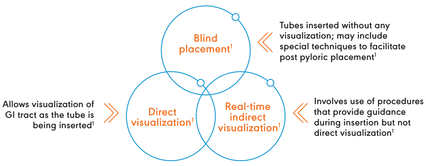
TECHNIQUES FOR NG/NI FEEDING TUBE PLACEMENT

There are several methods for nasogastric/nasointestinal (NG/NI) enteral access.[1]

- Selection of an appropriate enteral access device is based on the patient's GI anatomy and function, accessibility, disease state, and expected duration of therapy.[1]

Various techniques are used for the placement of small-bore feeding tubes—[1]



Did you know?

These techniques offer different safety features to prevent inadvertent pulmonary placement and optimize safe insertion into the GI tract. Even a single error at the time of placement can result in dangerous complications. Hence, awareness of the potential errors shall help recognize and avoid them, in turn decreasing iatrogenic complications.[1]

Each technique for tube placement can be used to place feeding tubes in the small bowel as well.[1]

Blind placement technique for gastric and post pyloric tube placement

Gastric tube placement using the blind placement technique involves insertion of tubes without any visualization (direct or indirect).[1]

However, to facilitate post pyloric tube placements, blind placement technique may include special techniques such as—[1]

10-10-10
Requires use of metoclopramide (associated with side effects)[1]

Prokinetics
Potential adverse drug reactions to medications used; need for multiple X-rays to verify placement[1]

Air insufflation
May require multiple X-rays to check placement[1]

Corkscrew
Requires a skilled clinician for placement[1]

Self-advancing nasal jejunal feeding tube
Lengthy placement; may require multiple X-rays to check placement[1]

Magnetically guided
Prone to malposition; requires specialized equipment and radiographic confirmation; cost of supplies and equipment[1]

Balloon
Need to wait for 12-24 h for migration; may require multiple X-rays[2]

Two-step or three-step
Nasal bleeding, vomiting, metoclopramide-related events[1]

Did you know?

- 10-10-10 technique: Insert feeding tube to the gastric area, give 10 mg metoclopramide; wait for 10 mins and advance at 10-cm intervals to a depth of 70-80 cm.[1]
- Prokinetics: Use promotility agents (erythromycin and metoclopramide) to help facilitate post pyloric placement.[1]
- Air insufflation: Insert tube into the stomach, instill air 10 ml/kg.[1]
- Corkscrew: Insert feeding tube into stomach, remove stylet and bending 30° reinsert stylet, and advance the tube using twisting motion.[1]
- Self-advancing nasal jejunal feeding tube: Specialized tubes with flaps propelled through GI tract with peristalsis.[1]
- Magnetically guided: Specialized tube with magnet tip, uses an external magnet to pull tip through the GI tract.[1]
- Balloon: Tube with balloon at tip to assist in propulsion through GI tract.[1]
- Two-step technique: Place tube to 30 cm and obtain X-ray to confirm esophageal placement; continue with insertion through GI tract.[1]
- Three-step technique (esophageal, gastric, post pyloric): Use with 145-cm spiral feeding tube, advanced at 5-cm intervals to 100 cm; inject 20 mg metoclopramide before insertion.[1]

Real-time indirect visualization placement techniques

Fluoroscopy
Requires a radiologist/trained clinician to place tubes; placement delays due to pending radiologist availability; radiation exposure; additional staff and cost; transport to radiology suite.[1]

Ultrasound
Technical difficulties in obese, patients with gas in bowel loop; need for radiologist/ specially trained clinician to operate and interpret.[1]

Electromagnetic placement devices

- Expedited placement at bedside[1]
- Nurses/dietitians can be trained to place tubes[1]
- Up to 100% success rate for post pyloric tube placement[1]
- Reduced time to feed, with average time of placement 6-20 minutes[1]
- Avoids inadvertent pulmonary placements.[1]

Our Solution

Feed patients faster, so they recover faster.[2]

An electromagnetic stylet provides real-time location information on tube tip placement within a patient's anatomy.[2]

On-screen visualization provides immediate feedback on tube placement.[2]

Efficient placement[2]

- Visualization at bedside
- Direct tubes to desired feeding placement with real-time feedback
- Immediately identify misplaced tubes
- Minimize complications, such as lung placements

Timely feeding[2]

- Can significantly reduce time-to-feed
- More efficient than blind placements with X-ray confirmation

Reduced burden[2]

- Address feeding needs more quickly
- Can improve patient outcomes
- Save time and resources

Allows clinicians to confidently place tubes in an optimal feeding position, quickly confirm location, and reduce the time to nutrition delivery.[2]

Institution protocols must always supersede the use of CORTRAK®2. Clinical judgment must always take precedence.[1]

References:
1. Powers J, Brown B, Lyman B, et al. Development of a competency model for placement and verification of nasogastric and nasoenteric feeding tubes for adult hospitalized patients. Nutr Clin Pract. 2021 Jun;36(3):517-33. 2. Avanos CORTRAK® 2 ANZ brochure. 3. CORTRAK 2 Quick Start Guide_15M1360.

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