

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



NHS Lothian Enteral Tube Feeding Best Practice Guidance – Adults V3

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Introduction to Best Practice Guidance for Enteral Nutrition

This document has been reviewed by the Lothian Enteral Tube Feeding Best Practice Guidance Review Group and approved by the NHS Lothian Complex Nutrition Quality Improvement Team (QIT). Where possible, the recommendations are based on evidence, research or national guidance. Where this was not available, some statements are based on consensus of expert opinion and any related reference(s) listed. The Best Practice Guidance applies to all adults in NHS Lothian. It is intended that this guidance should be implemented across NHS Lothian for hospitals and community. The Best Practice Guidance will be reviewed on a rolling programme as required.

General Principles

Topics (quick links)	
Considerations prior to commencing enteral tube feeding	Feed storage
Withholding or withdrawing enteral tube feeding	Feed preparation, hanging time and decanting
Documentation following enteral feeding tube insertion	Blended diets via gastrostomy tube
Training and competencies in relation to enteral feeding tubes	Oral Hygiene
Initiating feeding following enteral feeding tube insertion	Managing blocked tubes
The use of water for flushes in enteral feeding	Causes and management of nausea, reflux, bloating and vomiting
Flushing enteral feeding tubes	Causes and management of diarrhoea
Patient position during feeding	Causes and management of constipation
Delivery of bolus feeds	Refeeding syndrome (adult guidance)
Syringes for feeding and medicine administration	

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Topic
Considerations prior to commencing enteral tube feeding
Guidance
Nutrition and hydration provided by tube or drip are regarded in law as medical treatment and should be treated in the same way as other medical interventions. Enteral feeding should be a patient-centered approach and should never be started without consideration of all the related ethical issues and must be in the best interest of the patient. The access route should be decided individually according to the clinical indications, treatment plan and nutritional status of the patient. Any invasive procedure requires informed consent. For nasogastric tubes, consider providing the NHS Lothian "Nasogastric feeding - information for patients and carers" information leaflet. For gastrostomy tubes, the patient and/or their family/carers should be provided with the NDR UK "Tube Feeding – Making the Decision" booklet and any possible complications explained to the individual giving the consent. Radiology have created a video to inform oncology patients of what to expect during radiologically inserted gastrostomy. This is available to share with patients here: https://vimeo.com/452512813 Patients' capacity to consent should be assessed in accordance with Adults with Incapacity (Scotland) Act 2000 – Section 47. Discussions prior to commencing tube feeding should include advance planning, and there may be a time when enteral feeding may be no longer deemed in the patient's best interest. If this is the case this must be communicated to the patient, relatives and carers. It is recommended that in the case of new unintentional weight loss, the patient should be initially discussed with their parent team or GP prior to referral for enteral feeding, e.g. to rule out underlying malignancy. Once unintentional weight loss has been investigated, referral for enteral feeding can be done as follows: Acute: Discuss with parent/ward team, dietetics, speech and language therapy as appropriate with onward referral to Complex Nutrition Team for MDT discussion. Community: Discuss with parent team/GP, dietetics, speech and language therapy as appropriate, with onward referral to Complex Nutrition Team for MDT discussion. Please complete the gastrostomy referral form fully and email the relevant nutrition support team for MDT discussion prior to gastrostomy insertion. Referrals will be discussed at weekly MDT at WGH/RIE.

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WGH and Outpatients: Nutrition Team at WGH: loth.complexnutritionreferrals@nhs.scot

RIE/DCN Patients: Nutrition Team at RIE: loth.rienutritionsupport@nhs.scot

MND Patients: MND Advanced Clinical Nurse Specialists: loth.mndservice@nhs.scot

Evidence/References

Todorovic, V. E. and Mafrici, B. (2018) *PENG – A Pocket Guide to Clinical Nutrition*. 5th edition. British Dietetic Association.

General Medical Council (GMC)(2025) *Treatment and care towards the end of life*. [online]
Available at: <https://www.gmc-uk.org/professional-standards/the-professional-standards/treatment-and-care-towards-the-end-of-life> (Accessed: 30 July 2025).

Scottish Government (2000). *Adults with incapacity (Scotland) act 2000*. [online]
Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/asp/2000/4/contents>. (Accessed: 30 July 2025).

Topic

Withholding or withdrawing enteral tube feeding

Guidance

Enteral tube feeding is a medical intervention and should not be started if the risks outweigh the benefits. If this is thought to be the case, careful discussion should be undertaken with the patient and relatives/carers as outlined below. For patients who are established on enteral tube feeding, the ongoing justification for enteral feeding should be reviewed regularly. Enteral feeding should be withdrawn if the risks start to outweigh the benefits.

Withholding/withdrawal of treatment may be necessary if enteral feeding:

- Is highly unlikely to improve nutritional and fluid levels
- Will improve nutritional and fluid levels but the patient will not benefit
- Will improve nutritional and fluid levels and the patient will benefit, but the burdens of artificial nutrition and hydration will outweigh the benefits (e.g. artificial nutrition and hydration can be provided only with essential physical restraints etc.)

A patient with capacity can refuse artificial hydration or nutrition, or decide to discontinue, without considering the above conditions.

If the healthcare team feel the indication for artificial nutrition does not or no longer exists (especially in case of no efficacy, therapy-resistant complications, or the immediate dying process) and therefore conclude that enteral feeding is not or is no longer in the patient's best interests, it should be withheld/withdrawn. This decision should be explained clearly, and time given to the patient and relatives/carers to take in this information and to formulate any questions. This discussion should be handled timely and sensitively by the appropriate healthcare team member. The discussion should include rationale for the clinical judgement, and details of the discussion should be recorded in the patient's medical notes.

Artificial nutrition and artificial hydration should be considered separately, and a decision made, discussed, and documented in the notes on each. It is important when withholding or stopping artificial nutrition or hydration particularly in a patient approaching the end of life, to emphasise to the patient and relatives/carers that comfort care will continue, and to explain the measures the healthcare team will take to provide this (e.g. mouth care or comfort feeding).

Nutrition and hydration are often emotional topics for patients and families particularly when approaching the end of life. Conversations with patients and families regarding withdrawal of nutrition can be difficult. Therefore, if enteral feeding is being started in a patient with a life limiting illness, it is prudent to explain when or why this might stop prior to agreeing to start the feeding regimen. This means that the conversation regarding withdrawal if/when the time comes is not an unexpected conversation for the patient and/or family. There is likely to be a need for ongoing sensitive discussions around realistic expectations of treatment and goals of care.

If a decision is made to start enteral feeding as a trial to determine benefit, clear criteria for continuing the enteral feed should be decided and these criteria should be discussed with the patient and family/carers before commencing the feed.

Patients and carers are likely to need ongoing support around a decision to withhold or withdrawal artificial hydration or nutrition.

For further advice contact the Palliative Care team or look up the [palliative care page](#) on the intranet.

Evidence/References

General Medical Council (GMC) (2025) *Treatment and care towards the end of life*. Available at: <https://www.gmc-uk.org/professional-standards/the-professional-standards/treatment-and-care-towards-the-end-of-life> (Accessed: 30 July 2025).

Druml, C., Ballmer, P.E., Druml, W., Oehmichen, F., Shenkin, A., Singer, P., Soeters, P. and Weimann, A. (2016) ESPEN guideline on ethical aspects of artificial nutrition and hydration. *Clinical Nutrition*, [online] 35(3), pp.545–556. Available at: <https://doi.org/10.1016/j.clnu.2016.02.006> (Accessed 30 July 2025).

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Beauchamp, T.L. and Childress, J.F. (2019) Non-maleficence, in *Principles of biomedical ethics*. 8th edn. New York: Oxford University Press, pp. 119–150.

Topic

Documentation following enteral feeding tube insertion

Guidance

Accurate and timely record keeping is an essential aspect of patient care and helps to protect the welfare of patients by promoting:

- High standards and continuity of patient care
- Better communication and dissemination of information between members of the interdisciplinary team
- An accurate account of treatment, care planning and delivery
- The ability to detect problems at an early stage

When an enteral feeding tube has been placed (or replaced) the following information must be documented in the electronic patient record (EPR):

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- Type of enteral feeding tube
 - **Please ensure to document clearly and accurately the type of tube**, i.e. balloon/bumper retained gastrostomy tube, nasogastric or nasojejunal tube as this will determine the ongoing care/management of the tube.
- Manufacturer and LOT number of tube
- Length and size of tube (French gauge)
- Method of tube position confirmation
- For NG & NJ tubes, cm marking at nostril and if bridle used
- Approximate date of replacement
- Method for tube replacement (if needed)
- Guidance on gastropexy suture removal (for RIGs)

Following insertion of a gastrostomy tube, it should be documented on patient EPR and highlighted to the receiving ward team:

- If there is pain on feeding, prolonged or severe pain post-procedure, fresh bleeding, or external leakage of gastric contents:
 - Administration of feed/medication should be withheld
 - Escalate to medical team for advice/investigation urgently (e.g. consider CT scan, contrast study or surgical review)

Where patients are discharged within 72 hours of gastrostomy insertion, patients should be provided with this information and advised to seek urgent attention if they experience any of the above symptoms.

- This information should **also be included in the discharge letter** to GPs, community nurses or care homes

Evidence/References

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Available at: <https://www.bmj.com/content/340/bmj.c2160.long> (Accessed: 30 July 2025).

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Topic
Training and competencies in relation to enteral feeding tubes
Guidance
Staff must possess the knowledge, skills and abilities required for lawful, safe and effective care and must only practice those activities in which they have received appropriate education, training and experience, and maintained their competencies to do so. Any staff involved in placing enteral feeding tubes must be trained in the procedure. Staff must also be trained in the care of the above tubes when administering water, medicines or enteral feed according to local protocols.
Evidence/References
Nursing and Midwifery Council (NMC) (2010) <i>Standards for competence for registered nurses</i>. Available at: https://www.nmc.org.uk/globalassets/sitedocuments/standards/nmc-standards-for-competence-for-registered-nurses.pdf (Accessed: 30 July 2025). Nursing and Midwifery Council (NMC) (2015) <i>The Code: Professional standards of practice and behaviour for nurses, midwives and nursing associates</i>. Available at: https://www.nmc.org.uk/standards/code/ (Accessed: 30 July 2025). NHS Lothian (2024) <i>Enteral Tube Feeding (Adult): Pre-Course Workbook</i>. Available at: http://intranet.lothian.scot.nhs.uk/Directory/NursingMidwifery/EducationandEmployeeDevelopment/staffdevelopment/nursing/clinicalskills/Documents/Enteral%20Tube%20Feeding%20Workbook%20Final%20v5%20April%2025.pdf (Accessed: 6 August 2025). NHS Lothian (2024) <i>Insertion and care of nasogastric feeding tubes – Adult (v5, May 2024)</i>. Available at: http://intranet.lothian.scot.nhs.uk/Directory/NursingMidwifery/EducationandEmployeeDevelopment/staffdevelopment/nursing/clinicalskills/Documents/IC%20Insertion%20and%20Care%20of%20Nasogastric%20Feeding%20Tubes%20-%20Adult%20v5%20May%202024.pdf (Accessed: 30 July 2025). NHS Lothian (2024) <i>2-yearly insertion and care of nasogastric feeding tubes – Adult (v5, May 2024)</i>. Available at: http://intranet.lothian.scot.nhs.uk/Directory/NursingMidwifery/EducationandEmployeeDevelopment/staffdevelopment/nursing/clinicalskills/Documents/2%20yrly%20Insertion%20and%20Care

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[%20of%20Nasogastric%20Feeding%20Tubes%20%20Adult%20v5%20May%202024.pdf](#)

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<http://intranet.lothian.scot.nhs.uk/Directory/NursingMidwifery/EducationandEmployeeDevelopment/staffdevelopment/nursing/clinicalskills/Documents/IC%20-%20Gastrostomy%20Tube%20v5%20May%202024%20-%20Copy.pdf> (Accessed: 30 July 2025).

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Topic
Initiating feeding following enteral feeding tube insertion
Guidance
Local protocols should be agreed. - Nasogastric or Nasojejunal feeding can commence immediately once tube position has been confirmed. - Gastrostomy – evidence shows that early feeding (4 hours post insertion) following tube insertion is both safe and effective. - Surgical Jejunostomy - commence feeding 48 hours post insertion. - In ICU, follow jejunostomy enteral feeding protocol. - At ward level, follow blue regime provided by dietetics or contact ward dietitian for advice. - Out of hours feeding protocols can be found on the intranet: Enteral Feeding Protocols. See Appendix 3: NHS Lothian out of hours continuous nasogastric feeding regimen for adults and Appendix 4: NHS Lothian out of hours bolus feeding regimen for adults
Evidence/References
Stroud, M., Duncan, H. and Nightingale, J. (2003) Guidelines for enteral feeding in adult hospital patients. <i>Gut</i>, [online] 52(90007), pp.1vii12. Available at: https://gut.bmj.com/content/gutjnl/52/suppl_7/vii1.full.pdf (Accessed: 30 July 2025). NICE (2017) <i>Overview Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition Guidance NICE</i>. [online] Nice.org.uk. Available at: https://www.nice.org.uk/Guidance/CG32. (Accessed: 30 July 2025). NHS Lothian (2021) <i>Critical Care Directorate – Guidelines: Jejunostomy Enteral Feeding Protocol</i>. Available at: http://intranet.lothian.scot.nhs.uk/Directory/CriticalCare/GI%20liver%20and%20transplant/Jejunostomy%20feeding%20protocol%20April%202021%20(1).pdf (Accessed: 8 August 2025).

Topic
The use of water for flushes in enteral feeding
Guidance
In both acute and community settings: Gastric Tubes (nasogastric and gastrostomy tubes) • Freshly drawn potable (drinking) tap water should be used. • In a ward setting, this should be from the mains-connected cold water tap labelled “drinking water”, such as the tap in the pantry. Do not use hot water taps or mixer taps. • The water should be poured into a clean jug or cup and discarded after use. Intestinal tubes (nasojejunal, jejunostomy and gastrojejunal tubes) • Sterile water should be used in hospital. • Cooled boiled water should be used in community. • If decanting water, use a clean receptacle. • Unused water should be discarded 24 hours after the bottle has been opened. Special situations 1. <i>Gastric tubes in the immunosuppressed</i> • If a patient is significantly immunosuppressed, to the extent that they have been advised not to drink potable tap water by their specialist (e.g. recent allogeneic stem cell transplant recipients, patients with acute leukaemia), then sterile water (hospital) or cooled boiled water (community) should be used. 2. <i>Gastric tubes in patients with independent water supply to their home</i> • If a patient has an independent water supply to their home, only use bottled water from a freshly opened container or cooled boiled water. 3. <i>Gastric tubes in the event of concerns about water safety in hospital</i> • In the event of concerns about tap water safety in a clinical area, switch to using suitable drinking water (e.g. freshly drawn potable water from a mains-connected cold tap with a point of use filter, or non-sterile bottled water), adhering to local

infection control advice.

- If no suitable drinking water is available for patients, sterile water can be used as a last resort.
- Revert to freshly-drawn potable tap water from a mains-connected cold water tap once water safety concerns have resolved.

Evidence/References

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Topic
Flushing enteral feeding tubes
Guidance
Regular flushing of ALL enteral feeding tubes will help to reduce the risk of blockage. If a feeding tube is not being used for feeding it should be flushed at least once a day (60mls of water) to keep tube patent. A push/pause technique should be used as this is more effective in cleaning the inner walls of the tube. Jejunostomy tubes Newly placed jejunostomy - suggest 20mls twice a day. Once feed is established jejunostomy tube should be flushed three times a day, with 60mls water. Fluid Restriction If the patient is on a fluid restriction, flushing volumes may need to be altered. Flushing volumes Flush the tube with water: • Before commencing feed (at least 30mls) • When feeding has finished (at least 30mls) • Before and after administering medicines (at least 30mls) • Between each medicine (at least 5mls)
Evidence/References
White, R. and Bradnam, V. (2015) <i>Handbook of drug administration via enteral feeding tubes</i>. 3rd edn. London: Pharmaceutical Press. Available at: https://rudiapt.wordpress.com/wp-content/uploads/2017/11/handbook-of-drug-administration-via-enteral-feeding-tubes-2015.pdf (Accessed: 30 July 2025).

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Topic
Patient position during feeding
Guidance
Minimum upright position of 30 degrees, e.g. at least 2 pillows, during enteral feeding. Remain in an upright position ideally up to one hour after feeding to reduce the risk of aspiration. For overnight feeding, there should be additional considerations given based on patient's clinical condition and choice, as this may not always be appropriate. Gastro-oesophageal reflux and pulmonary aspiration can occur with enteral tube feeding resulting in aspiration pneumonia. Several factors increase the risk of aspiration, including: • Impaired consciousness/gag reflex • Supine position • Large gastric residual volumes • Mal-positioned feeding tubes Aspiration may occur with no obvious vomiting or coughing, known as silent aspiration.
Evidence/References
Metheny, N.A., Clouse, R.E., Chang, Y.-H., Stewart, B.J., Oliver, D.A. and Kollef, M.H. (2006) Tracheobronchial aspiration of gastric contents in critically ill tube-fed patients: frequency, outcomes, and risk factors, <i>Critical Care Medicine</i>, 34(4), pp.1007–1015. Available at: https://pubmed.ncbi.nlm.nih.gov/16484901/ (Accessed: 30 July 2025). Atkinson, K. (2022) Shared decision making in dysphagia. <i>British Journal of Nursing</i>, 31(13 Suppl), S21–S24. Available at: https://www.britishjournalofnursing.com/content/dysphagia/shared-decision-making-in-dysphagia (Accessed: 30 July 2025).

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Topic
Delivery of bolus feeds
Guidance
Bolus feeding refers to a volume of feed given over a short space of time either by gravity using a syringe, or via a feeding pump. When using a syringe, avoid using a plunger to administer bolus feed if possible. A maximum feed volume of 400mls should be bolused at any one time, unless otherwise advised. Please see Appendix 4: NHS Lothian out of hours bolus feeding regimen for adults.
Evidence/References
White, S. (2016) <i>Understanding bolus feeding</i>. [online] Available at: https://www.researchgate.net/publication/304423423_Understanding_bolus_feeding. (Accessed 30 July 2025).

Topic
Syringes for feeding and medicine administration
Guidance
Purple enteral syringes should be used at all times. In acute/hospital setting: all syringes must be sterile and single use. The largest functional size, commonly 60mls, should be used. In the community setting: reusable syringes (up to 7 days) will be provided. After use the syringe should be washed in hot soapy water and dried with a paper towel or kitchen roll. Smaller syringes will produce greater pressure and may split the tube, therefore use with caution and administer slowly. Administering medicines When measuring medicines with syringes, use the size of syringe appropriate to the volume of medicine to be given e.g. use a 5ml syringe to administer a 2.5ml dose.
Evidence/References
White, R. and Bradnam, V. (2015) <i>Handbook of drug administration via enteral feeding tubes</i>. 3rd edn. London: Pharmaceutical Press. Available at: https://rudiapt.wordpress.com/wp-content/uploads/2017/11/handbook-of-drug-administration-via-enteral-feeding-tubes-2015.pdf (Accessed: 30 July 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Feed storage
Guidance
Wherever possible sterile pre-packaged, ready-to-use feeds should be used in preference to feeds requiring decanting, reconstitution or dilution. Feeds should be kept in a clean, cool, dry area. Stock should be rotated to avoid feeds exceeding their expiry date. Feeds should be used according to manufacturers' guidance and food hygiene legislation.
Evidence/References
National Institute for Health and Care Excellence (NICE) (2012) <i>Healthcare-associated infections: prevention and control in primary and community care</i> (Clinical Guideline CG139). Last updated: 15 February 2017. Available at: https://www.nice.org.uk/guidance/cg139 (Accessed: 30 July 2025).

NHS Lothian Enteral Tube Feeding

Best Practice Guidance - Adults



Topic
Feed preparation, hanging time and decanting
Guidance
Effective hand washing must be carried out before setting up enteral feed. Use minimal handling and an aseptic non touch technique to connect the giving set to the enteral feeding tube. Decanting/Reconstituting feed • When decanting, reconstituting or diluting feeds, a clean working area should be prepared and equipment dedicated for enteral feed use only should be used. • Feeds that require reconstitution should ideally be mixed using cooled boiled water or freshly opened sterile water and a no-touch technique observed. • Where ready-to-use feeds are not available, feeds may be prepared in advance, stored in a refrigerator, and used within 24 hours. • Ready-to-use feeds may be given for a whole administration session, up to a maximum of 24 hours. Reconstituted feeds should be administered over a maximum 4-hour period. • Where possible, avoid decanting feed by using sterile, ready-to-hang packs or bottles. General guidance • Giving sets are for single use and must be discarded after each feeding session. • Some containers are single use and others are re-usable. Advice will be provided regarding appropriate use. • All unused feed should be discarded after 24 hours of opening.
Evidence/References
National Institute for Health and Care Excellence (NICE) (2012) <i>Healthcare-associated infections: prevention and control in primary and community care</i> (Clinical Guideline CG139). Last updated: 15 February 2017. Available at: https://www.nice.org.uk/guidance/cg139 (Accessed: 30 July 2025). Anderton, A. and Aidoo, K.E. (1990) Decanting—a source of contamination of enteral feeds? <i>Clinical Nutrition</i>, 9(3), pp.157–162. Available at: https://doi.org/10.1016/0261-5614(90)90048-w. (Accessed: 30 July 2025)

Topic
Blended diets via gastrostomy tube
Guidance
It is recommended that a prescribable, ready-to-hang feed is used as first line for enteral nutrition. This should be nutritionally complete if being used as the sole source of nutrition. However, some patients may wish to have real food blended via gastrostomy. The decision to commence blended diet via gastrostomy should take a shared decision-making approach with patient/ family and wider multi-disciplinary team. An informed choice should be made based on the considerations below and the outcome of discussion shared with the healthcare team. The following factors should be considered and fully discussed with patient/parents/carers: • Tube type – gastrostomy (12FR or wider) with well healed site. Please note a blended diet should not be administered via nasal tube due to the thin gauge of the tube, or a jejunal tube due to increased infection risk through bypassing the stomach. • Food hygiene, safe preparation and storage and transport of liquidised/blended food • Nutritional adequacy of blended diet • Infection control procedures • Tube blockage/degradation • Administration technique (blended diet cannot be provided by feeding pump) • Administering feed out with the home environment, including planning for periods of acute illness (i.e. hospital admission). ○ Use of a blended diet may not be appropriate during hospital admissions. This should be discussed as a multidisciplinary decision depending on the patient's clinical condition and ability to tolerate a blended diet. ○ If blended diet is not appropriate the dietitian will discuss a suitable alternative feed plan. ○ If the MDT agree continuing a blended diet is suitable during acute admission, feasibility should be discussed with the catering department. Please ensure compliance with Food Hygiene Policy, use pre-packaged products, and consider factors such as storage. This should be administered by the patient, a carer or relative. Long term enterally tube-fed patients tend to have multiple and often complex healthcare needs that make them more vulnerable in the consideration of the above factors.

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Dietetic support and monitoring should continue to be carried out as per monitoring guidelines. More frequent monitoring may be required.

Clinicians who are new to blended diet should seek supervision or advice from someone more experienced. There are paediatric dietitians experienced in blended diets who can be contacted for support if required.

Evidence/References

British Dietetic Association (BDA) (2021) *The use of blended diet with enteral feeding tubes: Practice Toolkit*. Available at: <https://www.bda.uk.com/resource-report/the-use-of-blended-diet-with-enteral-feeding-tubes.html> (Accessed: 30 July 2025).

NHS Lothian (2022) *Administration of Blended Diet via Gastrostomy Feeding Devices*. Available at: <http://intranet.lothian.scot.nhs.uk/Directory/dietetics/paediatric%20dietetics/Documents/Forms/AllItems.aspx> (Accessed: 30 July 2025).

