# Nasogastric tube (NG tube) Insertion and management- Full Clinical Guideline- Adults

**Reference No: CG-T/2014/210**

## Introduction

The reason the NPSA generated an alert regarding nasogastric (NG) feeding tubes is that these tubes are usually fine bore and can be easily misplaced into the trachea and tolerated by patients. If feed is then administered via a misplaced NG feeding tube, it can have serious consequences for the patient.
This guideline does not cover NG drainage tubes.

## Aim and Purpose

To provide guidance that applies to the insertion and management of ALL NG feeding tubes at UHDB within adult services.
To outline the requirements necessary when making decisions regarding the need for enteral feeding via a nasogastric tube.
Provide a framework for assessing the need for, inserting, confirming position and managing NG feeding tubes, in compliance with patient safety alert NPSA/2011/PSA002 10 March 2011.
To identify who can insert NG feeding tubes at UHDB.
Provide procedure for insertion and confirmation of tube position.

## Definitions

| | |
|---|---|
| Nasogastric tube | a tube that is inserted via the nose, through the oesophagus and into the stomach. |
| Nasogastric **feeding** tube | a tube inserted into the stomach (as above) for the purpose of administering feed, fluid or medication. |
| Nasogastric **drainage /feeding** | a tube inserted into the stomach (as above) for the purpose of draining the stomach of excess gastrointestinal fluid but can then be used for feeding for up to 7 days **(not a Ryles tube).** |
| Nasogastric **drainage** tube | a tube inserted into the stomach (as above) for the purpose of draining the stomach of excess gastrointestinal fluid, but must not be used for feeding e.g., Ryles tube. |

## Key points

- NG **feeding** tubes are covered by this guideline, **NG drainage tubes** are not (any clinician inserting an NG drainage tube must be appropriately trained to undertake this procedure).
- NG feeding tubes must only be inserted by practitioners who have been trained, competency assessed and recorded on the trust database.
- **Only** Trust approved, radiopaque NG feeding tubes can be used.
- The purpose of an NG tube should be confirmed at the time of insertion.
- The rationale for insertion of an NG feeding tube must be documented prior to insertion.
- If the tube is for feeding, fluids or medication, it is an NG feeding tube (should be a fine bore tube).
- If the tube is for drainage only, it is an NG drainage tube (usually a wide bore tube).
- If an NG tube is inserted as a drainage tube and needs to subsequently be used for feeding, fluids or medication it becomes an NG feeding tube and the correct position must be confirmed using pH testing or x-ray. **Ryles tubes must never be used for feeding.**
- Confirmation of position is required each time an NG feeding tube is used.
- pH testing is first line method of confirmation.
- X-ray is only required if pH testing does not confirm correct position.
- Guide wires must be removed from NG feeding tubes **immediately** following insertion, they are **NOT** required for x-ray.
- NG feeding tube insertion must be documented on a trust NG sticker, not sticker from the pack (appendix 4)

**Competency to insert NG feeding tubes**

NG feeding tube insertion must only be undertaken by

- Doctors who have received appropriate training, have signed a self-certification form (appendix 6) and are recorded on the trust database.
- Registered nurses and ACP'S who have completed competency nasogastric feeding tube insertion training and assessment and have been recorded on the trust database. If training was at another trust a self-certification form (appendix 7) must be completed and sent for inclusion on the trust database.

**Assessment for nasogastric feeding**

Before a decision is made to insert an NG feeding tube, an assessment must be undertaken to identify if NG feeding is appropriate for the patient. The rationale for any decision must be recorded in the patient's medical notes, including if feeding is for a limited trial. An NG tube should not be inserted unless this is documented. As a minimum the following is required.....

> *"Mr X has been NBM for 24 hours due to having an unsafe swallow following a CVA (for example). An assessment has been made by speech and language therapy and it is unsafe for Mr X to take diet, fluids and medication orally. A NG tube is required for feeding"*

**Bedside insertion of an NG feeding tube**

Most NG feeding tubes will be inserted by ward nursing staff or ACP's. However, there are some patients where nurses would not be expected to insert NG tubes (feeding or drainage):

- Maxillo-facial / laryngectomy/Head and neck surgery
- Recent oesophagectomy/oesophageal cancer/stricture
- Known oesophageal fistula, pharyngeal pouch
- Basal skull fracture.
- Recent nasal fracture (broken nose)

In these situations, experienced doctors who are recorded on the trust database may be able to insert an NG feeding tube or alternatively may request insertion under fluoroscopy.

