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**Enteral and Home Parenteral Feeding Policy**

**[Date of Issue]**

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# Introduction

Home Parenteral and enteral nutrition are types of artificial nutritional support that are specially formulated to provide the right balance of fats, proteins, sugars, vitamins and minerals for clients who have problems with eating or digestion.

Enteral nutrition involves the administration of food products into the gut for absorption in a normal manner.

Home Parenteral nutritional is delivered directly into the bloodstream, bypassing the gut.

# Policy Statement

[Company Name] is committed to ensuring that all healthcare professionals providing direct client care are competently trained in the importance of providing adequate nutrition, and that all clients receive nutritional support that is tailored and appropriate for their needs.

# Scope

This policy and the procedures apply to all healthcare professionals involved in direct client care and the supply and administration of nutritional support.

[Clinical Lead Name] is responsible for supporting staff in the implementation of this policy and for ensuring that it continues to meet the current standards of best practice.

**Routine and emergency phone numbers for a specialist nutrition healthcare professional will be in the clients care plan**.

NICE Guidance for Nutrition support for adults: oral nutrition support, enteral tube feeding and Home Parenteral nutrition has been followed for this policy, additional support and guidance can be found at [1 Guidance | Nutrition support for adults: oral nutrition support, enteral tube feeding and Home Parenteral nutrition | Guidance | NICE](https://www.nice.org.uk/guidance/cg32/chapter/1-Guidance#screening-for-malnutrition-and-the-risk-of-malnutrition-in-hospital-and-the-community)

# Procedures

**Recording Nutritional Intake and Screening**

Healthcare professionals are responsible for ensuring that existing nutritional intake plans are appropriately followed. Routine nutritional assessments should be performed to ensure that nutrition remains adequate and appropriate, usually by the clients specialist dietetic team, or if indicated due to clinical concern, this can be performed by the attending healthcare professional.

Nutritional assessment (Appendix I) should include the following:

* Height,
* