


# NASOGASTRIC TUBE: Intubation, Aspiration and Removal

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## Introduction

*This procedure involves the passing of a tube via the nose into the stomach.*

## Procedure

- 1. Risk Assessment:** Before inserting, a nasogastric feeding tube careful assessment of the risks and benefits must be performed by at least 2 competent health care professionals, including the GP/ doctor responsible for the individuals care. The rationale for the final decision must be recorded in the doctor's notes in the Care Plan.

Individuals who are confused, comatose, have swallowing dysfunction or recurrent retching or vomiting, have higher risks of placement errors or migration of the tube. The rationale for any decisions made must be documented in the individual's notes.

- 2. Possible reasons for this technique are:**









- ❓ Prior to or following abdominal surgery to ensure stomach is empty and to relieve pressure
- ❓ Persistent vomiting. To reduce risk of aspiration and facilitate Individual comfort
- ❓ Intestinal obstruction. To empty stomach of contents and facilitate Individuals comfort
- ❓ Insufficient calorie intake. To ensure nutrition is maintained

- 3. Equipment required:**



- 👉 Clinically clean tray
- 👉 Hypoallergenic tape
- 👉 Receiver
- 👉 Lubricating jelly
- 👉 Sterile water
- 👉 CE indicator strips with pH range of 0-6 or -11 with gradients of 0.5
- 👉 50 ml enteral syringe
- 👉 Fine-bore nasogastric tube with internal guide wire or stylet that is radio-opaque through its entire length and has externally visible length markings.
- 👉 Glass of water if appropriate




- 4. Proceed as follows:**

- 👉 Explain reason and nature of the procedure to the Individual to obtain a valid consent. Ensure privacy and dignity
- 👉 Arrange a signal by which the individual can communicate if they want the nurse to stop .e.g.by raising their hands. This will enable the individual to feel that they have some control over the procedure.
- 👉 Select the most appropriate position to facilitate passing the tube, usually upright in a bed or chair, supported by pillows. The head should not be tilted backwards or forwards This allows easy passage of the tube and ensure the epiglottis is not blocking the airway
- 👉 Put on plastic apron, wash gloves and hands (NICE 2003 CG2) to minimise cross infection
- 👉 Ensure the nostrils are clean to facilitate passing the tube, ask if they have any anatomical problems, e.g. broken nose, check they are patent by asking them to sniff through individual nostrils.







-  Measure the tube to determine the length necessary to allow entry to the stomach. From the ear to the bridge of the nose then to xiphisternum. To indicate the length of the tube required for entry into the stomach
-  Lubricate the tube as per manufacturer's instructions and encourage the Individual to swallow when requested. This enables easy passage of the tube by reducing the friction between the mucous membranes and the tube
-  Pass the tube gently into the stomach via the nose. Insert the proximal end of the tube into the clearer nostril and slide it backwards and inwards along the floor of the nose to the nasopharynx. If an obstruction is felt, withdraw the tube and try again in a slightly different direction or use the other nostril. This reduces the risk of naso- oesophageal trauma
-  Advance the tube through the pharynx as the RESIDENTS swallows until the tape marked tube reaches the point of entry into the external nares. **If the resident shows signs of distress, e.g. gasping or cyanosis, remove the tube as this may indicate that the tube is in the bronchus.**
-  Secure the tube to the Individual's nose and cheek with a small piece of hypoallergenic dressing tape. An adhesive patch will secure the tube to the cheek. This ensures the tube does not move and maximises comfort. The tube must be checked at regular intervals to prevent pressure sores around the nasal area
-  Aspirating 2 ml of stomach contents and testing this with pH indicator strips.
-  Once position has been confirmed, a spigot or drainage bag can be placed into the distal end of the tube. To prevent leakage of gastric
-  Do not flush any liquid down the tube until the position has been checked.as there is a risk of introducing fluids into the lungs if the tube is incorrectly positioned.

**5. Method for Confirming Correct Placement of Nasogastric Feeding Tube:** Correct placement of a nasogastric feeding tube should be established by aspirating and placing a drop of aspirated fluid on **pH Indicator strips**. If pH is between 1 and 5.5 feeding may be commenced. If pH is between 5 & 6 a 2nd competent nurse should check the result or retest.

-  **DO NOT USE THE TUBE if an aspirate with a pH level of 6 or above is obtained.**
-  **DO NOT USE THE TUBE if there is any doubt about its correct placement and seek advice from senior staff, x-ray confirmation may be required.**

-  Aspiration, feeding and flushing of tubes should be undertaken using a 50, 20 or 10 ml syringe depending on the RESIDENTS group Oral / Enteral or Catheter tip syringes should be used where available.
-  Record the volume and nature of the aspirate on the appropriate documentation, the Individuals care plan, when appropriate.
-  All staff undertaking pH testing must be trained and assessed as competent in the technique.

**6. When Should Testing take Place?**






-  Following insertion of the nasogastric feeding tube
-  Before the administration of each feed
-  Before giving medication (If feed not already in progress)
-  • At least once a day during continuous feeding in adults and children, and prior to changing syringe feeds in infants and neonates
-  Following episodes of vomiting, retching or coughing
-  Following evidence of tube displacement, e.g. visible external tube length is longer than previously recorded, loose tapes

**7. Potential problems encountered are:**





- a) No aspirate: **Action:** Ensure correct positioning of the tube by checking the back of the throat for coiling. Reposition the Individual in the left lateral position and re-aspirate

- b) Tube misplaced outside the stomach: **Action:** Remove and recommence procedure, if the Individual's condition allows
- c) Sore throat: **Action:** Give ice chips or mouth washes as Individual's condition allows, if safe to do so










#### 8. Removal of the Nasogastric tube.

-  Explain the procedure to the individual to gain a valid consent
-  Assist the individual to sit up in a semi-prone position in a chair or bed and support the head with pillows, this allows for easy removal of the tube
-  Wash hands with bactericidal soap and water or hand rub and assemble the equipment. Put on apron and sterile gloves.
-  Remove the tape securing the tube
-  Gently and continually pull the tube until it is completely removed.

#### 9. Post procedure

-  Dispose of gloves and apron.
-  Wash the nose and remove any traces of the tape to ensure comfort and dignity.
-  Dispose of tube and any other material in appropriate bin
-  Document the removal in the care plan

#### 10. Recording: At insertion of the nasogastric feeding tube record the following

-  Type and size of tube
-  External length of tube
-  pH of aspirate
-  Misplaced nasogastric feeding tube incidents must be reported and recorded on the incident file and as a near miss.
-  At each subsequent test document
  -  the external tube length measurement checked against the initial external length, for movement
  -  The pH reading
  -  Any actions taken
  -  At removal: Once the nasogastric tube has been removed, oral intake of food and drink should be recorded on a fluid balance chart and a food record chart to ensure that daily requirements are being met

**Further Guidance**  
*National RESIDENTS Safety Alerts – National RESIDENTS Safety Agency*  
*NICE guidelines [CG32] Published date: February 2006 Nutritional Support in Adults*