Care should be taken when inserting NG tubes into patients with tracheostomies and it should be established whether the cuff is inflated or deflated before attempting insertion and cuff pressure should be checked. (See appendix 1 for insertion procedure)

**Timing of NG tube insertion**

Under normal circumstance NG feeding tubes must always be inserted between 8am and 7pm at both RDH and QHB. The only exception to this is patients who require critical medication e.g., post cardiac arrest patients who have had stents inserted and require urgent antiplatelet drugs to be administered.

**Confirmation of position**

- **First line method** to confirm position is pH testing, with pH 5.5 or less used as confirmation of correct position. (See appendix 2 for procedure)
- **Second line method** to confirm position is x-ray, used only at the time of insertion, when no aspirate can be obtained (despite trying all appropriate techniques, see appendix 2) or pH indicator strip has failed to confirm the correct position. **Guide wires must be removed prior to x-ray.** Once an x-ray has confirmed an NG tube is correctly positioned feeding should be commenced. The only indication for a repeat x-ray would be if:
    - the tube has been dislodged,
    - the patient develops new or unexplained respiratory symptoms,
    - oxygen saturations decrease,
    - when there is suggestion of tube displacement
    - following episodes of vomiting, retching or coughing spasms or if the pH was previously 5.5 or less but is now >5.5,
    - if no aspirate can be obtained when it has previously been possible.

pH testing is required **every time** the NG feeding tube is used for feed, fluid or medication, the result must be recorded on the nasogastric feeding tube position confirmation record (appendix 5) an x-ray is not required every day. Drugs such as PPI (e.g., Omeprazole) or H2 antagonists (e.g., Ranitidine) can cause the pH of gastric fluid to be above pH 5.5. When these drugs are being used (and position at the time of insertion was confirmed by x-ray) the tube may still be used if subsequent pH readings remain above pH 5.5, providing the external position of the tube has not changed, and a second competent

person has checked both the pH reading and the external position of the tube. If the tube is marked with permanent marker pen, ensure this remains at the entrance to the nose.

**If chest x-ray is required**
A chest x-ray is **NOT** required to confirm NG feeding tube position, **UNLESS** it has not been possible to aspirate fluid with a pH 5.5 or less. An x-ray will not be required for the majority of NG tubes.

## Royal Derby Hospital site

The chest x-ray request must be phoned through as urgent, and an urgent report requested by the clinical team. This should either be stated in the clinical information or telephoned through to the department.

Adult & all 'out of hours' requests: 83223 / 88916
Paediatrics: 09:00 to 16:30 Monday to Friday: 85540.

The chest x-ray must be requested by a doctor or suitably qualified non-medical referrer and clearly state that the purpose of the x-ray is to confirm NG feeding tube position as well as other relevant clinical information. This will allow the radiographer to perform the appropriate examination.

### Note: Guide wires must be removed prior to x-ray as NG tubes used within the Trust are still radio-opaque (visible on x-ray) without the guide wire.

It is part of the radiographer's role to satisfy themselves that appropriate first line tests have been attempted before performing the x-ray. If this information is not included in the request, they may need to ask the requesting doctor for further information, which must be provided before the examination can proceed.

If the NG tube is removed prior to x-ray or position has been successfully confirmed by pH testing, the referrer is responsible for cancelling an x-ray request, this must include phoning the x-ray department.

All chest x-rays performed to confirm NG feeding tube position must be reported by a radiologist or a reporting radiographer, who will assess the NG tube position. No health care professional other than a radiologist or a reporting radiographer is permitted to assess NG tube position on an x-ray.

**Radiologist's report**
Reporting of x-rays to confirm NG tube position will not be undertaken after 7pm. There is a registrar on call who can issue provisional or final reports (depending on their seniority), for NG tube position until 7pm.