NHS Lothian (2024) *Teaching guideline on administration of blended diet via a gastrostomy tube*. Available at: <http://intranet.lothian.scot.nhs.uk/Directory/ChildrensServices/PoliciesGuidelines/Teaching%20Guidelines/Administration%20of%20Blended%20Diet%20via%20Gastrostomy%20Tube%20Teaching%20Guideline.pdf> (Accessed: 20 August 2025).

NHS Lothian (2024) *Food Hygiene Policy*. Available at: <https://policyonline.nhslothian.scot/wp-content/uploads/2023/03/Food%20Hygiene%20Policy.pdf>

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Oral Hygiene
Guidance
Good oral hygiene should be maintained in patients receiving enteral tube feeding. A patient who is receiving all nutritional requirements via an enteral feeding tube requires regular oral care (3-4 hourly) or more frequently as required. Use of oral swabs see advice below: http://www.mhra.gov.uk/Publications/Safetywarnings/MedicalDeviceAlerts/CON149697
Evidence/References
NHS Lothian (2023) <i>Lothian oral health assessment</i>. Available from: http://intranet.lothian.scot.nhs.uk/Directory/PatientOutcomes/Documents/Oral%20Hygiene%20Assessment%20SOP%20v2%20Final.pdf (Accessed: 30 July 2025). Scottish Intercollegiate Guidelines Network (SIGN) (2010) <i>Management of patients with stroke: identification and management of dysphagia</i>. SIGN publication no. 119. Available at: https://collections.nlm.nih.gov/master/borndig/101609300/sign119.pdf (Accessed: 30 July 2025). Maeda, K. and Akagi, J. (2014) Oral care may reduce pneumonia in the tube-fed elderly: A preliminary study. <i>Dysphagia</i>, 29(5), pp. 616–621. Available at: https://doi.org/10.1007/s00455-014-9553-6 (Accessed: 30 July 2025).

Topic
Managing blocked tubes
Guidance
If feeding tube is blocked, try the following: 1. Using a 60ml syringe, administer warm water (i.e. 3 parts cold water and 1 part hot water) using a push/pause technique. Massage the blockage if visible. 2. Using a 60ml syringe administer sodium bicarbonate solution (1 teaspoon in 100mls warm water) or soda water using a push/pause technique. 3. Use a smaller syringe (20ml) with caution if the above does not work. Cranberry juice, carbonated cola drinks and pineapple juice are acidic and may contribute to tube blockage by protein denaturation and, therefore, should NOT be used. If the tube cannot be unblocked, follow the local procedure to get the tube replaced.
Evidence/References
White, R. and Bradnam, V. (2015) <i>Handbook of drug administration via enteral feeding tubes</i>. 3rd edn. London: Pharmaceutical Press. Available at: https://rudiapt.wordpress.com/wp-content/uploads/2017/11/handbook-of-drug-administration-via-enteral-feeding-tubes-2015.pdf (Accessed: 30 July 2025).

Topic
Causes and management of nausea, reflux, bloating and vomiting
Guidance
The following may be potential causes for nausea, reflux, bloating and vomiting • Too rapid feed administration • Feed too cold • Side effects of medicines • Constipation • Feed intolerance • Gastro-oesophageal reflux • Delayed gastric emptying • Incorrect positioning whilst feeding • There may be other medical related causes and appropriate advice should be sought to rule these out. Management – discuss with managing healthcare professional • Reduce rate or lower gravity for bolus feeds • Reduce water flushes if large volumes (at least 60mls minimum should be used) • Ensure feed is at room temperature • Review prescribed medicines • Consider prescribing anti-emetics, gastric motility agents and/or anti-reflux medicines • Dietetic review re type of feed and hydration status • Ensure patient is in correct position whilst feeding – see section on Patient Positioning • Medical review if appropriate
Evidence/References
NICE (2017) <i>Overview Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition Guidance NICE</i>. [online] Nice.org.uk. Available at: https://www.nice.org.uk/Guidance/CG32. (Accessed: 30 July 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



British Association for Parenteral and Enteral Nutrition (BAPEN) (2025) *Management of Enteral Feeding Complications*. In: *Enteral Nutrition*. [Online] Available at: <https://www.bapen.org.uk/education/nutrition-support/enteral-nutrition/management-of-enteral-feeding-complications/> (Accessed: 31 July 2025).

Metheny, N.A., Clouse, R.E., Chang, Y.H., Stewart, B.J., Oliver, D.A. and Kollef, M.H. (2006) Tracheobronchial aspiration of gastric contents in critically ill tube-fed patients: frequency, outcomes, and risk factors, *Critical Care Medicine*, 34(4), pp. 1007–1015. [Online] Available at: <https://pubmed.ncbi.nlm.nih.gov/16484901/> (Accessed: 31 July 2025).

Topic
Causes and management of diarrhoea
Guidance
The following may be potential causes of diarrhoea • Infection • Rapid feed administration • Medication • Pre-existing bowel disorder • Overflow • Malabsorption • Migration of feeding tube Management – discuss with managing healthcare professional • Keep an accurate stool chart • Stool sample for analysis • Dietetic review of feeding regimen • Consider reduction of rate of feed administration • Review recent and current drug therapy • Consider anti-diarrhoeal medicines e.g. Loperamide • Consider pancreatic enzyme therapy or a peptide feed if appropriate • Assess whether hydration and electrolyte replacements are required – discuss with Medical Team • If concern that tube has migrated, please seek medical advice • Consider whether patient has pre-existing bowel disorders – discuss with medical team • Management of constipation (see below) • Consider hygiene practices around feed administration – please see relevant sections above (e.g. feed hanging times, feed preparation etc.)

Evidence/References

Todorovic, V. E. and Mafrici, B. (2018) *PENG – A Pocket Guide to Clinical Nutrition 5th edition*. British Dietetic Association.

British Association for Parenteral and Enteral Nutrition (BAPEN) (2025) *Management of Enteral Feeding Complications*. In: *Enteral Nutrition*. [Online] Available at: <https://www.bapen.org.uk/education/nutrition-support/enteral-nutrition/management-of-enteral-feeding-complications/> (Accessed: 31 July 2025).

Phillips, M., Hopper, A.D., Kumar, R., et al., 2021. Consensus for the management of pancreatic exocrine insufficiency: UK practical guidelines. *BMJ Open Gastroenterology*, 8(1), e000643. [Online] Available at: <https://bmjopengastro.bmj.com/content/8/1/e000643> (Accessed: 31 July 2025).

Topic
Causes and management of constipation
Guidance
The following may be potential causes for constipation • Dehydration • Side effects of medicines • Lack of dietary fibre • Immobility • Changes in gut motility Management – discuss with managing healthcare professional • Assess fluid/hydration status e.g. fluid balance chart, biochemistry • Review prescribed medicines • Prescribe laxatives • Review/assess use of fibre feed • Encourage physical activity if appropriate • Consider enema/other medical management • Assess usual bowel pattern and historic fibre consumption
Evidence/References
Todorovic, V. E. and Mafrici, B. (2018) <i>PENG – A Pocket Guide to Clinical Nutrition</i>. 5th edition. British Dietetic Association. British Association for Parenteral and Enteral Nutrition (BAPEN) (2025) <i>Management of Enteral Feeding Complications</i>. In: <i>Enteral Nutrition</i>. [Online] Available at: https://www.bapen.org.uk/education/nutrition-support/enteral-nutrition/management-of-enteral-feeding-complications/ (Accessed: 31 July 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic									
Refeeding syndrome (adult guidance)									
Guidance									
Re-feeding syndrome is a set of potentially fatal adverse reactions including biochemical shifts and clinical symptoms that may occur in the malnourished patient when nutrition is re-introduced in amounts that exceed their metabolic capacity. These adverse reactions may stem from a variety of processes which are triggered by re-feeding, including: • Sudden electrolyte & fluid shifts • Altered glucose metabolism • Severe micronutrient (particularly thiamine) deficiency Re-feeding syndrome can be prevented; it is therefore important that patients at risk of re-feeding syndrome are identified, assessed and managed appropriately. Identification of Re-feeding Syndrome Risk <table border="1"> <thead> <tr> <th>Risk Category</th><th>How to Identify patient*</th></tr> </thead> <tbody> <tr> <td>At risk patients</td><td>Any patient with very little or no food intake for > 5 days</td></tr> <tr> <td>High-risk patients</td><td> Any patient with very little or no food intake for > 5 days And with one of the following: • BMI <16kg/m² • Unintentional weight loss >15% within past 3-6 months • Little or no nutrition for >10 days • Low electrolyte levels of potassium, magnesium and phosphate prior to feeding Or with two of the following: • BMI <18.5kg/m² • Unintentional weight loss >10% in the past 3-6 months • Little or no nutrition for >5days • A history of alcohol excess or on insulin, chemotherapy, antacids or diuretics </td></tr> <tr> <td>Extremely high-risk patients</td><td> Any patient with one of the following: • BMI <14kg/m² • Very little or no nutrition for >15 days </td></tr> </tbody> </table>		Risk Category	How to Identify patient*	At risk patients	Any patient with very little or no food intake for > 5 days	High-risk patients	Any patient with very little or no food intake for > 5 days And with one of the following: • BMI <16kg/m² • Unintentional weight loss >15% within past 3-6 months • Little or no nutrition for >10 days • Low electrolyte levels of potassium, magnesium and phosphate prior to feeding Or with two of the following: • BMI <18.5kg/m² • Unintentional weight loss >10% in the past 3-6 months • Little or no nutrition for >5days • A history of alcohol excess or on insulin, chemotherapy, antacids or diuretics	Extremely high-risk patients	Any patient with one of the following: • BMI <14kg/m² • Very little or no nutrition for >15 days
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Extremely high-risk patients	Any patient with one of the following: • BMI <14kg/m² • Very little or no nutrition for >15 days								

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Treatment

Please refer to the Appendix 1: [NHS Lothian guideline for the prevention and management of re-feeding syndrome in adult acute hospital inpatients](#).

Evidence/References

NICE (2017) *Overview | Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition | Guidance | NICE*. [online]. Available at: <https://www.nice.org.uk/Guidance/CG32>. (Accessed: 30 July 2025).

Todorovic, V. E. and Mafrici, B. (2018) *PENG – A Pocket Guide to Clinical Nutrition 5th edition*. British Dietetic Association.

NHS Lothian (2023) *Prevention of re-feeding syndrome guidelines in adult acute hospital inpatients*. [PDF] Available at: <https://policyonline.nhslothian.scot/wp-content/uploads/2023/03/Prevention%20of%20re-feeding%20syndrome%20guidelines%20in%20adult%20acute%20hospital%20inpatients.pdf> (Accessed: 31 July 2025).

Infection Control

Topics (quick links)	
Hand hygiene, and Personal Protective Equipment (PPE)	Giving sets, syringes
Equipment	Pump cleaning

Topic
Hand hygiene, and Personal Protective Equipment (PPE)
Guidance
Standard Infection Control Precautions (SICPs) are to be used by all staff, in all care settings, at all times, for all patients whether infection is known to be present or not to ensure the safety of those being cared for, staff and visitors in the care environment. Standard hand washing protocol should be followed in an acute setting. On completion of connecting enteral feeding, Personal Protective Equipment should be removed (discarded as clinical waste) and hands decontaminated. If a patient is managing their own enteral feeding tube, then it is not necessary for them to wear gloves, but hand hygiene should be carried out. Relatives or carers in the home situation are not required to wear protective clothing but must be aware that: • Good hand hygiene is important. • Cuts and sores on their hands and forearms must be covered with a waterproof dressing. • Carers should not handle enteral feeds if they have skin infections, diarrhoea or vomiting. In such situations medical advice should be sought. Minimal handling should be used to connect the administration system to the enteral feeding tube. In the acute setting, an aseptic non-touch technique should be used.

