

Nasogastric (NG) tube insertion

Theory

In this procedure, a plastic tube is inserted through the nose, down the back of the throat and esophagus, and into the stomach.

The bore of the tube (large = 16, medium = 12, small = 10) is dictated by the tube's intended purpose. For short- or medium-term nutritional support in patients with a defective swallow, a fine-bore tube is used. Larger bores are used to drain the stomach contents and decompress intestinal obstruction.

- *Contraindications:* severe facial trauma and basal skull fractures
- *Complications:* aspiration, tissue trauma, electrolyte loss, tracheal or duodenal intubation, perforation of esophagus or stomach

Equipment

- Disposable gloves
- Protective gown
- Drape
- Lubricant gel
- NG tube
- Cup of water and straw
- 50 mL syringe
- Drainage bag (if necessary)
- Adhesive tape or steristrips
- Emesis basin
- Paper towel
- Suction pump (if indicated)

Procedure

- Introduce yourself, confirm the patient's identity, explain the procedure, and obtain verbal consent.
- Wash your hands thoroughly, and put on gloves and gown.
- Ideally, the patient should be seated upright (often, the head tilted slightly forward can aid insertion).
- Examine the patient's nose for deformity or obstructions and decide which nostril to use.
- Use the tube to measure the distance xiphoid process → earlobe → tip of nose and note the distance.
- Lubricate the first 4–8 cm of tube. You may also wish to use local anesthetic spray on the patient's throat, if available.
- Pass the tube into the nostril and then posteriorly, a short distance at a time. You will feel it turn the corner at the nasopharynx and another slight obstruction as it passes into the esophagus.
- If the patient is able, ask them to swallow as the tube passes the pharynx—a brief sip of water may help here.
- Advance the tube as far as the premeasured distance.
- To check for correct placement, you may wish to aspirate some stomach contents with the syringe and test the fluid's pH (it should be <6).
- Secure the tube to the patient's nose with some tape. You may also wish to curl it back over their ear and secure it to their cheek.
- Request a chest X-ray and confirm the tube's position (*below* the diaphragm in the region of the gastric bubble) before using for feeding.
- Record the procedure in the patient's notes.

▶ Hints

- If resistance is felt, try rotating the tube while advancing it. Never force it.
- Partially cooling the tube can stiffen the tube, making it easier to pass.
 - ▶ No longer considered appropriate, an alternate test for correct placement was to insert a small bolus of air (20–30 mL) via the tube with the syringe while listening to the epigastrium with the stethoscope. One would thus hear the air entering the stomach.