The only exception to this is when an NG feeding tube would be required overnight. One example is a patient presenting obtunded with a cardiac emergency e.g., post cardiac arrest who requires critically important cardiac antiplatelet medication to be administered enterally. In this situation an NG feeding tube (required for medication) needs to be inserted as an emergency and confirmation of position will be required initially using pH testing, but radiological confirmation will be required if pH testing does not confirm position. The x-ray will then need to be reported via a remote radiology reporting service. This report must be requested as an emergency to enable confirmation of position and administration of essential medication.

If the tube is correctly positioned the report will include the following phrase: -

*"NG tube noted in situ with its tip projected over the stomach beneath the left diaphragm. The radiological assessment, valid at the time the image was obtained, is that it is safe to proceed with administration of liquids via the tube*."

The NG tube must not be used until the radiologists / reporting radiographers report has been recorded in the notes by a doctor, AP or competent registered nurse. Healthcare professionals who are not radiologists are not permitted to interpret NG tube position on CXR.

Please note that if an urgent report is not requested by the clinical team, it remains the responsibility of the requesting clinical team to review the CXR for other abnormalities such as infection or pneumothorax.

## Queens Hospital Burton site

The chest x-ray request must be phoned through as urgent; the referrer must also request an urgent formal report. This should either be stated in the clinical information or telephoned through to the department.
Call 5158 8am to 7pm

The chest x-ray must be requested by a doctor or suitably qualified non-medical referrer and clearly state that the purpose of the x-ray is to confirm NG feeding tube position as well as other relevant clinical information. This will allow the radiographer to perform the appropriate examination.

**Note: Guide wires must be removed prior to x-ray as NG tubes used within the Trust are still radio-opaque (visible on x-ray) without the guide wire.**

It is part of the radiographer's role to satisfy themselves that appropriate first line tests have been attempted before performing the x-ray. If this information is not included in the request, they may need to ask the requesting doctor for further information, which must be provided before the examination can proceed.

If the NG tube is removed prior to x-ray or position has been successfully confirmed by pH testing, the referrer is responsible for cancelling an x-ray request, this must include phoning the x-ray department.

All chest x-rays performed to confirm NG feeding tube position must be reported by an appropriately qualified reporting radiographer or radiologist who will assess NG tube position.
No person other than an appropriately qualified reporting radiographer or radiologist is permitted to assess NG tube position on an x-ray.

**Qualified reporting radiographers/radiologists report**
Reporting of x-rays to confirm NG tube position will not be routinely undertaken after 7pm. There is consultant radiologist on call until 7pm who can issue a report for the NG tube position. The remote reporting service 4 ways can issue a report after 7pm

The only exception to this is when an NG feeding tube would be required overnight. One example is a patient presenting obtunded with a cardiac emergency e.g., post cardiac arrest who requires critically important cardiac antiplatelet medication to be administered enterally. In this situation an NG feeding tube (required for medication) needs to be inserted as an emergency and confirmation of position will be required initially using pH testing, but radiological confirmation will be required if pH testing does not confirm position. After 7pm and at weekends there is no on-site radiology reporting staff and in this situation an x-ray will need to be reported by the TMC, remote radiology reporting service. This report must be requested as an emergency to enable confirmation of position and administration of essential medication.

If the tube is correctly positioned the report will include the following phrase: -

*"NG tube noted in situ with its tip projected over the stomach beneath the left diaphragm. The radiological assessment, valid at the time the image was obtained, is that it is safe to proceed with administration of liquids via the tube*."

The NG tube must not be used until the radiologists / reporting radiographers report has been recorded in the notes by a doctor, AP or competent registered nurse. Healthcare professionals who are not radiologists are not permitted to interpret NG tube position on CXR.

Please note that if an urgent report is not requested by the clinical team, it remains the responsibility of the requesting clinical team to review the CXR for other abnormalities such as infection or pneumothorax.

**NG tubes inserted in theatre or endoscopy.**
NG feeding tubes may be inserted peri operatively by anaesthetists or endoscopically. The anaesthetist/endoscopist will place the NG tube under direct/endoscopic vision and confirm correct position at the time. However, where feeding is to be initiated by the nursing staff it may be several days after the NG tube was inserted and there is the potential for the NG feeding tube to have become misplaced. In this situation pH testing must be performed first (with a subsequent x-ray if pH testing is not confirmatory).