Evidence/References

National Institute for Health and Care Excellence (NICE) (2012) *Healthcare-associated infections: prevention and control in primary and community care* (Clinical Guideline CG139). Last updated: 15 February 2017. Available at: <https://www.nice.org.uk/guidance/cg139> (Accessed: 30 July 2025).

Ojo, O. and Bowden, J. (2012) Infection control in enteral feed and feeding systems in the community. *British Journal of Nursing*, 21(18), pp.1070–1075. Available at: <https://doi.org/10.12968/bjon.2012.21.18.1070>. (Accessed: 31 July 2025).

National Services Scotland, 2023. *National Infection Prevention and Control Manual: Chapter 1 – Standard Infection Control Precautions (SICPs)*. [Online] Available at: <https://nipcm.hps.scot.nhs.uk/chapter-1-standard-infection-control-precautions-sicps> (Accessed: 31 July 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Equipment
Guidance
Any equipment used should be dedicated for enteral tube feeding use only. In hospital all items should be single use. Some manufacturers may suggest that items can be washed in a dishwasher, but this may affect the usable life of these items. Handwashing is recommended.
Evidence/References
National Institute for Health and Care Excellence (NICE) (2012) <i>Healthcare-associated infections: prevention and control in primary and community care</i> (Clinical Guideline CG139). Last updated: 15 February 2017. Available at: https://www.nice.org.uk/guidance/cg139 (Accessed: 30 July 2025). Osland, E.J., Andersen, S., Coleman, E. and Marshall, B. (2020) Revisiting the Evidence for the Reuse of Enteral Feeding Equipment in Ambulatory Patients: A Systematic Review. <i>Nutrition in Clinical Practice</i>, 36(1), pp.169–186. Available at: https://doi.org/10.1002/ncp.10574. (Accessed: 31 July 2025). National Services Scotland (2025) <i>National Infection Prevention and Control Manual (NIPCM)</i>. [Online] Available at: https://www.nipcm.scot.nhs.uk/ (Accessed: 31 July 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Giving sets, syringes and extension sets
Guidance
Items marked 'Single Use' should not be reused, unless otherwise advised.  Items marked 'Single Patient Use' can be reused for a specific patient, following the manufacturer's instructions for reuse. Only syringes for enteral use (purple) should be used for administration of feed, water and medicines. Refer to manufacturer guidelines for cleaning instructions and how often they should be changed. For low profile devices, extension sets will be required to administer feed. These would be considered 'single patient use'. Severely immuno-compromised patients at home should only use Single Use syringes.
Evidence/References
National Institute for Health and Care Excellence (NICE) (2012) <i>Healthcare-associated infections: prevention and control in primary and community care</i> (Clinical Guideline CG139). Last updated: 15 February 2017. Available at: https://www.nice.org.uk/guidance/cg139 (Accessed: 30 July 2025). Fletcher, J. (2011) <i>Nutrition: safe practice in adult enteral tube feeding</i>. British Journal of Nursing, 20(19), 1234–1239. Available at: https://doi.org/10.12968/bjon.2011.20.19.1234 (Accessed: 1 August 2025). NPSA. (2007) <i>Patient Safety Alert 19. Promoting safer measurement and administration of liquid medicines via oral and other enteral routes</i>. Available at https://www.england.nhs.uk/wp-content/uploads/2020/11/Recommendations-from-NPSA-alerts-that-remain-relevant-to-NEs-FINAL.pdf (Accessed: 1 August 2025). Medicines and Healthcare products Regulatory Agency (MHRA) (2021). <i>Single-use medical devices: implications and consequences of re-use</i>. GOV.UK. Available at: https://www.gov.uk/government/publications/single-use-medical-devices-implications-and-consequences-of-re-use (Accessed: 1 August 2025). NHS MEL (2001) <i>Infection Control: Decontamination of Medical Devices</i>. Available at: https://www.publications.scot.nhs.uk/files/hdl2001-10.htm (Accessed: 1 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Pump cleaning
Guidance
Pumps should be cleaned once a week using a damp cloth both on the pump face and the door opening (where the giving set is placed). Pump and stand should also be cleaned as required with a damp cloth if there is any spillage of feed or other liquids. As the pumps are water resistant, this does not cause any damage.
Evidence/References
National Institute for Health and Care Excellence (NICE). (2012) <i>Healthcare-associated infections: prevention and control in primary and community care</i> (Clinical Guideline CG139). Last updated: 15 February 2017. Available at: https://www.nice.org.uk/guidance/cg139 (Accessed: 30 July 2025). National Institutes of Health (NIH) (2025) <i>Preventing hospital-acquired infection: clinical guidelines - NLM Catalog - NCBI</i>. Available at: https://www.ncbi.nlm.nih.gov/nlmcatalog/101155756 (Accessed: 1 August 2025). Farrington, M. and Pascoe, G. (2001). Risk management and infection control – time to get our priorities right in the United Kingdom. <i>Journal of Hospital Infection</i>, 47(1), pp.19–24. Available at: https://doi.org/10.1053/jhin.2000.0829 (Accessed: 1 August 2025). Scottish Executive Health Department Working Group (2001). <i>The contamination of surgical instruments and other medical devices</i>. Available at: https://www.publications.scot.nhs.uk/files_legacy/sehd/publications/hdl30101annex.pdf (Accessed: 1 August 2025). NHS Scotland (2025). <i>National Infection Prevention and Control Manual: Chapter 1 - Standard Infection Control Precautions (SICPs)</i>. Available at: https://www.nipcm.hps.scot.nhs.uk/chapter-1-standard-infection-control-precautions-sicps#a1081 (Accessed 1 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Nasogastric (NG)/Nasojejunal (NJ) tube care

Topics (quick links)	
Nasogastric Tube Care	Nasojejunal Tube Care
How to check correct nasogastric tube placement	Insertion technique and confirmation of nasojejunal tube position
Frequency of checking nasogastric tube placement	Frequency of checking nasojejunal tube position
Frequency of changing nasogastric tube	Nasojejunal feeding regimen
	Frequency of changing nasojejunal tube

Nasogastric Tube Care
Topic
How to check correct nasogastric tube placement
Guidance
General information Fully radio-opaque tubes with markings to enable accurate measurement, identification and documentation of their position should be used.
Routine method for checking nasogastric tube position following initial placement - Checking pH of NG tube aspirate is the routine method for checking placement of NG tubes. - Radiological confirmation is recommended if you are unable to obtain a gastric aspirate.
Aspiration
Prior to using a nasogastric tube, the position should be checked - Test aspirate with pH paper, a pH 5.5 or less is acceptable to commence feeding or tube use. - The pH paper should have 0.5 graduations and be suitable for the pH determination of human gastric aspirate.

- If the aspirate has a pH of 6 or more on initial insertion, do not use tube and arrange x-ray to confirm tube placement. See Appendix 2: [NG decision tree](#)
- Medication which could elevate the pH level includes Antacids, H2 -Antagonists and Proton Pump inhibitors. An individual risk assessment should be completed for patients taking such medications and this should include testing and documenting the pH at time of initial insertion.
- If the aspirate of a nasogastric tube has a pH of 6 or more **and the tube was previously confirmed and documented as in the correct position**, risk assess - is it safe to start feed?
- **Risk Assessment**
 1. Is there any suspicion that the tube has been displaced?
 2. Are tapes and securing devices intact and cm mark at nostril the same as at initial insertion?
 3. Is the patient receiving medication that will elevate gastric pH?
 4. Document decisions.
 5. If risk assessment inconclusive - Go to X-Ray.

If there is difficulty obtaining an aspirate, consider the following:

1. If possible turn patient onto left hand side - try to aspirate
2. Inject 10 -20ml of AIR into the NG tube - try to aspirate
3. If able give patient a drink or perform mouth care and wait for 15 mins - try to aspirate
4. Advance tube a maximum of 5cms and try to aspirate again

Radiography

Special considerations for x-ray confirmation of correct nasogastric tube placement:

- Order when requesting on TRAK should be "XR Nasogastric tube position". This will generate a new TRAK code (XNASG), which has a clearly distinct pathway in Radiology from other chest x-rays, allowing for a faster reporting time and safe ongoing patient care.
- For new NG tubes that require an x-ray, leave guidewire in place until x-ray is taken (improves tube visibility). Once NG tube position is correctly confirmed and documented, remove wire from NG tube and dispose of according to local policy.
- Do not use or flush the NG tube before the tube is documented as safe to use.
- X-ray should only be interpreted by a person competent in the four criteria below.

Four criteria:

1. Does the tube path follow the oesophagus/avoid the contours of the bronchi?
2. Does the tube clearly bisect the carina or the bronchi?

3. Does it cross the diaphragm in the midline?

4. Is the tip clearly visible below the left hemi diaphragm?

- If the x-ray is not clear enough to view the four criteria, seek radiology advice. Be aware that *tip below diaphragm* is not adequate documentation.
- Only use nasogastric tube if right patient, right x-ray, four criteria and clear conclusion are recorded.
- Do not accept verbal instructions or incomplete documentation regarding correct placement of the nasogastric tube
- Record size of tube and final length of tube inserted for future checks of position.

If in doubt DO NOT flush or give medication or feed – seek medical advice

Methods which must NOT be used to check tube placement

- Auscultation of air insufflated through the nasogastric tube
- Testing aspirate using blue litmus paper
- Interpreting the absence of respiratory distress as an indicator of correct position
- Monitoring bubbling at the end of the tube

Refer to [decision tree for checking Nasogastric tube placement in adults](#)

Evidence/References

NHS Improvement (NHS England) (2016) *Patient safety alert: Nasogastric tube misplacement: continuing risk of death and severe harm* [online]. First published 22 July 2016; updated 14 February 2022. Available at: <https://www.england.nhs.uk/2016/07/nasogastric-tube-misplacement-continuing-risk-of-death-severe-harm/> (Accessed: 1 August 2025).

BAPEN Nasogastric Tube Special Interest Group (NGSIG) / BAPEN (2020) *Aide-mémoire: Nasogastric tube placement checks before first use in critical care settings during the COVID-19 response (13 May 2020)* [PDF]. Available at: <https://www.bapen.org.uk/pdfs/covid-19/aide-memoire-ngt-placement-13-05-20.pdf> (Accessed: 1 August 2025).

NHS Improvement (NHS England) (2016) *Patient Safety Alert Stage 2 – Resource set: Initial placement checks for nasogastric and orogastric tubes* [PDF]. First published 22 July 2016; updated 14 February 2022. Available at: https://www.england.nhs.uk/wp-content/uploads/2016/07/Resource_set_-_Initial_placement_checks_for_NG_tubes_1.pdf (Accessed: 1 August 2025).

NHS Lothian (2024). *Insertion and Care of Nasogastric Feeding Tubes – Adult Initial Competency (v5 May 2024)* [PDF]. Available at:

<http://intranet.lothian.scot.nhs.uk/Directory/NursingMidwifery/EducationandEmployeeDevelopment/staffdevelopment/nursing/clinicalskills/Documents/IC%20Insertion%20and%20Care%20of%20>

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



[Nasogastric%20Feeding%20Tubes%20-%20Adult%20v5%20May%202024.pdf](#) (Accessed: 1 August 2025).

NHS Lothian (2024). *Insertion and Care of Nasogastric Feeding Tubes – Adult 2 yearly competency (v5 May 2024)* [PDF]. Available at:

<http://intranet.lothian.scot.nhs.uk/Directory/NursingMidwifery/EducationandEmployeeDevelopment/staffdevelopment/nursing/clinicalskills/Documents/2%20Yrly%20Insertion%2c%20Care%20of%20Nasogastric%20Feeding%20Tubes%20Adult%20v5%202024.pdf> (Accessed: 1 August 2025)

NICE (2017). *Overview | Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition | Guidance | NICE*. [online] Nice.org.uk. Available at: <https://www.nice.org.uk/Guidance/CG32>. (Accessed: 30 July 2025).

