate using Litmus paper - DO NOT USE (Earley, 2005; NHS Improvement 2016)
Interpreting the absence of respiratory distress, as an indicator of correct tube positioning - DO NOT USE (NHS Improvement 2016)

Best Practice
A pH of 1 to 5 or below should be obtained before feeding commences.
Use only CE marked pH paper for Human Aspiration testing.
Always check the expiry date of the pH paper before using
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1. Using a 60ml purple enteral Enfit syringe (BAPEN 2012) aspirate some fluid from the tube and test it on CE marked pH paper. Check the expiry date on the CE Marked pH paper for Human aspirate prior to using. If there is any doubt, the pH reading confirmation should be sought from another health care professional.</td>
<td>A smaller syringe may produce too much pressure and split the tube (BAPEN 2003) To establish correct and confirm position of the tube. Aspirate should be pH 5 or below to commence feeding. There are no known reports of pulmonary aspirates at or below 5. (NPSA Safety Alert 2005). pH indicator strips can measure this accurately. (NHS Improvement 2016) To rule out subjective analysis.</td>
</tr>
<tr>
<td>2. If aspirate of between pH 1– 5 is obtained remove the guide wire according to manufacturer’s instructions. If no aspirate or aspirate with a pH 5 or above is obtained follow the flow chart in figure 2.</td>
<td>To facilitate the procedure.</td>
</tr>
<tr>
<td>3. Each pH test (including failure to obtain aspirate) and test result should be documented</td>
<td>To allow for ongoing record To assist in investigation in event of respiratory feeding following placement (NHS Improvement 2016)</td>
</tr>
<tr>
<td>4. Commence feeding only after the position of the tube has been confirmed by aspiration or radiology. If radiology is used a competent doctor should interpret the image and document in the medical notes the position of the NG tube in patients’ medical records</td>
<td>To maintain patient safety.</td>
</tr>
</tbody>
</table>
3.4.2 RADIOGRAPHY SECOND LINE METHOD

X-ray should be used as a second line test when:

- No aspirate could be obtained or pH is above 5 so has failed to confirm the position of the NG tube (as is often the case for patients on proton pump inhibitor medication)
- There is significant doubt that the aspirate obtained is gastric (as above)
- In high-risk patients where there is any concern that the tube may be in the bronchial tree, e.g. unconscious, sedated or intubated patients and patients with tracheostomies.
- Patient on critical care

The X-ray request should state clearly the purpose (NHS Improvement 2016) for which the x-ray is being requested to establish correct position of the NG tube. If a chest x-ray is required to confirm the position of a Nasogastric tube:

- Request a Chest x-ray via NotIS answering the relevant mandatory questions (The NotIS request will direct the requestor to the mandatory questions).
  Follow the mandatory questions regarding the position of the tube at the nose.
- Once the image is available, a competent practitioner should review the image and document in the medical notes:
  a) That the image was the most current x ray for the correct patient
  b) How the position of the nasogastric tube was interpreted using the ‘four criteria’ e.g.
    1. NG tube follows path of oesophagus,
    2. bisecting bronchi,
    3. remains midline to level of diaphragm and deviates to left thereafter.
    4. Tip is seen about 7cm below diaphragm
  c) Clear instructions as to required actions e.g NG tube safe to use for feeding
  d) Clear signature including competency statement
Any tubes identified to be in the lung are removed immediately, whether in the x-ray department or clinical area.