**NG tubes inserted in x-ray**
The radiologist will insert the NG feeding tube under fluoroscopic guidance and will confirm correct position. pH testing should be performed by the nursing staff before starting feed, however if pH testing does not confirm position a repeat x-ray is not required, and the original radiological confirmation of position will be accepted. The only indication for a repeat x-ray would be if there is suggestion of tube displacement or the patient develops new or unexplained respiratory symptoms if oxygen saturations decrease or following episodes of vomiting/ retching/ coughing spasms or if the pH was previously 5.5 or less but is now >5.5.

**Complication associated with insertion of NG feeding tubes.**

- Intrapulmonary placement
- Pneumothorax or pleural placement
- oesophageal placement
- Oesophageal or hypopharyngeal perforation.

**NG tube stocks**

**All NG feeding tubes stocked within UHDB must be Trust approved and radiopaque.**

**Royal Derby Hospital site**

High use areas (ICU, wards 304 and 305, 410) order their own supply of NG feeding tubes, theatres, Endoscopy, and x-ray also maintain stocks. These areas will not supply tubes to any other ward or department.

Low use areas keep a small supply of tubes that are maintained by pharmacy top up services.
Other areas must obtain NG feeding tubes, when required from pharmacy ward services.
Pharmacy opening hours Mon - Fri 08.15 to 17.45, Sat - Sun 09:00 to 13:00

**Queens Hospital Burton site**

ICU and theatres order their own supply, all other areas have a small stock maintained by stores top up.

**Management of a patient with a nasogastric feeding tube can be found in appendix 3**

**Discharging patients with a nasogastric feeding tube**
A risk assessment must be completed for all patients who are to be considered for discharge with a nasogastric feeding tube. NG discharge preparation (koha-ptfs.co.uk)

## Documentation Controls

| | |
|---|---|
| Development of Guideline | Liz O'Dell, Lead Nutrition Nurse Specialist<br>Dr Stephen Hearing, Consultant Gastroenterologist |
| Consultation with: | Dr Low ITU Consultant<br>Nutrition team<br>Nutrition steering group<br>Radiology |
| Approved By: | Nutrition team<br>Nutrition steering group<br>Trust CGG - May 2024 |
| Approval date: | April 2024 |
| Review Date: | April 2027 |
| Key Contact: | Lead Nutrition Nurse Specialist |

# Procedure for Nasogastric (NG) tube insertion in adults

## Equipment required for NG feeding tube insertion

- Enteral tray, gloves, and apron
- Fine bore NG tube
- 60ml enfit enteral/oral syringe
- Lubricating gel
- pH indicator strips
- Mouth care tray/glass of water if the patient can drink (mixed to the correct consistency if required)
- Occlusive dressing e.g., Tegaderm

## Procedure

1. Explain the procedure to the patient and gain verbal consent. If patient is unable to consent, please refer to the Trust consent policy.
2. Assemble the equipment on the tray.
3. Arrange a stop signal with which the patient can communicate e.g., raising hands.
4. Ensure the patient is in an upright position with their chin on the chest and head well supported. If a patient has a neurological deficit – it may be worth considering NG tube placement in the nostril on the side of the deficit.
5. Estimate the NEX (Nose, Ear, Xiphisternum) measurement (Place exit port of tube at tip of nose, extend tube to earlobe, and then to xiphisternum.
6. Lubricate the first 10cm of the NG tube and ensure that the nostrils are clear.
7. Insert the NG tube into the nostril and slide it backwards along the floor of the nose to the nasopharynx.
8. At this point either perform mouth care or ask the patient to take sips of fluid
9. Advance the NG through the pharynx until the NEX measurement is reached. If the patient shows signs of distress e.g., gasping or cyanosis remove the NG immediately.
10. Aspirate the NG tube with the 60ml syringe and test the contents on the pH indicator strips and document on the pH chart (see testing the position of the NG tubes for further information) Once the position is confirmed remove the guide wire (with a witness present) and secure the tube to the patient's cheek with occlusive dressing.
11. Removed the guide wire must be immediately following insertion, even if x-ray is required, as the NG tube is radio opaque throughout its length.

Should the NG tube require repositioning, **DO NOT** re-insert the guide wire whilst the NG tube is in the patient.

