

RCP 10 top tips for Nasogastric tube feeding in Adults

Introduction

Enteral tube feeding (ETF) is used to feed patients who cannot attain an adequate oral intake from food and/or oral nutritional supplements, or who cannot eat or drink safely. The GI tract must be accessible and functioning sufficiently to absorb the feed administered. It is classed as a medical treatment and has risks and benefits associated with its use. These should be considered and documented in the medical notes before placing a tube or commencing feed. The best interests and (wherever possible) the wishes of the patient should be taken into consideration before embarking on this management.

RCP 10 top tips for Nasogastric tube feeding in adults (short version)

Indications

1. Naso-gastric tube (NGT) feeding is likely to be needed if a patient has a functional, tube accessible gut but inadequate oral intake or unsafe swallow.

Assessment

2. Patient assessment, calculation of requirements and choice of appropriate feed usually requires input from a dietitian or other appropriately trained individual.

Placement of NGT

3. Placement of NGT for feeding should be done by sufficiently experienced staff who have documented competencies, using radio-opaque tubes that have externally visible length markings.
4. pH testing using indicator paper that is CE marked should be used as a 1st line method to assess tip position, with pH between 1 and 5.5 as being safe. Follow NPSA 2011 guidelines on NGT insertion. www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=129640

Care of Tube

5. The tube should be kept clean and flushed regularly with water using a 50ml enteral syringe before commencing feed, between medications, after feeding and every 4-6 hours if being used continuously.

Monitoring & Feeding

6. All patients must be lying at a minimum of 30-45 degrees above the horizontal during enteral tube feeding or hydration and continue to be kept raised for 1 hour after administration of feed.
7. Any risk of refeeding should be documented in the medical notes and appropriate refeeding guidelines followed (e.g. NICE Clinical guideline 32 – Nutrition Support in Adults).

Medication

8. If administering medication via an NGT, ensure this is safe and appropriate with a pharmacist or a suitably experienced member of a nutrition support team.

Troubleshooting

9. *GI Disturbance*

- i. Diarrhoea: Rule out infection, malabsorption, overflow diarrhoea from constipation or drug causes. Consider reducing osmolality of feed, removing fibre and/or reducing rate of feed.

ii. Nausea / Vomiting: Rule out obstruction / ileus. Correct electrolyte imbalances, review drug prescriptions and consider pro-motility agents or post pyloric feeding. Reduce feeding rate.

10. **Tube difficulties**

i. Blocked Tube: Flush with warm water using 50ml syringe using push - pause technique

ii. Constant displacement of tubes: Consider NG bridle / bolus feeding / early gastrostomy.

RCP 10 top tips for Nasogastric tube feeding in Adults - long version

Indications

1. Naso-gastric tube (NGT) feeding is likely to be needed if a patient has a functional, tube accessible gut but inadequate oral intake or unsafe swallow. Nutritional support is classed as a treatment and not a basic need. The decision to initiate this type of feeding should be documented in the patients' notes along with an appropriate risk assessment.

Assessment

2. Patient assessment, calculation of requirements and choice of appropriate feed usually requires input from a dietitian or other appropriately trained individual. Most standard feeds are 1kcal/ml and are 'nutritionally complete' in a required volume. An average non-obese person requires 25-30kcal per kg body weight and approximately 1g per kg protein per 24 hours. These are target recommendations and initial feed rates may need to be less. Obese individuals are likely to need fewer calories per kilogram. Dietitians can advise on this as well as specialist feeds including semi-elemental, electrolyte deplete, fibre containing and higher calorie feeds. Delivery methods include bolus feeding, intermittent and continuous feeding, the choice of which depends on the patients' lifestyle / medical needs.

Placement of NGT

3. Placement of NGT for feeding should be done by sufficiently experienced staff who hold documented competencies, using radio-opaque tubes that have externally visible length markings and are NPSA compliant. Once removed, the guide wire should never be replaced with the NGT in situ. Ryles tubes should not be used routinely for feeding. The size of the feeding tubes should be 6-12 french. NGTs should not be flushed or have any introduction of fluid / feed following initial placement until the NGT tip is confirmed in the stomach and then tube position should be confirmed before each use.
4. pH testing using indicator paper that is CE marked should be used as a 1st line method to assess tip position, with pH between 1 and 5.5 as being safe. 'Whoosh' tests or Litmus paper should NEVER be used. If a gastric aspirate cannot be obtained or the pH is greater than 5.5, a CXR should be requested and interpreted by someone with appropriate training who is certified as competent to do so. An appropriate training module may be found at www.trainingngt.co.uk Decisions regarding need and placement of NGT should be fully documented in the patient notes. Follow NPSA 2011 guidelines on NGT insertion. www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=129640

Care of Tube

5. Hands should be washed thoroughly before touching the feeding tube and the tube should be kept clean and flushed regularly with water using a 50ml enteral syringe before commencing feed, between medications, after feeding and every 4-6 hours if being used continuously. Use sterile water within the hospital setting.

Monitoring & Feeding

6. To reduce risk of reflux and aspiration, all patients must be lying at a minimum of 30-45 degrees above the horizontal during enteral tube feeding or hydration and continue to be kept raised for 1 hour after administration of feed.
7. Check bloods (including renal and liver function, magnesium and phosphate) daily and supplement electrolyte deficiencies until established on full feeding regimen / clinically stable. Any risk of refeeding should be documented in the medical notes and appropriate refeeding guidelines followed (such as those found in NICE Clinical guideline 32 – Nutrition Support in Adults p80 <http://www.nice.org.uk/nicemedia/pdf/cg032fullguideline.pdf>).

Medication

8. If administering medication via an NGT, ensure this is safe and appropriate with a pharmacist or a suitably experienced member of a nutrition support team. Flush the tube with 10-30 mls of sterile water with a 50ml enteral syringe before and after drug administration. Use liquid or dispersible tablets where possible and give each drug separately, flushing the tube in between.

Troubleshooting

9. *GI Disturbance*
 - i. Diarrhoea: Send stool sample to assess for infection. Consider malabsorption (short bowel syndrome, pancreatic insufficiency etc). Consider reducing osmolality of feed, removing fibre and/or reducing rate of feed. Review medication (eg antibiotics / laxatives / PPI). Deliver feed at room temperature.
 - ii. Nausea / Vomiting: Ensure patient not obstructed / in ileus. Correct electrolyte imbalances, review drug prescriptions and consider pro-motility agents or post pyloric feeding. Reduce feeding rate.
10. *Tube difficulties*
 - i. Blocked Tube: Flush with warm water using 50ml syringe using push - pause technique. Do not use acidic fluids such as cola or pineapple juice. Review medication and method of administration. If feed is in the tube, pancreatic enzymes may be necessary. Clamp and secure tube between feeds to prevent backflow.
 - ii. Constant displacement of tubes: Consider NG bridle / bolus feeding / early gastrostomy. Any decisions should be made with the patient where possible and with the wider medical / nutrition team. Consider what is in the best interests of the patient.

Reference

NNNG Good Practice Guideline Safe Insertion of Nasogastric Feeding tubes in Adults (2012) www.nnng.org.uk

Lead Author: Dr Aminda de Silva on behalf of the RCP Nutrition Committee May 2013