NASOGASTRIC / OROGASTRIC TUBE CARE		
ISSUE	**STATEMENT**	**EVIDENCE / REFERENCE**
How to check correct Nasogastric / Orogastric tube placement	General information ▪ Fully radio-opaque tubes with markings to enable accurate measurement, identification and documentation of their position should be used. Routine method for checking nasogastric tube placement ▪ Aspiration is the routine method for checking placement of nasogastric / orogastric tubes. ▪ **Radiography is recommended but should not be used 'routinely'.** It is the most reliable method it is not always possible or practical. Aspiration ▪ Test aspiration with pH paper: pH 5.5 or less ▪ The pH paper should have 0.5 graduations and be CE marked ▪ If the aspirate has a pH of 6 or more, this indicates that it may possibly be bronchial secretions. **Do not feed**, leave for an hour and try again. ▪ Medication which could elevate the pH level are antacids, H2 antagonists and proton pump inhibitors. An individual risk assessment should be completed for patients taking such medications and this should include testing and documenting the pH of the initial aspirate. ▪ If there is difficulty obtaining an aspirate: - Turn the patient on their side - Inject air (1-5mls for infants and children, 10-20mls for adults) using a 20 or 50ml syringe. Wait 15-30 minutes and try again. Injecting air will dispel any residual fluid in the tube and may also dislodge the exit port of the nasogastric tube / orogastric from the gastric mucosa. **Do not carry out auscultation.** - If the patient is alert, has an intact swallow and is perhaps only on supplementary feeding and is thus eating and drinking. Ask them to sip a coloured drink and aspirate the tube. If coloured fluid is obtained then the tube is in the stomach. Refer to Appendix 1 Decision tree for checking Nasogastric tube placement in Adults Methods which must **not** be used to check tube placement ▪ Auscultation of air insufflated through the nasogastric / orogastric tube ▪ Testing aspirate using blue litmus paper ▪ Interpreting the absence of respiratory distress as an indicator of correct position ▪ Monitoring bubbling at the end of the tube ▪ Observing the appearance of the aspirate	National Patient Safety Agency (2011) Patient Safety Alert: Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants. NPSA/2011/PSA002 http://www.nrls.npsa.nhs.uk/resources/?entryid45=129640&p=2 Refer to Insertion and Care of Nasogastric Feeding Tubes (Adult) Initial Competency: http://intranet.lothian.scot.nhs.uk/NHSLothian/Corporate/A-Z/Clinical%20and%20Corporate%20Learning/ClinEducationTrain/Clinical%20Skills/PreCourse%20Workbooks%20and%20Competencies/IC%20-%20Insertion%20and%20Care%20of%20Nasogastric%20Feeding%20Tubes%20-%20Adult%20v2%20May%202012.pdf Refer to the Procedure for the Insertion and Care of Nasogastric (NG) Feeding Tubes in Adults Clinical Policy: http://intranet.lothian.scot.nhs.uk/NHSLothian/Healthcare/ClinicalGuidance/General/Nasogatric%20feeding%20tube%20insertion.pdf NICE (2006) Nutrition support in adults – Oral nutrition support, enteral tube feeding and parenteral nutrition http://intranet.lothian.scot.nhs.uk/NHSLothian/Healthcare/A-Z/ ChildrensServices/PoliciesGuidelines/TeachingGuidelines/Documents/ngfeeds.pdf http://intranet.lothian.scot.nhs.uk/NHSLothian/Healthcare/A-Z/ChildrensServices/PoliciesGuidelines/TeachingGuidelines/Documents/ngpassing.pdf

Lothian Enteral Tube Feeding Best Practice Statement

ISSUE	STATEMENT	EVIDENCE / REFERENCE
Frequency of checking Nasogastric / Orogastric tube placement	Check Nasogastric / Orogastric tube position: ▪ Following initial tube insertion ▪ Before commencement of each feed ▪ Before medications are administered ▪ Following evidence of tube displacement, e.g. loose tape or the visible tube appears longer ▪ Following episodes of vomiting, retching or coughing	National Patient Safety Agency (2011) Patient Safety Alert: Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants. NPSA/2011/PSA002 http://www.nrls.npsa.nhs.uk/resources/?entryid45=129640&p=2
Frequency of changing Nasogastric / Orogastric tube	Follow manufacturer's guidance. Nasogastric / orogastric tubes should not be re-used, except if it is a 'single patient use' tube which may be reused, if considered appropriate. Only Nasogastric tubes liscensed for feeding should be used	

NASOJEJUNAL

Also refer to following sections General Issues, Medicine Administration.