Following insertion, a trust NG insertion sticker must be completed and placed in the notes by the person who inserted the tube and signed by the witness to the guidewire removal (appendix 4), the sticker from the NG tube packet must not be used

The method of testing the tube position and result must also be recorded. If position is confirmed by correct pH, complete the NG feeding tube position (pH) confirmation record chart (appendix 5)

**No more than 2 attempts at a time to be made at insertion of a nasogastric tube, allow patient to recover before trying again.**

# Nasogastric feeding tube position confirmation (pH) testing

## When to test tube position

On initial placement
Before each bolus feed or when starting a feed
Before administering medication
Following violent coughing, sneezing or vomiting
If the tube is accidentally dislodged
If patient complains of discomfort or pain
If there is evidence of feed in secretions
In the presence of any new or unexplained respiratory symptoms or reduction in oxygen saturation

## Procedure for testing gastric aspirate

1. Aspirate 2-3ml from NG tube using a 60ml Enfit enteral syringe.
2. Dip the testing strip into the aspirate and read whilst moist.
3. Compare with colour chart on the pH strip container.
4. Document the pH reading on the NG feeding tube position (pH) confirmation record chart appendix 5

**Do not decant pH indicator strips into any other container.**
**Only** if it is not possible to obtain aspirate or the pH is greater than 5.5 following the initial insertion of the NG tube is an x-ray required to confirm position prior to commencing use.

## Factors that may cause a raised pH i.e., >5.5.

Proton Pump Inhibitors (PPIs) e.g omeprazole or $H_2$ antagonist e.g., ranitidine
Pernicious anaemia
Previous gastric surgery
Food and drink/enteral feed within 1 hour of testing
If the pH is between 5 and 6 a second nurse should check the reading used

If following confirmation of position with x-ray, subsequent pH readings remain above pH 5.5, the tube may still be used providing the external position of the tube has not changed, and a second competent person has checked both the pH reading and the external position of the tube.

# Management of a patients with an NG tube

## Important points

The patient's nostril should be assessed each shift for soreness and erosions and the observations recorded.
External tube markings at patient's nose should be documented in patients care plan and on pH chart.
If the patient is nil by mouth particular attention should be paid to mouth care
It is important that the patient is in a position of at least 35 degrees for the duration of feeding, medication, or flushes and that they maintain that position for at least ½ hour post intervention.
It is important to be aware of the day number of the tube i.e., document when the tube was inserted to ensure that NG tubes are not in position for longer than the manufacturer recommends:
All enteral tubes used for feeding should be radio opaque throughout their length and have externally visible length markings.
The standard securing methods is to tape the NG tube to the cheek with an occlusive dressing (or if friable skin, a length of hypoallergenic tape). Do not place tape around the tube and onto the patient's nose as this predisposes them to nasal erosions.

**If a patient has an NG tube that has been misplaced and this has not been detected prior to use it should be reported as a 'never event'.**

## Managing NG tube complications

### Unable to aspirate an NG tube

Ensure that when you attempt to aspirate your NG tube that the syringe is below the level of the stomach to produce a 'siphoning effect'.
Instil air- the NG tube eyelets may be obstructed by gastric mucosa, if patient burps, the tip is likely to be in the oesophagus.
Change the patient's position onto left side so that tip of tube will be in a reservoir of gastric juices.
If oral intake is allowed, encourage the patient to drink.
Check external position, Reposition the tube if needed.
Mouth care, then try to aspirate again 15- 30 mins.
The NG tube may be kinked or blocked with debris. Inject 20ml of air and try to aspirate again.
If you suspect that the NG tube is kinked, you may have to withdraw the tube 1cm at a time,
aspirating each time the tube is withdrawn.
If you suspect that the NG tube is blocked, using a 60ml enteral/oral syringe attempt to clear the tube with 20mls of air using a push and pull technique. **Do not** use water as the position of the tube has not been confirmed.
The NG tube may have migrated to the small bowel, it is unlikely that you will obtain aspirate from the small bowel as there is no reservoir of fluid to aspirate from. If you do obtain aspirate, it will be yellow in colour and the pH will be 6-8. Withdraw the tube 5cm and aspirate again.