National Nurses Nutrition Group (NNNG) (2023) *Good Practice Guideline: Safe Insertion and Ongoing Care of Nasogastric (NG) Feeding Tubes in Adults* [PDF]. Available at: <https://nnng.org.uk/wp-content/uploads/2024/06/Good-Practice-Guideline-Safe-Insertion-and-Ongoing-Care-of-Nasogastric-NG-Feeding-Tubes-in-Adults-Final-CR-June-2023-PDF.pdf> (Accessed: 1 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Frequency of checking nasogastric tube placement
Guidance
Check Nasogastric tube position: • Following initial tube insertion • Before commencement of each feed • Before administering water • Before medications are administered • Following evidence of tube displacement, e.g. loose tape or the visible tube appears longer/cm marking has changed • Following episodes of vomiting, retching or coughing
Evidence/References
National Patient Safety Agency (2011) <i>Patient Safety Alert: Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants</i>. [online]. Available at: https://www.cas.mhra.gov.uk/ViewandAcknowledgment/ViewAttachment.aspx?Attachment_id=101341 (Accessed: 18 June 2026) NHS Improvement (NHS England) (2016) <i>Patient safety alert: Nasogastric tube misplacement: continuing risk of death and severe harm</i> [online]. First published 22 July 2016; updated 14 February 2022. Available at: https://www.england.nhs.uk/2016/07/nasogastric-tube-misplacement-continuing-risk-of-death-severe-harm/ (Accessed: 1 August 2025). NHS Improvement (NHS England) (2016) <i>Patient Safety Alert Stage 2 – Resource set: Initial placement checks for nasogastric and orogastric tubes</i> [PDF]. First published 22 July 2016; updated 14 February 2022. Available at: https://www.england.nhs.uk/wp-content/uploads/2016/07/Resource_set_-_Initial_placement_checks_for_NG_tubes_1.pdf (Accessed: 1 August 2025).

NHS Lothian Enteral Tube Feeding

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Topic
Frequency of changing nasogastric tube
Guidance
Nasogastric tubes should be changed according to manufacturers' recommendations. There may be clinical situations where it is appropriate to exceed the manufacturers' recommendations; please discuss with the patient's multi-disciplinary team if this is the case. Only Nasogastric tubes licensed for feeding should be used.
Evidence/References
Based on professional consensus

Topic
Patient insertion of nasogastric tubes
Guidance
Nasogastric tube insertion should only be completed by registered nurses, dietitians, radiographers and medical staff (including radiologists and intensivists) or other qualified staff who have undergone appropriate training and ongoing competency assessment. Patients should not routinely be trained to self-insert nasogastric tubes. There may be rare and complex clinical scenarios where the only option for artificial nutritional support is for the patient to pass their own nasogastric feeding tube on a daily basis. In this scenario, a documented multidisciplinary, multispecialty risk assessment and evidence of competency training would be required.
Evidence/References
BAPEN (2020) <i>A Position Paper on Nasogastric Tube Safety "Time to put patient safety first"</i> . Available from: https://www.bapen.org.uk/pdfs/ngsig/a-position-paper-on-nasogastric-tube-safety-v2.pdf (Accessed: 9 January 2026).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Health Improvement Scotland (2015) *Complex Nutrition Standards*. Available from: https://www.healthcareimprovementscotland.scot/wp-content/uploads/2024/02/COMPLEXNUTRITION_STANF_DEC2015.pdf (Accessed: 9 January 2026).

Nasojejunal Tube Care

Topic

Insertion technique and confirmation of nasojejunal tube position

Guidance

Nasojejunal tube position should be placed/ confirmed radiologically or placed endoscopically.
Secure the nasojejunal tube with nasal fixation tape or nasal retention device (bridle) and secure the residual tube firmly to face.
It is not required to check the pH prior to each use.

Evidence/References

Stroud, M., Duncan, H. and Nightingale, J. (2003) Guidelines for enteral feeding in adult hospital patients. *Gut*, [online] 52(90007), pp.1vii12. Available at: https://gut.bmj.com/content/gutjnl/52/suppl_7/vii1.full.pdf (Accessed: 30 July 2025).

NICE (2017) *Overview | Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition | Guidance | NICE*. [online] Nice.org.uk. Available at: <https://www.nice.org.uk/Guidance/CG32>. (Accessed: 30 July 2025).

Ellett, M.L.C. (2006) Important Facts About Intestinal Feeding Tube Placement. *Gastroenterology Nursing*, 29(2), pp.112–124. Available at: <https://doi.org/10.1097/00001610-200603000-00004>. (Accessed: 1 August 2025).

Topic
Frequency of checking nasojejun tube position
Guidance
Apart from radiologically there is no reliable means of confirming nasojejun tube position. The following may help detect tube migration: • Clearly document the position of the tube against the nostril and ensure that this has not changed. • Check length of external tubing daily and record centimetre marking. • Measure and document the external length of tube, following tube placement and before administering feed/water/medications. • Observe the patient for signs of abdominal distension, vomiting or aspiration – this could indicate tube migration back into the stomach.
Evidence/References
Ellett, M.L.C. (2006) Important Facts About Intestinal Feeding Tube Placement. <i>Gastroenterology Nursing</i>, 29(2), pp.112–124. Available at: https://doi.org/10.1097/00001610-200603000-00004. (Accessed: 1 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Nasojejunal feeding regimen
Guidance
Feed should always be administered by a feeding pump. Bolus feeding should NOT be used. Jejunal feeding may cause looser stools. Consider requesting dietetic review to check feed composition, osmolality, osmolarity and feeding rate if symptoms worsen.
Evidence/References
Stroud, M., Duncan, H. and Nightingale, J. (2003) Guidelines for enteral feeding in adult hospital patients. <i>Gut</i>, [online] 52(90007), pp.1vii12. Available at: https://gut.bmj.com/content/gutjnl/52/suppl_7/vii1.full.pdf (Accessed: 30 July 2025). NICE (2017) <i>Overview Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition Guidance NICE</i>. [online] Nice.org.uk. Available at: https://www.nice.org.uk/Guidance/CG32 (Accessed: 30 July 2025).

Topic
Frequency of changing nasojejunal tube
Guidance
Nasojejunal tubes are not routinely changed unless no longer functioning.
Evidence/References
Based on professional consensus

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Gastrostomy Tube Care

The recommendations in this section refer to Percutaneous Endoscopic Gastrostomy, Radiological Inserted Gastrostomy and Balloon-Retained Gastrostomy.

Topics (quick links)	
Gastrostomy Care	Balloon-Retained Gastrostomy Tube
Care following initial gastrostomy stoma formation	Frequency of checking the balloon in balloon-retained tubes
Daily stoma/tube care	
Stoma problems – Infection	Difficulties when changing balloon water
Stoma problems – Candida	
Stoma problems – Hypergranulation	
Leakage around gastrostomy site	Radiologically Inserted Gastrostomy Tube
End of the tube has perished	Care of sutures following insertion of Radiological Inserted Gastrostomy
Frequency of changing tubes	
What to do when a gastrostomy tube falls out	
Fasting prior to and after permanent gastrostomy tube removal	

Gastrostomy Tube Care
Topic
Care following initial gastrostomy stoma formation
Guidance
Following initial formation of the stoma there may be slight bleeding from the wound. The stoma should be left undisturbed for 24 hours. Clean the stoma site with saline, using aseptic technique until site is healed. Thereafter, use a clean cloth and water and dry thoroughly. During the first 14 days the patient should not have a bath or go swimming to reduce the risk of infection. Insertion site should be fully healed before bathing.

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Showers are acceptable.

Wash the stoma site prior to rest of the body.

Care must be taken when adjusting the external fixator- **this should not be adjusted for the first 14 days post insertion.**

To adjust - please seek advice from a nutrition nurse, medical staff or a dietitian. Leave a 0.5cm - 1cm gap between skin surface and external fixator.

If there is pain when feeding, leakage of fluid around the tube or new bleeding within first week of insertion - **STOP FEED IMMEDIATELY** and **CONTACT** a Nutrition Nurse Specialist or GI Registrar for urgent advice.

Evidence/References

Bischoff, S. et al. (2022) ESPEN practical guideline: Home enteral nutrition. *Clinical Nutrition*, 41(2), pp. 468-488. Available at: https://www.espen.org/files/ESPEN-Guidelines/ESPEN_practical_guideline_Home_enteral_nutrition.pdf (Accessed: 10 December 2025).

CREST (2004) *Guidelines for the management of enteral tube feeding in adults* [PDF]. Available at: <https://docslib.org/doc/8608045/guidelines-for-the-management-of-enteral-tube-feeding-in-adults> (Accessed: 1 August 2025).

NICE (2017) *Overview | Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition | Guidance | NICE*. [online] Nice.org.uk. Available at: <https://www.nice.org.uk/Guidance/CG32>. (Accessed: 30 July 2025).

Haywood, S. (2012) PEG feeding tube placement and aftercare, *Nursing Times*, 108(42), pp. 20–22. Available at: <https://www.nursingtimes.net/nutrition-and-hydration/peg-feeding-tube-placement-and-aftercare-12-10-2012/> (Accessed: 1 August 2025).

National Patient Safety Agency (2010) *Rapid Response Report NPSA/2010/RRR010: Early Detection of Complications after Gastrostomy Insertion*. [online] Available at: https://www.cas.mhra.gov.uk/ViewandAcknowledgment/ViewAttachment.aspx?Attachment_id=101133 (Accessed 18 June 2026).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Daily stoma/tube care
Guidance
Clean the area with a clean cloth and soapy water, rinse and dry thoroughly. Do not use moisturising creams or talc around the stoma site. Reposition the external fixator after cleaning, if appropriate. Once a week, the external fixator should be moved and the tube should be advanced into the stomach by at least 5cm. This prevents buried bumper syndrome occurring. External fixator should be kept between 0.5-1cm from the skin after weekly tube advancement. The tube should be rotated 360° daily. If unsure whether a tube should be rotated, discuss with Nutrition Nurse or refer to the manufacturer's guidelines.
Evidence/References
National Institute for Health and Care Excellence (NICE) (2012) <i>Healthcare-associated infections: prevention and control in primary and community care</i> (Clinical Guideline CG139). Last updated: 15 February 2017. Available at: https://www.nice.org.uk/guidance/cg139 (Accessed: 30 July 2025). Westaby, D., Young, A., O'Toole, P., Smith, G. and Sanders, D.S. (2010) The provision of a percutaneously placed enteral tube feeding service. <i>Gut</i>, 59(12), pp.1592–1605. Available at: https://doi.org/10.1136/gut.2009.204982. (Accessed: 1 August 2025). NICE (2019) <i>Overview Surgical site infections: prevention and treatment Guidance NICE</i>. [online]. Available at: https://www.nice.org.uk/guidance/ng125. (Accessed: 1 August 2025).