**Best Practice:**
Remove any existing NG tubes if clinically appropriate and ensure ONLY the NG tube requiring position confirmation is in place at the time of X-ray. Most current X-ray must be used to interpret correct tube position. Assessment of the x-ray for tube position should include the 4 point check as detailed above.
### 3.5 ONGOING TUBE CARE AND MANAGEMENT OF NG TUBES

#### TABLE 3:

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</table>
| **1.** The position of the tube using pH testing and the length of tube at the nostril must be re-checked each time:  
- The tube is accessed for feeding, flushing and administration of medications  
- At the start of each shift  

The tube should also be checked:  
- If the patient has episodes of vomiting, retching or coughing  
- After any oro-pharyngeal suction  
- If there is any change in length of tube  
- At any signs of respiratory distress  

How the tube has been checked and confirmed and the length of the tube should be documented each time on the 'Adult observation chart: Checking and confirming the position of a Fine bore Nasogastric tube'. | The tube can become dislodged, increasing the risk of aspiration.  
Establishing the correct position of the tube in the stomach is essential to the safety of the patient, as intrapulmonary feeding or aspiration owing to a poorly positioned tube can have serious consequences (NHS Improvement 2016). |
| **2.** If an aspirate cannot be obtained (– see figure 2) OR the pH is above 5 and the tube has not moved since last (+) check was made, it may be acceptable to commence the feed after having had a second review by another competent practitioner. If the patient has coughed, retched or vomited and there is any doubt about the position of the tube, do not use and seek expert/medical advice. | To maintain patient safety. |
| **3.** Visible characteristics of the aspirate should never be used as a method for checking the tube position. | It is difficult to distinguish between gastric and other aspirate |
If possible turn the patient onto left side and try again

Advance or withdraw tube 5-10cm and try again

Position the NG tube below the level of patient’s stomach to obtain syphon effect and try again

If no aspirate obtained, wait 30-60 minutes and retry

If no aspirate with a pH between 1 and 5 can be obtained then a chest x-ray will be required to determine the position of the tube

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**TABLE 4: FLUSHING THE TUBE**

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<tbody>
<tr>
<td><strong>1.</strong> Only use 60ml purple enteral Enfit syringes to flush the tube and discard after single use.</td>
<td>A smaller syringe may produce too much pressure and split the tube (BAPEN, 2003). Re-use of single use only items contravenes Medical Devices Regulations (MDA, 2000).</td>
</tr>
</tbody>
</table>
| **2.** Tubes should be flushed with freshly drawn drinking tap water  
  • before and after feeding  
  • before and after administration of medication and  
  • as indicated on the feeding regimen. | To prevent tube blockage and to maintain hydration. |
| **3.** Sterile water should be used if the patient is immunocompromised | To reduce the risk of infection |

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**Best Practice:** **Flushing the tube**

Fine bore feeding tubes require regular flushing and water is the most effective fluid with which to flush (White and Bradnam 2015). Tubes which are not flushed immediately before and after feed and/or medication have a much higher risk of blocking.
## Ongoing management

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<tbody>
<tr>
<td>1. The giving set and reservoir (if used) must be labelled and changed <strong>every 24 hours</strong> and any remaining feed discarded. Decanted feeds should only hang for 4 hours.</td>
<td>To minimise the risk of infection (Armer and White 2014)</td>
</tr>
<tr>
<td>2. Document input &amp; output as clinically appropriate accurately on a fluid balance chart</td>
<td>To ensure accurate records</td>
</tr>
<tr>
<td>3. Weigh patient twice weekly if possible, or as indicated by the dietitian or medical staff.</td>
<td>To monitor nutritional status.</td>
</tr>
<tr>
<td>4. The results of Baseline (and refeeding if required) blood monitoring must be checked and appropriately actioned at the commencement of enteral feeding and then at the time intervals indicated on the Dietitian's regimen.</td>
<td>To establish baseline biochemistry and identify abnormalities which need monitoring or correction thus preventing the patient from becoming metabolically unstable</td>
</tr>
<tr>
<td>5. Record bowel movements. If any change to usual pattern, commence a stool chart and inform the Dietitian and/or medical team.</td>
<td>To observe and monitor normal bowel function.</td>
</tr>
<tr>
<td>6. Observe the patient for signs of complications (e.g. new onset of breathlessness, coughing, fever or regurgitation or vomiting) throughout the duration of the feed. If signs of complications or distress are seen, stop the feed and seek medical advice.</td>
<td>To monitor and maintain patient safety</td>
</tr>
<tr>
<td>7. Inform the Dietitian of any problems involving the feed, equipment etc.</td>
<td>To maintain patient safety.</td>
</tr>
<tr>
<td>8. Change the tape, which secures the tube at the nostril as required. A commercial “attacher” should be used where possible.</td>
<td>To reduce risk of accidental removal or displacement of the tube.</td>
</tr>
<tr>
<td>9. Check the nostril daily for any signs of pressure damage and document findings.</td>
<td>To maintain patient safety.</td>
</tr>
<tr>
<td>10. Assist the patient to clean mouth and nostrils.</td>
<td>To promote comfort.</td>
</tr>
</tbody>
</table>
3.6 ADMINISTRATION OF MEDICATION