# Trust NG insertion sticker

| **NG FEEDING TUBE INSERTION** | | | | | |
|---|---|---|---|---|---|
| **DO NOT USE THE NG TUBE UNTIL ALL DETAILS BELOW ARE COMPLETED** | | | | | |
| Patient name | | | | | |
| Hospital number | | | Ward | | |
| Type of tube | | | Size | | fg |
| LOT number | | | Expiry date | | |
| Date of insertion | | | Time of insertion | | |
| NEX measurement | | cm | Tube length at nose (cm mark) | | cm |
| Nostril used for insertion | LEFT | RIGHT | Aspirate obtained | YES | NO |
| pH of aspirate (if obtained) | | | Is x-ray required (eg if pH >5.5 | YES | NO |
| Tube inserted by | sign | | print | | |
| **THE GUIDE WIRE MUST BE REMOVED IT IS NOT REQUIRED FOR X-RAY** | | | | | |
| Guide wire removed by | sign | | print | | |
| Witnessed by | sign | | print | | |
| **X-RAY CONFIRMATION** | | | | | |
| **X-ray report by radiologist / qualified reporting radiographer ONLY** | | | | | |
| Date of x-ray interpretation | | | Time of x-ray interpretation | | |
| Is this the most current x-ray? | YES | NO | Is this x-ray for the correct patient? | YES | NO |
| If it is safe to feed via NG tube the x-ray report will include the following phrase ***"NG tube noted insitu with its tip projected over the stomach beneath the left hemi diaphragm. The radiological assessment, valid at the time the image was obtained, is that it is safe to proceed with administration of liquids via the tube"*** | | | | | |
| X-ray report read by: (Doctor or Trust approved Nurse for NG insertion) | (sign & print) | | | | |

# UNIVERSITY HOSPITALS OF DERBY AND BURTON NHS FOUNDATION TRUST

NASOGASTRIC FEEDING TUBE POSITION CONFIRMATION RECORD

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Name / Hospital/unit number / D.O.B<br>Affix patient sticker | **Type of tube** | | | **size** | | | **fg** |
| | | **Date of insertion** | **Date due for change** | **nostril** | | | |
| | **Tube 1** | | | **Left** | | **Right** | |
| | **Tube 2** | | | **Left** | | **Right** | |
| | **Tube 3** | | | **Left** | | **Right** | |
| | **Tube 4** | | | **Left** | | **Right** | |

**A UHDB trust NG insertion sticker must be completed for each tube inserted. DO NOT use the sticker from the NG tube pack**

## PRIOR TO USE ENSURE THE GUIDE WIRE HAS BEEN REMOVED

**Position of an NG feeding tube must be checked:**

1. Following insertion
2. Before administration of feeds, flushes or medications
3. Episodes of coughing, vomiting or retching
4. If there is any suggestion of tube displacement, eg. The external tube length at the nose has changed
5. New/unexplained respiratory symptoms or reduction in oxygen saturation
6. Pain or discomfort

**Normal pH is 5.5 or less, if pH is more than 5.5 see decision tree overleaf**

| Date | Time | pH | Tube length at nose * (cm mark) | Reason for testing (see code above) | Signature | Second signature if pH is between 5 and 6 | Comment |
|---|---|---|---|---|---|---|---|
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***If marked with permanent marker pen on tube, ensure this remains at the entrance to nose**

# Decision tree for nasogastric tube placement checks in ADULTS

- 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 in notes secured NEX measurement.
- Aspirate with a syringe using gentle suction.
- Guide wire **MUST** be removed following insertion, even if x-ray is required to confirm position.

**Aspirate obtained?**

**YES**

**NO**

**Try each of these techniques to help gain aspirate:**

- If possible, turn adult onto left side.
- Inject 10-20ml air into the tube using a 50ml syringe (to free tube from stomach wall)
- Wait for 15-30 minutes before aspirating again.
- Advance or withdraw tube by 10-20cm.
- Give mouth care to patients who are nil by mouth (stimulates gastric secretion of acid)
- Do not use water to flush.

**Aspirate obtained?**

**YES**

**NO**

Test aspirate on CE marked pH indicator strips for use on human gastric aspirate.

**pH 5.5 or less**

**pH >5.5**

Proceed to x-ray: ensure reason for x-ray documented on request form and phone to Imaging request an urgent examination, stating an urgent report is required.