Topic
Stoma problems – Infection
Guidance
Infection can be minimised by good hand hygiene practices and implementation of appropriate infection control precautions. Avoid occlusive dressings over the stoma as these can encourage and trap moisture. A small amount of exudate at stoma site can be common and not problematic with good daily hygiene practices. However, a swab of stoma site should be taken if exudate is ongoing or inflammation is present. If appropriate, treat with the appropriate systemic antibiotic as topical may not always be effective, as the infection is usually within the tract and not just superficial. Seek advice from Complex Nutrition Team if there are ongoing concerns.
Evidence/References
Goldberg, E., Barton, S., Xanthopoulos, M.S., Stettler, N. and Liacouras, C.A. (2010). A Descriptive Study of Complications of Gastrostomy Tubes in Children. <i>Journal of Pediatric Nursing</i>, 25(2), pp.72–80. Available at: https://doi.org/10.1016/j.pedn.2008.07.008. (Accessed: 1 August 2025). NICE (2019). <i>Overview Surgical site infections: prevention and treatment Guidance NICE</i>. [online]. Available at: https://www.nice.org.uk/guidance/ng125. (Accessed: 1 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Stoma problems – Candida
Guidance
The tube often appears to have bobbly or bumpy appearance. A burst balloon or leaking feeding port can also be an indication of Candida. If the tube is still patent, continue to use tube and monitor for deterioration in tube integrity. Treat with appropriate antibiotics following discussion with a medical team. If the tube is completely blocked, change the tube as soon as possible, and contact a Nutrition Nurse for advice if required.
Evidence/References
Boeykens, K., Duysburgh, I. and Verlinden, W. (2022) Prevention and management of minor complications in percutaneous endoscopic gastrostomy. <i>BMJ Open Gastroenterology</i>, [online] 9(1), p.e000975. Available at: https://doi.org/10.1136/bmjgast-2022-000975. (Accessed: 1 August 2025). Syavuz, A., Buluş, H., Akkoca, M., Özayar, E., Ünlü, E.N., Akbal, E. and Köklü, S. (2012) Systemic candidiasis arising from percutaneous endoscopic gastrostomy tube. <i>Gastrointestinal Endoscopy</i>, 75(6), pp.1292–1293. Available at: https://doi.org/10.1016/j.gie.2012.01.027. (Accessed: 1 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Stoma problems – Hypergranulation
Guidance
Insufficient rotation of the tube or movement of the tube within the tract can cause granulation tissue. Check that the external fixator is not too loose or too tight. Correct positioning of the external retention device can reduce the risk of overgranulation (0.5-1cm between skin and external fixator). See Appendix 5: Granuloma Flowchart
Evidence/References
Healthcare Improvement Scotland (2021). <i>Enteral Feeding for Adults Right Decisions</i>. [online] Available at: https://rightdecisions.scot.nhs.uk/nhs-borders-clinical-guidelines/primary-community-services/dietetics/enteral-feeding-for-adults/ (Accessed 4 August 2025). British Journal of Nursing (2021). <i>The assessment and management of hypergranulation</i>. [online] Available at: https://www.britishjournalofnursing.com/content/back-to-basics/the-assessment-and-management-of-hypergranulation. (Accessed: 4 August 2025).

Topic
Leakage around gastrostomy site
Guidance
Consider the following: • Check for infection by taking a swab of the stoma site and treat accordingly. • Check the internal fixator is against the inner gastric wall by gently pulling the tube outwards until resistance is felt, and ensuring the external fixator is close to the skin, leaving a space of approximately 0.5cm to allow slight movement. • For balloon-retained tubes, check the balloon is still inflated. • The tube size (FR) may be incorrect. Discuss with a specialist e.g. Nutrition Nurse or GI Specialist. • Consider the use of barrier preparation e.g. Cavilon or zinc oxide cream, in conjunction with a foam dressing such as Allevyn Non-Adhesive.
Evidence/References
Sealock, R.J. and Munot, K. (2018) Common Gastrostomy Feeding Tube Complications and Troubleshooting. <i>Clinical Gastroenterology and Hepatology</i>, 16(12), pp.1864–1869. Available at: https://doi.org/10.1016/j.cgh.2018.07.037. (Accessed: 4 August 2025). Boeykens, K. and Duysburgh, I. (2021) Prevention and management of major complications in percutaneous endoscopic gastrostomy. <i>BMJ Open Gastroenterology</i>, [online] 8(1), p.e000628. Available at: https://doi.org/10.1136/bmjgast-2021-000628. (Accessed: 4 August 2025). Bischoff, S. et al. (2022) ESPEN practical guideline: Home enteral nutrition. <i>Clinical Nutrition</i>, 41(2), pp. 468-488. Available at: https://www.espen.org/files/ESPEN-Guidelines/ESPEN_practical_guideline_Home_enteral_nutrition.pdf (Accessed: 10 December 2025).

Topic
End of the tube has perished
Guidance
There are no replacement ends for some types of gastrostomy tubes e.g. balloon retained gastrostomy - these tubes will therefore need replaced if Y-port is damaged. Any staff involved in changing gastrostomy tubes should have received appropriate training and maintained competency to do so. If a replacement end is available, order a new end for tube. Remove the existing end, trim the end of the tube, and insert a new Y-connector as per instructions (Monarch and Corflo bumper retained tubes).
Evidence/References
Based on professional consensus

Topic
Frequency of changing tubes
Guidance
When a tube has been placed, document the approximate time of the next replacement. As a guide: • Bumper retained gastrostomy: change if required or clinically indicated (can often last years) • Balloon retained gastrostomy tubes: 6 months- unless otherwise indicated • Monarch tubes- 1 year • Balloon retained low profile device: 6 months- unless otherwise indicated Life span of the tube can vary depending on medicines, stomach acidity and other factors.
Evidence/References
Healthcare Improvement Scotland (2021) <i>Enteral Feeding for Adults Right Decisions</i>. [online] Available at: https://rightdecisions.scot.nhs.uk/nhs-borders-clinical-guidelines/primary-community-services/dietetics/enteral-feeding-for-adults/ (Accessed: 4 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
What to do when a gastrostomy tube falls out
Guidance
Follow NHS Lothian Management of dislodged gastrostomy tubes flowchart: Management of Dislodged Gastrostomy Tube If the tract is more than 28 days old and you have been trained and are competent to reinsert the tube then attempt to do so. It is important to ensure that a spare feeding tube is readily available (correct type and size) irrespective of whether a patient is at home or in hospital. If a gastrostomy tube falls out then it should be replaced as soon as possible. Mature stomas may take up to 48 hours or longer to heal but some will close more quickly. The permanent replacement tube or temporary tube should be the same or smaller size to the tube which has fallen out. A foley urinary catheter can be used as a temporary measure to keep stoma open. However, note that foley catheters are licensed for urethral use only. ENPLUGs or ACE stoppers may be inserted into the stoma if available to keep stoma open until a new tube can be sited.
Evidence/References
NHS Lothian (2025) <i>Management of dislodged gastrostomy tubes</i>. Available at: http://intranet.lothian.scot.nhs.uk/Directory/cnt/Protocols/Dislodged%20gastrostomy%20flowchart.pdf (Accessed: 18 March 2026).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Fasting prior to and after permanent gastrostomy tube removal
Guidance
Individuals should ideally fast for 4-6 hours before and after permanent tube removal. Consider the needs of the individual patient but do NOT remove the tube immediately after food or drink. Apply a dry dressing and secure with tape over the stoma site, a foam dressing such as Allevyn adhesive/non adhesive may be required for the first 24-48 hours. Change as required.
Evidence/References
Gloucestershire Hospitals (2024). <i>PEG removal information and aftercare advice</i>. Available from: https://www.gloshospitals.nhs.uk/media/documents/PEG_removal_information_and_aftercare_advice_GHPI1680_08_24.pdf (Accessed: 4 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Balloon-Retained Gastrostomy Tubes
Topic
Frequency of checking the balloon in balloon-retained tubes
Guidance
Balloon water should be changed on a weekly basis. Remove old water from the balloon and replace with fresh water (volume according to manufacturer's guidelines) using a luer-slip syringe. In acute setting, use sterile water and in community settings use cooled boiled water. Ideally check balloon water on the same day each week. Ensure that the balloon port is kept clean. Balloon water changes should be documented on the Record of Balloon Gastrostomy Inflation Sheet, available on the intranet (see reference below).
Evidence/References
NHS University Hospitals Plymouth (2022) <i>Daily and weekly care of the balloon gastrostomy</i>. Available at: https://www.plymouthhospitals.nhs.uk/display-pil/pil-daily-and-weekly-care-of-the-balloon-gastrostomy-5478 (Accessed: 4 August 2025). Nutricia (2024) <i>Balloon Gastrostomy (BG) Tube Replacement</i>. Available at: https://www.nutriciahomeward.co.uk/your-tube/bgt (Accessed: 4 August 2025). NHS Lothian (2020) Record of balloon gastrostomy inflation record sheet. Available at: http://intranet.lothian.scot.nhs.uk/Directory/cnt/Protocols/Record%20of%20Balloon%20Gastrosomy%20Inflation%20-%202020.doc (Accessed: 15 October 2025).

NHS Lothian Enteral Tube Feeding

Best Practice Guidance - Adults



Topic
Difficulties when changing balloon water
Guidance
If unable to remove balloon water: • Check that luer slip syringe is attached to balloon port firmly. • Try again, and if unsuccessful contact a specialist for advice. If pain or resistance is felt when inflating balloon: • Stop, secure tube with tape and seek specialist advice.
Evidence/References
Based on professional consensus.

Topic
Care of sutures following insertion of Radiological Inserted Gastrostomy
Guidance
Around the stoma there will be two to three sutures in situ. Please note that the gastrostomy tube is not held in place by the sutures. The sutures secure the stomach wall to the abdominal wall to allow the stoma to be formed. These sutures should be removed five days post procedure by a ward nurse, community nurse or outpatient nurse. Raise the metal fastener and cut the suture at skin level. Internal suture material will pass through the gastrointestinal tract. Some minor bleeding may occur when removing sutures. Please refer to Appendix 6: Protocol for the care of balloon-retained gastrostomy tube
Evidence/References
NHS Lothian (2024) <i>Care of Radiologically Inserted Gastrostomy (RIG) Balloon Retained Tube</i>. Available from: http://intranet.lothian.scot.nhs.uk/Directory/cnt/Protocols/Care%20of%20Radiologically%20Inserted%20Gastrostomy%20(RIG)%20-%20Balloon%20Retained.pdf (Accessed: 4 August 2025).

Jejunostomy Tube Care

Topics (quick links)	
Insertion techniques	Stoma problems – Hypergranulation
Care following initial jejunostomy stoma formation	Removal of Jejunostomy tubes
Daily stoma care	Tube displacement
Stoma problems – Infection	Frequency of changing Jejunostomy tubes

Jejunostomy Tube Care
Also refer to following sections: General Principles , Medicine Administration , Balloon- retained Gastrostomy
Topic
Insertion techniques
Statement
There are different ways of inserting a jejunal feeding tube; most commonly surgically or radiologically.
Evidence/References
Based on professional consensus

Topic
Care following initial jejunostomy stoma formation
Statement
Observe the site for swelling or bleeding - if present contact medical staff. DO NOT ROTATE THE TUBE Ensure Community Nursing has been informed of the care of a stoma prior to the patient being discharged home from Hospital. Surgical Needle Catheter Jejunostomy – 9Fr Freka Surgical Jejunostomy (should be retained by 2 sutures) • Do NOT remove external sutures or release external fixator. • Contact medical staff to re-suture as required. • Use aseptic technique when cleaning. • Clean twice weekly or more frequently if discharge is observed. • Clean around the Jejunostomy exit site and suture sites and dry thoroughly. Apply a sterile film dressing (e.g. Tegaderm). • Immersion bathing should be avoided for the first 14 days post insertion. Showering is permitted. Surgical Jejunostomy (balloon retained tube). • Clean and dry daily using aseptic technique. • Avoid rotating the tube. Trans-gastric jejunostomy (GJ tube) • Can be considered after gastrostomy tube has been in situ for 6-12 weeks. • Usually placed / exchanged in interventional radiology. • Clean around the stoma site using mild soap and tepid water, then dry thoroughly. • Do NOT rotate the tube.

Evidence/References

NHS Royal Berkshire (2025) *Caring for your jejunostomy feeding tube*. Available from: https://www.royalberkshire.nhs.uk/media/043fpmpk/caring-for-your-jejunostomy-feeding-tube_feb25.pdf (Accessed: 4 August 2025).

Gabe, S. (2018) *Surgical jejunostomy, DEPJ or PEGJ*. Available at: <https://www.bapen.org.uk/pdfs/conference-presentations/2018/wed/symposium-10/Simon-Gabe.pdf> (Accessed: 4 August 2025).

Kim, C.Y., Dai, R., Wang, Q., Ronald, J., Zani, S. and Smith, T.P. (2020) Jejunostomy Tube Insertion for Enteral Nutrition: Comparison of Outcomes after Laparoscopic versus Radiologic Insertion. *Journal of Vascular and Interventional Radiology*, 31(7), pp.1132–1138. Available at: <https://doi.org/10.1016/j.jvir.2019.12.010>. (Accessed: 4 August 2025).