For administration of medication – please refer to separate policy – Use of Syringes to Administer Flushes, Feeds And Medication via the Oral and Enteral Routes Policy And Procedures, (2016)

**Best Practice: Medication**

The pharmacist will review the drug chart so that the medication prescribed for enteral administration is rationalised to the least number without compromising patient care. All medication that is given enterally is unlicensed. The pharmacist will advise on the appropriate form of medication available for enteral administration or via an alternative route e.g intravenous, rectal, sublingual or topical. The pharmacist will endorse the drug chart if a tablet needs dispersing or crushing.

3.6.1 SOME PROBLEM DRUGS:

*Phenytoin, Digoxin and Carbamazepine:*

Blood levels may be affected by feeds. Drug level monitoring may be required. It may be necessary to alter the dose. It is often helpful to write a feed regimen which gives a two hour break pre and post the dosing of phenytoin.

*Time critical medication:*

Some medications (Anti-epileptics, Oral hypoglycaemics, others in certain clinical situations) are time critical for patients. In these situations there may be an urgent need to replace displaced or blocked tubes if an alternative route is not available.

*Antacids:*

Metal iron in the antacids can bind to protein in the feed and can block the tube. An alternative should be considered.

*Penicillins:*

Feed may reduce the absorption; a higher dose may be needed. If possible stop the feed 1-hour before and 2 hours after administration

*Other antibiotics:*

Levels of antibiotics such as Ciprofloxacin, Tetracyclines and Rifampacin can be significantly reduced by feed. Higher doses may be necessary.
3.7 NG RETAINING DEVICES

Retaining devices are loops which go through each nostril around the posterior aspect of the nasal septum and are then secured to the feeding tube in front of the nose. They are intended as a method of securing feeding tubes so that they are not easily displaced. They should be used only when standard methods of securing feeding tubes have failed and only tubes that are licensed for this use should be used.

3.7.1 INDICATIONS FOR NG RETAINING DEVICES

- Short-term (< six weeks) feeding in patients who frequently displace their tubes
- Post operatively in upper GI surgery to ensure that tubes stay safely across an anastomosis (but these tubes are then not usually used for feeding purposes)
- In critically ill patients where intubation has been difficult and there is a high risk of displacement

In general, their use outside of critical care would usually be at the discretion of the Nutrition Nurse Specialist in discussion with the multi professional team.

Best Practice: Check the nose, surrounding skin and nostril daily to ensure there is no evidence of necrosis or pressure sores from the NG tube or NG retaining devices.

3.7.2 PROCEDURE: PASSING A NG RETAINING DEVICE

EQUIPMENT REQUIRED:

- NG retaining device
- Disposable non-sterile gloves
- Disposable apron
- Lubricant
- Tissues
- Scissors
**TABLE 6: PASSING AN NG RETAINING DEVICE**