ISSUE	STATEMENT	EVIDENCE / REFERENCE
Insertion technique and confirmation of Nasojejunal tube position.	Nasojejunal tube position should be placed/ confirmed radiologically, or placed endoscopically. Secure the Nasojejunal tube with nasal fixation tape and secure the residual tube firmly to face.	Stroud, M., Duncan, H., Nightingale, J. (2003) Guidelines for enteral feeding in adult hospital patients Gut 52 (Suppl VIII) vii1-vii2 Cottee, S (2002) Jejunal feeding Complete Nutrition 2(2), p32-34 NICE (2006) Nutrition support in adults – Oral nutrition support, enteral tube feeding and parenteral nutrition Cirgin Ellett M L (2006) Important facts about intestinal feeding tube placement Gastroenterology Nursing 29(2) 112-124.
Frequency of checking nasojejunal tube position.	Apart from radiology there is no reliable means of confirming tube position. The following may help indicate tube migration: ▪ Mark the position of the tube against the nostril daily using a permanent marker pen. ▪ Check length of external tubing daily and record centimetre marking. ▪ Measure and document the external length of tube, following tube placement and before administering feed/water/medications ▪ Observe the patient for signs of abdominal distension, vomiting or aspiration – this could indicate tube migration back into the stomach. In Paediatrics if the child has a gastrostomy tube this should be attached to a suitable drainage bag to allow gastric decompression during feeds. Feeds should be stopped if milk is noted in the drainage bag and advice sought.	Cottee, S (2002) Jejunal feeding Complete Nutrition 2(2), p32-34. Cirgin Ellett M L (2006) Important facts about intestinal feeding tube placement Gastroenterology Nursing 29(2) 112-124.
Feeding regimen	Feed should always be administered by a feeding pump. Bolus feeding should NOT be used.	

	Jejunal feeding may cause looser stools – check feed composition, osmolality, osmolarity and feeding rate if symptoms worsen.	
Frequency of changing Nasojejunal tube	Refer to manufacturer's recommendations	

Decision tree for Checking Naso-Gastric tube placement in ADULTS

CHECK POSITION OF THE FEEDING TUBE;

- When a new tube is inserted
- Before giving any medication through the tube
- Daily: prior to feeding/during continuous feeding
- Following any episodes of retching, vomiting or severe coughing
- If there is any suspicion of tube misplacement

Aspirate 0.5-1ml with an enteral 50ml syringe and gentle suction

pH below 5.5	pH 5.5 -6.0	pH above 6.0	No Aspirate
PROCEED TO FEED	**CHECK AGAIN**	**DO NOT FEED**	**DO NOT FEED**
Document: **1. pH value** **2. cm mark at nostril** **3. Complete sticker and place in patient record if new tube**	**Recommend that second person checks the reading or retests before proceeding to feed**	**If NEW nasogastric tube insertion- X-Ray must be obtained if pH is above 5.5 or no aspirate**	**If NEW nasogastric tube insertion- X-Ray must be obtained if pH is above 5.5 or no aspirate**

A pH of between 1 and 5.5 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 tip may sit in the oesophagus where it carries a higher risk of aspiration. If this is a concern, the patient should proceed to x-ray.

EXISTING tube with pH >6.0 RISK ASSESS-IS IT SAFE TO START FEED?

1. Is there any suspicion that the tube has been displaced?
2. Are tapes and securing devices intact and cm mark at nostril the same as at initial insertion?
3. Is the patient receiving medication that will elevate gastric pH?
4. Document decisions
5. If risk assessment inconclusive - Go to X-Ray

TRY THE FOLLOWING:
1. If possible turn patient onto left hand side - try to aspirate
2. Inject **10 -20ml of AIR** into the NG tube - try to aspirate
3. If able give patient a drink or perform mouth care and wait for 15 mins - try to aspirate
4. Advance tube a maximum of 5cms and try to aspirate again

STILL NO ASPIRATE

CONSIDER
a) **RISK ASSESS**
Is it safe to start feed?
1. Is there any suspicion that the tube has been displaced?
2. Are tapes and securing devices intact and tube length the same as at initial insertion?
3. Is the patient receiving medication that will elevate gastric pH?
4. Document decisions
5. Inconclusive? Go to X-Ray

b) Consider **r**epassing tube
c)Go to X-RAY

The following methods must not be used to confirm tube placement

- Auscultation of air insufflated through the feeding tube (whoosh test)
- Testing the aspirate using blue litmus paper
- Interpreting absence of respiratory distress as an indicator of correct
- Monitoring bubbling at the end of the tube
- Observing the appearance of feeding tube aspirate.

A Competent Doctor must check X-ray and confirm and document correct tube position before feeding