NHS Oxford (2025) *Caring for your JEJ tube: A guide for patients and carers*. Available from: <https://www.oxfordhealth.nhs.uk/wp-content/uploads/2020/03/OH-193.20-Caring-for-your-JEJ-tube-new.pdf> (Accessed: 4 August 2025).

Topic
Daily stoma care
Statement
Surgical Needle Catheter Jejunostomy – 9Fr Freka Surgical Jejunostomy (should be retained by 2-3 sutures) • Check the length of external tubing daily and record centimetre marking. • Ensure correct positioning of the external fixator and sutures if present. • Site should be cleaned daily with a clean cloth and water and dried thoroughly. • A clear film dressing e.g. Tegaderm should be used to minimise risk of tube displacement. • Do NOT rotate tube. Surgical Jejunostomy • Clean around the stoma site using mild soap and tepid water, then dry thoroughly. The external fixator should also be re-positioned- approximately 0.5 -1cm from the skin. • After 14 days, ensure that balloon water is changed weekly (as per manufacturers' guidelines). • Avoid the use of dressings unless exudate is present. Trans-gastric Jejunostomy (GJ tube) • Clean around the stoma site using mild soap and tepid water, then dry thoroughly. The external fixator should also be re-positioned- approximately 0.5-1cm from the skin. • After 14 days, ensure that balloon water is changed weekly (as per manufacturers' guidelines). • Do NOT rotate tube.

Evidence/References

NICE (2017) *Overview | Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition | Guidance | NICE*. [online] Nice.org.uk. Available at: <https://www.nice.org.uk/Guidance/CG32>. (Accessed: 30 July 2025).

NHS Oxford (2025) *Caring for your JEJ tube: A guide for patients and carers*. Available from: <https://www.oxfordhealth.nhs.uk/wp-content/uploads/2020/03/OH-193.20-Caring-for-your-JEJ-tube-new.pdf> (Accessed: 4 August 2025).

Healthcare Improvement Scotland (2021) *Enteral Feeding for Adults | Right Decisions*. [online] Available at: <https://rightdecisions.scot.nhs.uk/nhs-borders-clinical-guidelines/primary-community-services/dietetics/enteral-feeding-for-adults/> (Accessed: 4 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Stoma problems – Infection
Statement
Observe the site daily for signs of infection (i.e. inflammation, pain, exudate). If infection is suspected, a wound swab should be taken for microbiology and, if indicated, the patient treated with the appropriate systemic antibiotic. Seek medical advice as required.
Evidence/References
CREST (2004) <i>Guidelines for the management of enteral tube feeding in adults</i> [PDF]. Available at: https://docslib.org/doc/8608045/guidelines-for-the-management-of-enteral-tube-feeding-in-adults (Accessed: 1 August 2025). Healthcare Improvement Scotland (2021). <i>Enteral Feeding for Adults Right Decisions</i> . [online] Available at: https://rightdecisions.scot.nhs.uk/nhs-borders-clinical-guidelines/primary-community-services/dietetics/enteral-feeding-for-adults/ (Accessed: 4 August 2025).

Topic
Stoma problems – Hypergranulation
Statement
Hypergranulation may arise from excessive movement of tube. See Appendix 5: Granuloma Flowchart for management .
Evidence/References
Healthcare Improvement Scotland (2021) <i>Enteral Feeding for Adults Right Decisions</i> . [online] Available at: https://rightdecisions.scot.nhs.uk/nhs-borders-clinical-guidelines/primary-community-services/dietetics/enteral-feeding-for-adults/ (Accessed 4 Aug. 2025). British Journal of Nursing (2021) <i>The assessment and management of hypergranulation</i> . [online] Available at: https://www.britishjournalofnursing.com/content/back-to-basics/the-assessment-and-management-of-hypergranulation (Accessed: 4 August 2025).

Topic
Removal of Jejunostomy tubes - should only be removed after MDT agreement.
Statement
Surgical Needle Catheter Jejunostomy – 9Fr Freka Surgical Jejunostomy Surgical Jejunostomies should be left in situ for at least 4 weeks (even if feeding has been discontinued) to allow establishment of a tract, and the dissolution of the purse-string sutures which anchor the tube. • The tube should be removed by a trained practitioner by traction after removal of sutures if present. • A dressing can then be applied until stoma site heals. Surgical Jejunostomy • The tube should be removed by a trained practitioner. Trans-gastric jejunostomy (GJ tube) • Deflate the balloon and remove tube gently from the tract. • A dressing can then be applied until stoma site heals. Individuals should fast for 4-6 hours after permanent tube removal.
Evidence/References
Stroud, M., Duncan, H. and Nightingale, J. (2003) Guidelines for enteral feeding in adult hospital patients. <i>Gut</i>, [online] 52(90007), pp.1vii12. Available at: https://gut.bmj.com/content/gutjnl/52/suppl_7/vii1.full.pdf (Accessed: 30 July 2025). NICE (2017) <i>Overview Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition Guidance NICE</i>. [online] Nice.org.uk. Available at: https://www.nice.org.uk/Guidance/CG32. (Accessed: 30 July 2025). NHS Royal Berkshire (2025) <i>Caring for your jejunostomy feeding tube</i>. Available from: https://www.royalberkshire.nhs.uk/media/043fpmpk/caring-for-your-jejunostomy-feeding-tube_feb25.pdf (Accessed: 4 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Tube displacement
Statement
If the tube dislodges, the stoma tract may begin to close within an hour. Except for a 9Fr tract, it is essential to maintain stoma tract patency as soon as possible, when the stoma tract is more than 28 days old. It is vital to know the size of the displaced tube. Seek advice as soon as possible from an appropriate healthcare professional. If the tract is greater than 28 days old, attempt to maintain tract patency using a tube of equivalent size or smaller. An appropriately sized deflated balloon gastrostomy tube, ACE Stopper or EnPlug can be used to do this. Never use force if resistance is felt.
Evidence/References
CREST (2004) <i>Guidelines for the management of enteral tube feeding in adults</i> [PDF]. Available at: https://docslib.org/doc/8608045/guidelines-for-the-management-of-enteral-tube-feeding-in-adults (Accessed: 1 August 2025).

Topic
Frequency of changing Jejunostomy tubes
Statement
Refer to the manufacturer's guidelines or discuss with an appropriate healthcare professional.
Evidence/References
CREST (2004) <i>Guidelines for the management of enteral tube feeding in adults</i> [PDF]. Available at: https://docslib.org/doc/8608045/guidelines-for-the-management-of-enteral-tube-feeding-in-adults (Accessed: 1 August 2025).

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Medicine Administration via the Enteral Tube Feeding Route

Topics (quick links)	
General Information	Drug-Nutrient Interactions
Prescribing considerations	Cytotoxic Medicines/Prostaglandins/Hormone Antagonists

Topic
General Information
Guidance
Administration of medicine(s) via an enteral feeding tube should only be undertaken after other routes of administration have been considered. Buccal and sublingual tablets can be used, even if the patient is 'nil by mouth', provided they are producing and managing saliva. Administration of medicine via an enteral feeding tube generally falls outside a medicine product license/marketing authorisation. Check with a pharmacist regarding medicine administration via an enteral feeding tube, to minimise tube blockage or drug-nutrient interactions. If medicine is to be given covertly then the following procedure must be followed: Covert administration of medicines Procedure.pdf Some medications require specific advice regarding feed timings and medicine formulation - e.g. pancreatic enzyme replacement therapy, and further information on some commonly used medicines that may interact with feed is given in the Drug-Nutrient Interactions section below. Enteral feeding regimen should be taken into consideration when any new medications are prescribed and if unsure of interactions speak to your dietitian or pharmacist.
Evidence/References
White, R. and Bradnam, V. (2015) <i>Handbook of drug administration via enteral feeding tubes</i>. 3rd edn. London: Pharmaceutical Press. Available at: https://rudiapt.wordpress.com/wp-

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[content/uploads/2017/11/handbook-of-drug-administration-via-enteral-feeding-tubes-2015.pdf](https://www.nhs.uk/content/uploads/2017/11/handbook-of-drug-administration-via-enteral-feeding-tubes-2015.pdf)

(Accessed: 30 July 2025).

NHS Lothian (2025) *Covert administration of medicines*. Available at:

<https://policyonline.nhslothian.scot/wp->

[content/uploads/2023/03/Covert%20administration%20of%20medicines%20Procedure.pdf](https://policyonline.nhslothian.scot/wp-content/uploads/2023/03/Covert%20administration%20of%20medicines%20Procedure.pdf)

(Accessed: 6 August 2025).

Smyth, J. (2024) *The NEWT guidelines for the administration of medication to patients with enteral feeding tubes or swallowing difficulties*. Available at:

<https://www.newtguidelines.com/AdminEnteralFeedingTubes.html> - access via institution registration and password. (Accessed: 4 August 2025).

NHS Scotland (2025). *East Region Formulary*. Available at: <https://formulary.nhs.scot/east>

(Accessed: 4 August 2025).

Topic
Prescribing considerations
Guidance
If medications must be given via an enteral feeding tube then use liquid or soluble / dispersible medications whenever possible. Viscous medications may need to be diluted for administration via an enteral feeding tube. Modified release and enteric coated medicine formulations are not suitable for administration via the enteral feeding tube route. Doses of immediate release tablets/capsules may not be bioequivalent to those of a liquid formulation. A pharmacist can provide advice on a suitable alternative or equivalent dose of another formulation of the medicine. Consider the timing of medicine(s) administration, e.g. some may need to be administered on an empty stomach. Limit cumulative volume(s) of sorbitol to prevent diarrhoea. Crushing medicines could potentially lead to loss of therapeutic effect, sensitisation, allergy and possible adverse effects. If this is a concern a COSHH assessment should be carried out. Discuss with pharmacy for further advice. In general: • Take care when changing from 'slow release' (labelled SR, MR, CR, LA, X/L or retard) to ordinary release or liquid preparations as changes in dose and/or dose interval may be required. • For medicines which should be taken on an empty stomach give during a break in feeding: in general, consider stopping feed 120 minutes before giving medication and wait 60 minutes before restarting feed. Also see the Drug-Nutrient Interactions section below. • If there are concerns over interactions with feed and a particular medicine, or difficulty in controlling levels, the dose can be given during a break in feeding. Medicines that should not be crushed: • Enteric coated • Modified/slow release • Cytotoxics & Hormones (This list is not exhaustive)

Evidence/References

White, R. and Bradnam, V. (2015) *Handbook of drug administration via enteral feeding tubes*. 3rd edn. London: Pharmaceutical Press. Available at: <https://rudiapt.wordpress.com/wp-content/uploads/2017/11/handbook-of-drug-administration-via-enteral-feeding-tubes-2015.pdf> (Accessed: 30 July 2025).

Smyth, J. (2024). *The NEWT guidelines for the administration of medication to patients with enteral feeding tubes or swallowing difficulties*. Available at: <https://www.newtguidelines.com/AdminEnteralFeedingTubes.html> - access via institution registration and password (Accessed: 4 August 2025).

Specialist Pharmacy Service (2024) *Checking if tablets can be crushed or capsules opened*. Available at: <https://www.sps.nhs.uk/articles/checking-if-tablets-can-be-crushed-or-capsules-opened/> (Accessed: 8 August 2025).

Specialist Pharmacy Service (2024) *Advising how to crush or disperse tablets and open capsules*. Available at: <https://www.sps.nhs.uk/articles/advising-how-to-crush-or-disperse-tablets-and-open-capsules/> (Accessed: 8 August 2025).

Topic
Drug-Nutrient Interactions
Guidance
There are several drug-nutrient interactions documented in the literature and the suggested interventions on how to minimise them are documented in the table below. Please note this is not an exhaustive list. For other medications please speak to your pharmacist, or see the references below, “Handbook of drug administration via enteral feeding tubes” and “The NEWT guidelines for the administration of medication to patients with enteral feeding tubes or swallowing difficulties”.