**PROCEED TO USE TUBE**

Record result in notes and subsequently in bedside documentation before each feed/medication/flush.

**YES**

**IS NG TUBE IN THE CORRECT POSITION?**

**ONLY Radiologist at RDH or appropriately qualified reporting radiographer at QHB** may report nasogastric tube position in the stomach. Competent clinician, doctor or nurse (with evidence of training), to document radiological confirmation of position in medical notes.

**NO**

**DO NOT FEED or USE TUBE**

Consider re-siting tube or call for senior advice.

**PPI or H2 antagonist use can cause the pH of gastric fluid to be raised. When these drugs are being used (and NG tube position has been confirmed on insertion by x-ray), the NG tube may continue to be used even if subsequent pH readings continue to fall between 5 – 6, as long as feed is tolerated, and the external position of the tube has not changed. However, a second competent person must check the reading or retest the pH prior to use.**

**A pH of 5.5 or less is reliable confirmation that the tube is not in the lung, however it does not absolutely 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 aspiration or feed regurgitation occurs proceed to x-ray in order to confirm tube position.**

University Hospitals of Derby and Burton NHS Foundation Trust

# Fine Bore Nasogastric Feeding Tube Insertion

# Self-certification Document for Doctors in insertion of nasogastric feeding tubes

## CRITERIA FOR COMPETENCE

To meet the Trust's requirements for the insertion of NG feeding tubes, doctors must either be:

Consultants or SAS doctors who are substantive in post at Royal Derby Hospital or Queen's Hospital Burton, with previous experience of insertion of Nasogastric feeding tubes and who understand and agree to follow the Trust Clinical Guideline.

or

Doctors-in-Training and Foundation programme Doctors who are new to the trust who:

1. Have previously undertaken training and have been certified as competent in the skill of NG feeding tube insertion.

2. Maintain competence by inserting a **MINIMUM** of 2 NG feeding tubes a year.

3. Have completed UHDB competency training for verification of tube position (pH testing) and are recorded on the trust database.

4. Doctors-in-Training/ Foundation programme Doctors must not practice this skill if they have been unable to maintain their competence within the previous 12 months and must attend UHDB training.

# Information for staff inserting fine bore NG tubes at UHDB.

- All staff who insert fine bore NG tubes must be competency trained, assessed, and recorded on the trust database.
- To maintain competence, a **minimum** of 2 fine bore NG tubes must be inserted each year.
- All staff who insert fine bore NG tubes must have undertaken verification of tube position (pH testing) training and competency assessment and be recorded on the trust verification of tube position database. Training is available on the ward.
- The rationale and aims of feeding must be documented.
- Unless an emergency, NG tubes are not to be inserted after 6pm.
- NEX measurement must be assessed prior to insertion.
- **The guide wire must be removed immediately following insertion, even if x-ray is required for confirmation of position, as the tubes are radio opaque.**
- A **trust** NG insertion sticker must be completed and put in the medical notes.
- Nasogastric tube position confirmation record "pH form" must be completed each time a tube is inserted, or pH tested.
- pH must be tested every time the tube is accessed.
- X-ray is only required to confirm position if a pH of 5.5 or less cannot be obtained at the time of insertion.
- If pH remains between 5 and 6 after initial confirmation of position with x-ray, two trained practitioners must check and document tube position and pH, repeated x-rays are **NOT** required.
- **ONLY** Radiologists at RDH or Advanced practitioner radiographers/radiologists at QHB can interpret the x-ray and report nasogastric tube position in the stomach.
- If the NG tube is correctly positioned the report will include the phrase-

  *"NG tube noted in situ with its tip projected over the stomach beneath the left diaphragm. The radiological assessment, valid at the time the image was obtained, is that it is safe to proceed with administration of liquids via the tube."*
- Competent clinicians (with evidence of training) may document the radiological report confirming correct position of the NG tube in the medical notes.
- A decision tree for checking NG tube position can be found on the back of the pH form.
- All enteral/oral syringes are single use only.