<table>
<thead>
<tr>
<th>Principle</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check patients’ notes for documentation that an NG retaining device is required.</td>
<td>For patient’s safety</td>
</tr>
<tr>
<td>2. Explain the procedure to the patient and gain consent or Best Interest; document in the patient’s notes.</td>
<td>To gain permission (consent) and demonstrate understanding and agreement to proceed with the removal of the NGT. ‘Best Interest’ is the decision made for a person who lacks capacity.</td>
</tr>
<tr>
<td>3. Gather together the equipment.</td>
<td>To ensure timely placement.</td>
</tr>
<tr>
<td>4. Wash hands and put on apron and gloves.</td>
<td>To prevent cross infection and protect clothing. Hand hygiene is the single most important factor in reducing the spread of healthcare associated infection (HCAI) (World Health Organisation (WHO) 2009). Hand hygiene decreases the colonisation of transient bacteria and can be achieved by either handwashing or hand disinfection (WHO 2009).</td>
</tr>
<tr>
<td>5. Sit the patient in a comfortable position.</td>
<td>To prepare for the procedure.</td>
</tr>
<tr>
<td>6. Lubricate both probes/catheters with lubricating gel.</td>
<td>To facilitate the procedure.</td>
</tr>
<tr>
<td>7. Insert the probes/catheters into both nasal passages (follow manufactures instructions)</td>
<td>To insert the loop.</td>
</tr>
<tr>
<td>8. Manipulate the probes/catheters until an audible click or the connection of the magnetic probes/catheters engagement can be felt.</td>
<td>To facilitate the procedure.</td>
</tr>
<tr>
<td>9. Following the manufactures guidance slowly withdraw one of the probes/catheters to allow the umbilical tape to loop the vomer bone.</td>
<td>To guide the umbilical over the vomer bone.</td>
</tr>
<tr>
<td>10. Cut the existing probe/catheter off the umbilical tape or remove from the magnet.</td>
<td>To release the umbilical tape.</td>
</tr>
<tr>
<td>11. Secure the NG tube within the clip. Tie the tape as per manufacturer’s guidelines.</td>
<td>To secure the NG tube in position.</td>
</tr>
</tbody>
</table>
3.8 PROCEDURE: REMOVAL OF A NASOGASTRIC TUBE WITH AND WITHOUT AN NG RETAINING DEVICE

EQUIPMENT REQUIRED:

- Scissors (for removal of the NG retaining device)
- Disposable non-sterile gloves
- Disposable apron
- Receiver or vomit bowl
- Tissues

TABLE 7 REMOVAL OF NASOGASTRIC TUBE

<table>
<thead>
<tr>
<th>Principle</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check patients’ notes for documentation that NGT feeding is no longer</td>
<td>For patient’s safety</td>
</tr>
<tr>
<td>appropriate or discuss with the Dietitian.</td>
<td></td>
</tr>
<tr>
<td>2. Explain the procedure to the patient and gain consent or Best Interest;</td>
<td>To gain permission (consent) and demonstrate understanding and agreement</td>
</tr>
<tr>
<td>gain consent or Best Interest; document in the patient’s notes.</td>
<td>to proceed with the removal of the NGT.</td>
</tr>
<tr>
<td></td>
<td>‘Best Interest’ is the decision made for a person who lacks capacity.</td>
</tr>
<tr>
<td>3. Gather together the equipment.</td>
<td>To ensure timely placement.</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>---</td>
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</tr>
<tr>
<td><strong>4.</strong></td>
<td>Wash hands and put on apron and gloves.</td>
</tr>
<tr>
<td><strong>5.</strong></td>
<td>Sit the patient in a comfortable position.</td>
</tr>
<tr>
<td><strong>6.</strong></td>
<td>Remove the commercial attacher or fixation at the nose. If the NGT is secured with a nasal retaining device cut the loop (tape) at the nostril.</td>
</tr>
<tr>
<td><strong>7.</strong></td>
<td>Gently pull the NGT until the tube/retaining loop is completely removed.</td>
</tr>
<tr>
<td><strong>8.</strong></td>
<td>Record in patient’s notes • Details of the tube removal.</td>
</tr>
</tbody>
</table>

**REFERENCES**


BAPEN (2012) Ethics and clinically assisted nutrition or hydration approaching the end of life London:BAPEN


Medical Device Agency (2000) The re-use of medical devices supplied for single use only MDA DB9501 London: HMSO