NHS Lothian Enteral Tube Feeding

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Medication	Recommendation
Carbamazepine	- Enteral feeding may slightly delay and reduce the absorption of the liquid preparation, which may help reduce side effects such as drowsiness and light-headedness. - A prolonged break in feeding is not necessary. - Dilute liquid dose in an equal quantity of water and ensure consistent timing of dosing each day. - Ensure plasma concentration is closely monitored if feeding schedule is changed or stopped. - There are no specific data relating to jejunal administration of carbamazepine.
Ciprofloxacin	- Ciprofloxacin appears to be absorbed from the duodenum therefore higher doses should be used if administering into the jejunum. - The suspension is thick and should not be used as it blocks enteral feeding tubes. - Tablets should be crushed and dispersed in water. - Ciprofloxacin interacts with enteral feeds to produce insoluble chelates and therefore a feeding gap of two hours pre and post administration should occur. - For severe infections consider swapping to the IV route.
Digoxin	- Absorption of digoxin is primarily from the proximal small intestine. Jejunal feeding may affect absorption however the clinical significance of this is unclear. Gastric absorption is minimal. - Absorption of digoxin is reduced by high fibre feeds, therefore in these cases stop feeds two hours administration and restart one hour after. - Serum levels may need to be monitored more closely in patients with short bowel or small intestine malabsorption.
Flucloxacillin	- Flucloxacillin is possibly absorbed in the upper small bowel and jejunal administration is not thought to reduce bioavailability. - The suspension should be given on an empty stomach therefore a feeding gap of two hours pre and one hour post administration is advisory. - Its four times daily dosing schedule may be impractical for patients on continuous feeds and a different antibiotic may be preferable or using a higher dose if breaks in feed cannot be taken. - Osmotic diarrhoea may be a problem when feeding into the jejunum therefore consider diluting the suspension with an equal volume of water or using the injection for jejunal administration.

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Levodopa	- Levodopa is mainly absorbed in the jejunum and food generally affects its absorption, resulting in lower time to peak plasma concentrations and lower bioavailability. Therefore, drug effects may be unpredictable in patients with jejunal feeding tubes. - Timing of enteral feed and levodopa dosing should be as consistent as possible to reduce fluctuations in daily response and a one hour feeding gap pre and post administration may be beneficial.
Phenytoin	- Stop feeds 2 hours before and after administration. - When Phenytoin capsules are substituted for phenytoin liquid, serum level monitoring is advised and the dose should be adjusted accordingly. - Dilute liquid dose in an equal quantity of water. - Try to ensure consistent timing of dosing each day and ensure plasma concentration is closely monitored if feeding schedule is changed or stopped. - Absorption is particularly poor via the jejunal route and as the suspension is hyperosmolar, diarrhoea may be a problem.
Rifampicin	- Rifampicin is absorbed from the stomach and duodenum therefore there is a risk of poor absorption from jejunal feeding. - Absorption can be decreased by enteral feeds therefore a feeding gap of two hours pre and one hour post administration is advisory.
Warfarin	- The specific site of warfarin absorption is unclear though reduced absorption appears to occur when administered through tubes beyond the stomach. - There is evidence of physico-chemical interaction between enteral feed and warfarin, including those containing soya protein, therefore stopping feeds one hour before administration and re-starting one hour after may be beneficial. - Where this is not possible ensure the timing of feed and dose are kept as stable as possible and monitor INR closely when feed type and site of delivery are altered. - Warfarin resistance may occur in patients receiving enteral feeds, resulting in the need for higher doses.

Evidence/References

White, R. and Bradnam, V. (2015) *Handbook of drug administration via enteral feeding tubes*. 3rd edn. London: Pharmaceutical Press. Available at: <https://rudiapt.wordpress.com/wp-content/uploads/2017/11/handbook-of-drug-administration-via-enteral-feeding-tubes-2015.pdf> (Accessed: 30 July 2025).

Smyth, J. (2024). *The NEWT guidelines for the administration of medication to patients with enteral feeding tubes or swallowing difficulties*. Available at:

<https://www.newtguidelines.com/AdminEnteralFeedingTubes.html> - access via institution registration and password (Accessed: 4 August 2025).

Specialist Pharmacy Service (2024) *Checking if tablets can be crushed or capsules opened*. Available at: <https://www.sps.nhs.uk/articles/checking-if-tablets-can-be-crushed-or-capsules-opened/> (Accessed: 8 August 2025).

Specialist Pharmacy Service (2024) *Advising how to crush or disperse tablets and open capsules*. Available at: <https://www.sps.nhs.uk/articles/advising-how-to-crush-or-disperse-tablets-and-open-capsules/> (Accessed: 8 August 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Cytotoxic Medicines/Prostaglandins/Hormone Antagonists
Guidance
These should not be crushed due to risk of staff exposure. Contact your clinical pharmacist before administration. For example (this list is not exhaustive): - Anastrozole (Arimidex®) - Azathioprine (Imuran®) - Bicalutamide (Casodex®) - Busulfan - Chlorambucil - Ciclosporin (Capimune® /Deximune® /Neoral®/Sandimmun®) - Cyclophosphamide - Cyproterone acetate (Androcur®/Cyprostat®) - Etoposide - Exemestane (Aromasin®) - Flutamide - Hydroxycarbamide (Hydrea®/Siklos®) - Idarubicin (Zavedos®) - Letrozole (Femara®) - Lomustine - Melphalan - Mercaptopurine (Hanixol®) - Methotrexate - Misoprostol(Cytotec®/Arthrotec®) - Mycophenolate (CellCept®/Myfenax®/Captava®/Myfortic® Procarbazine - Tacrolimus (Prograf®/Envarsus®/Adoport®/Advagraf®/ Dailiport®/Modigraf®) - Tamoxifen / Temozolamide (Temodal®) - Tioguanine - Toremifene (Fareston®) - Tretinoin
Evidence/References
Specialist Pharmacy Service (2024) <i>Checking if tablets can be crushed or capsules opened</i>. Available at: https://www.sps.nhs.uk/articles/checking-if-tablets-can-be-crushed-or-capsules-opened/ (Accessed: 8 August 2025). Specialist Pharmacy Service (2024) <i>Advising how to crush or disperse tablets and open capsules</i>. Available at: https://www.sps.nhs.uk/articles/advising-how-to-crush-or-disperse-tablets-and-open-capsules/ (Accessed: 8 August 2025).

Discharge Planning and Monitoring

Topics (quick links)	
Procedure for discharging patients with enteral feeding tubes	Post discharge monitoring
Guidance on monitoring - Inpatients	

Topic
Procedure for discharging patients with enteral feeding tubes
Statement
Prior to discharge careful consideration should be given to ensure patients can be discharged home safely on enteral tube feeding. This includes: • Identifying who will be responsible for daily care of tube and set up of the feed. • Arranging relevant training to patient/ carers/care staff. • Providing appropriate enteral tube feeding supplies to the patient/carers prior to discharge, along with contact details of the service provision from the enteral feed contract provider. • Early identification of patients who require community nursing input to ensure smooth transition and appropriate training if required. ○ Patients who require district nurse input should have a referral completed prior to discharge using the Referral Form. Please include all relevant information for the district nurses including tube type, feed regime and who to contact if the tube is displaced. • Providing written information and informing the patient regarding the procedure if the feeding tube is displaced. Please complete Appendix 8: Enteral Feeding Discharge Checklist prior to a patient going home with a new feeding tube. PINNT is a support group for patients receiving enteral nutrition; consider providing signposting patients to PINNT for support.

Evidence/References

BAPEN (2025) Home Enteral Nutrition. In: *Enteral Nutrition*. [Online] Available at: <https://www.bapen.org.uk/education/nutrition-support/enteral-nutrition/home-enteral-nutrition/> (Accessed: 9 October 2025)

PINNT (2025). *What is Enteral Nutrition?* [online]. Available at: <https://pinnt.com/Enteral-Nutrition.aspx> (Accessed: 10 October 2025).

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



Topic
Guidance on monitoring - Inpatients
Guidance
Effective monitoring is vital to reduce the incidence of complications, reduce electrolyte and metabolic abnormalities and ensure adequate nutrition is delivered. The frequency of monitoring and parameters measured will be dependent on the diagnosis and underlying clinical condition of the patient; duration and tolerance of enteral feeding; and rationale for feeding. Monitoring will also vary according to the clinical setting and availability of appropriate expertise. Ensure appropriate monitoring of nutritional, anthropometric, biochemical and clinical monitoring for those receiving nutrition support in hospital. Consider whether short- and long-term goals are being met and remain appropriate. Please see guidance on the references below with regards to frequency of monitoring for patients receiving enteral nutrition.
Evidence/References
BAPEN (2025) Home Enteral Nutrition. In: <i>Enteral Nutrition</i>. [Online] Available at: https://www.bapen.org.uk/education/nutrition-support/enteral-nutrition/home-enteral-nutrition/ (Accessed: 9 October 2025) NICE (2017) <i>Overview Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition Guidance NICE</i>. [online] Nice.org.uk. Available at: https://www.nice.org.uk/Guidance/CG32. (Accessed: 30 July 2025).

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Topic
Post discharge monitoring
Guidance
Once a patient has been discharged from hospital, healthcare professionals should review the indications, route, risks, benefits and goals of nutrition support at regular intervals, to ensure this remains an appropriate treatment and suits the patients' individual circumstances. The time between reviews depends on the patient, care setting and duration of nutrition support. Intervals may increase as the patient is stabilised on nutrition support. As a guide, patients receiving enteral tube feeding in the community should be monitored every 3 to 6 months or more frequently if there is any change in their clinical condition.
Evidence/References
BAPEN (2025) Home Enteral Nutrition. In: <i>Enteral Nutrition</i>. [Online] Available at: https://www.bapen.org.uk/education/nutrition-support/enteral-nutrition/home-enteral-nutrition/ (Accessed: 9 October 2025) NICE (2017) <i>Overview Nutrition Support for adults: Oral Nutrition support, Enteral Tube Feeding and Parenteral Nutrition Guidance NICE</i>. [online] Nice.org.uk. Available at: https://www.nice.org.uk/Guidance/CG32. (Accessed: 30 July 2025).

Stakeholder Consultation

A Short Life Working Group with representation from key stakeholders was established to review and update the guidance. The revised document was placed on the NHS Lothian Consultation Zone for comments and feedback by staff across NHS Lothian. The final draft of the document was approved by the Complex Nutrition QIT in April 2026.

Authors

NHSL Best Practice Guidance Short Life Working Group, consisting of members from the Complex Nutrition Service and Community Enteral Nutrition Team.

Many thanks also to the following staff who supported with specific sections:

- Diane Fraser – Lead SLT DCN (now retired)
- Fiona Muldoon - Infection Prevention Nurse Specialist WGH
- Kathryn McDiarmuid – Clinical Skills Facilitator
- Lindsay Rosie - Team Lead Paediatric Community Enteral Nutrition Team (CENTIPAED)
- Oral Health Team
- Palliative Care Consultants - Dr Beci Evans, Dr Colette Reid, Dr Angela Bentley

Special thanks to Karen Henderson, Head of Service, Dietetics (now retired) for oversight of the Short Life working Group.

NHS Lothian Enteral Tube Feeding Best Practice Guidance - Adults



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Associated Materials

Appendices
Appendix 1: NHS Lothian Guideline for the Prevention and Management of Refeeding Syndrome
Appendix 2: NG Decision tree for checking nasogastric tube placement in adults
Appendix 3: NHS Lothian out of hours continuous nasogastric feeding regimen for adults
Appendix 4: NHS Lothian out of hours bolus feeding regimen for adults
Appendix 5: Hypergranulation Flow Chart
Appendix 6: Care of Radiologically Inserted Gastrostomy (RIG) - Balloon Retained.pdf
Appendix 7: Gastrostomy referral form
Appendix 8: Home Enteral Tube Feeding discharge checklist
Complex Nutrition Intranet page
Please refer to the Complex Nutrition intranet page for: • Aftercare leaflets for gastrostomy tubes, jejunostomy tubes • Dislodged gastrostomy tube management • Gastrostomy pre-procedure checklist • Patient information on nasogastric feeding