FLOWCHART FOR INSERTION AND CONFIRMATION OF PLACEMENT OF NASOGASTRIC AND OROGASTRIC TUBES

Ensure the procedure is clinically indicated and that assessment has been carried out to exclude contraindications or potential complications or as per local standing order.

The following insertion instructions are for the insertion of a nasogastric (NG) tube.
If an orogastric tube is required the principles remain the same, however, the tube is inserted via the oropharynx

5 MOMENTS OF HAND HYGIENE | **CONSENT** | **PERSONAL PROTECTIVE EQUIPMENT** | **ANALGESIA** | **CHECKLIST**

Step 1: Measure tube from the tip of the nose to the bottom of the ear lobe and to the observed midpoint between the xiphoid process and the umbilicus [3]. (as per diagrams 3 & 4 in Guideline). The length of insertion should be noted in the child's clinical record.

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Step 2: Lubricate the end of the tube with a water based lubricant (PVC tubes) or activate the lubricant of a polyurethane/silicon tube by ***following the manufacturer's instructions*** carefully.

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Step 3: Examine the nostrils for patency to determine best side for insertion. If age appropriate, ask the patient if they have had any problems with either side of their nose, e.g. sinusitis can increase irritation from the naso gastric tube. In younger children gently occlude each nostril separately and insert the tube in the nostril with the best airflow.

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Step 4: Gently insert into one nostril and advance tube posteriorly aiming the tube parallel to nasal septum and superior surface of hard palate. Advance to nasopharynx, allowing tip of tube to seek its own passage into oesophagus and stomach until measured marking is reached (as per diagram 5 in Guideline).

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Step 5: Where age appropriate, instruct or encourage (using dummy with consent/oral sucrose as per local protocol) the patient to swallow and advance the tube as the patient swallows. For infant or child with intact gag reflex swallowing small sips of water may enhance passage of tube into oesophagus.

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Step 6: Observe infant or child for excessive gagging, coughing, wheezing, apnoea or colour change during placement. This may indicate passage of tube into trachea. If suspected, withdraw tube and re-advance once child is stable and comfortable.

⇩

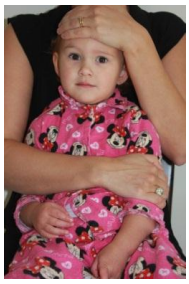
Step 7: If resistance is met, withdraw the tube 1-2 cm and rotate it slowly with downward advancement directed toward the closest ear. Never force the nasogastric tube.

GUIDE TO GASTRIC TUBE SIZES

Tube size	Feeding	Decompression
Newborns	6FG	8FG
Infants and children up to 5 years	8FG	8-10FG
Children over 5 years	8-10FG	10-14FG
Special consideration to tube size selection should be given to children with developmental or physical delay, and others who are very small for age as a smaller tube may be indicated.		

POSITIONING

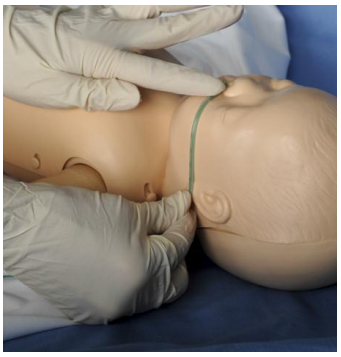
Wrapping an infant

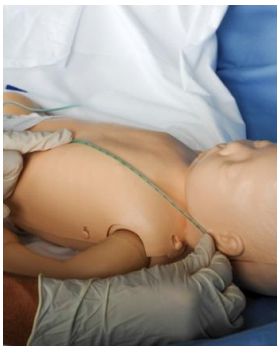


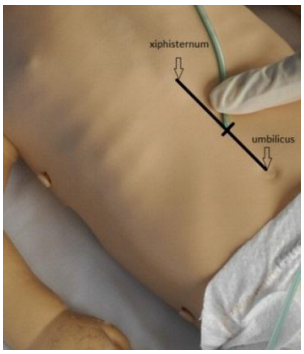
Holding a child in a seated position

MEASURE

Firstly measure using the tube from the tip of the nose to the bottom of the ear lobe
Secondly measure from the bottom of the ear lobe to the observed midpoint between the xiphoid process and the umbilicus.



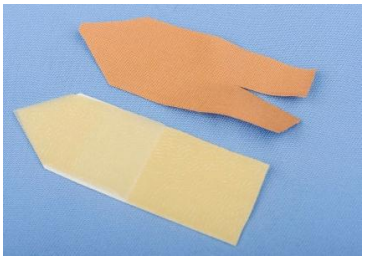


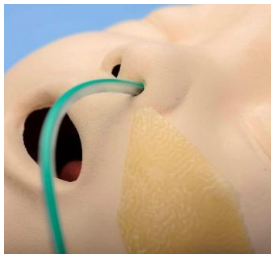


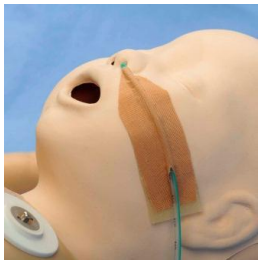
Gently insert lubricated tube into one nostril and advance tube posteriorly aiming the tube parallel to nasal septum and superior surface of hard palate.

TAPING

Suggested taping for securing NG







ALGORITHM FOR CHECKING GASTRIC TUBE POSITION

Obtain Aspirate

- Measure external tube length from nostril – ensure measurement corresponds with documented external tube length at insertion.
- Aspirate tube using 2.5mL [20] syringe using gentle suction until aspirate obtained

When to check gastric tube

- New insertion
- Pre feed or medication
- Post cough, vomit or gagging
- Any clinical change in patient condition
- Once per shift

Aspirate obtained — Yes → **Test pH of aspirate using pH strips with a sensitivity of at least 0.5 increments**

pH less than or equal to 4.0 — Yes → **Proceed to feed or deliver medication and/or fluid**

No → **DO NOT COMMENCE FEED!**
If safe turn patient onto left side with tube on free drainage below level of stomach and wait 15 – 30 minutes then
Re-aspirate

Aspirate obtained — Yes → **Test pH of aspirate using pH strips with a sensitivity of at least 0.5 increments**

No → **Check the length of the NGT at the nare as in Step 1 of "Procedure for Insertion" to ensure tube is inserted to correct length**
Potentially reposition tube 1-2cm in or out
Re-aspirate

Aspirate obtained — Yes → **Test pH of aspirate using pH strips with a sensitivity of at least 0.5 increments**

No → **DO NOT COMMENCE FEED!**
Seek senior medical assistance. Consider removing and reinserting oro/nasogastric tube and repeat checking procedure.
If still unsuccessful obtain x-ray with consent to confirm gastric tube position
Should placement, maintenance, and ongoing verification of a gastric tube become hazardous, risking the patient's health, consideration of alternative methods for delivery of nutrition and medications is necessary.

Test pH of aspirate using pH strips with a sensitivity of at least 0.5 increments

pH less than or equal to 4.0

No → If patient on acid pump inhibitors or continuous feeds consult Medical Officer **before accepting pH up to 5.0**

Yes → **Proceed to feed or deliver medication and/or fluid**