# Nasogastric Feeding Tube Insertion – External

## STATEMENT OF EXTERNAL TRAINING AND ASSESSED COMPETENCE

**Practitioners Name…….**
*Print clearly as shown on payslip.*

**Designation……...**

**I confirm that:**

- I have previously received training and supervision and now undertake independent practice in insertion of NG feeding tubes (Substantive Consultants and SAS doctors only).

  Or (Delete as appropriate)

- I have previously received training and have undertaken a period of assessed, supervised practice, and have been certified as competent (Doctors-in-Training and Foundation programme Doctors).

- I have maintained my competence.

- I accept my professional accountability for unsupervised practice when performing this skill.

- I have undertaken UHDB verification of tube position (pH testing) training and have been included on the trust database.

**Signature of Practitioner……**

**Date: ……...**

**When this form has been completed, please return it to: -**
**The Learning Hub, Level 3, Rehab Block RDH**

Retain a copy of this form for your professional portfolio.

**OLH reference:** nasogastric feeding tube placement- external

**Appendix 7**

University Hospitals of Derby and Burton NHS Foundation Trust

# Fine Bore Nasogastric Feeding Tube Insertion

# Self-certification and Information for practitioners who have received training at another trust.

## CRITERIA FOR COMPETENCE

To meet the Trust's requirements for the insertion of fine bore NG tubes, practitioners who are new to the trust must: -

1. Have previously undertaken a period of training, supervised practice and have been certified as competent in the skill of fine bore NG tube insertion.

2. Have completed UHDB competency training for verification of tube position (pH testing) and are recorded on the trust database.

3. Maintain competence by inserting a **MINIMUM** of 2 NG tubes a year.

4. Practitioners must not practice this skill if they have been unable to maintain their competence within the previous 12 months and must attend UHBD training.

## Information for staff inserting fine bore NG tubes at the UHDB

- All staff who insert fine bore NG tubes must be competency trained, assessed, and recorded on the trust database.
- To maintain competence, a **minimum** of 2 fine bore NG tubes must be inserted each year.
- All staff who insert fine bore NG tubes must have undertaken verification of tube position (pH testing) training and competency assessment and be recorded on the trust verification of tube position database. Training is available on the ward.
- The rationale and aims of feeding must be documented in the medical notes.
- Wherever possible NG tubes should not be inserted after 6pm.
- NEX measurement must be assessed prior to insertion.
- **The guide wire must be removed immediately following insertion, even if x-ray is required for confirmation of position, as the tubes are radio opaque.**
- A **trust** NG insertion and guide wire removal sticker must be completed and put in the medical notes.
- Nasogastric tube position confirmation record "pH form" must be completed each time a tube is inserted, or pH tested.
- pH must be tested every time the tube is accessed.
- X-ray is only required to confirm position if a pH of 5.5 or less cannot be obtained.
- If pH remains between 5 and 6 after initial confirmation of position with x-ray, two trained practitioners must check and document tube position and pH.
- **ONLY** Radiologists at RDH or Advanced practitioner radiographers/radiologists at QHB can interpret the x-ray and report nasogastric tube position in the stomach.
- If the NG tube is correctly positioned the report will include the phrase-

  *"NG tube noted in situ with its tip projected over the stomach beneath the left diaphragm. The radiological assessment, valid at the time the image was obtained, is that it is safe to proceed with administration of liquids via the tube."*
- Competent clinicians (with evidence of training) may document the radiological report confirming correct position of the NG tube in the medical notes.
- A decision tree for checking NG tube position can be found on the back of the pH form.
- All enteral/oral syringes are single use only.

# Nasogastric Feeding Tube Insertion – External

## STATEMENT OF EXTERNAL TRAINING AND ASSESSED COMPETENCE

**Practitioners Name…….**
*Print clearly as shown on payslip.*

**Designation……...**

**I confirm that:**

- I have previously received training and have undertaken a period of assessed, supervised practice, and certified as competent at another trust.
- I have maintained my competence since training.
- I accept my professional accountability for unsupervised practice when performing this skill.
- I have undertaken UHDB verification of tube position (pH testing) training and have been included on the trust database.

**Signature of Practitioner……**

**Date: ……...**

**When this form has been completed, please return it to: -**
**The Learning Hub, Level 3, Rehab Block RDH**

Retain a copy of this form for your professional portfolio.

**OLH reference:** nasogastric feeding tube placement- external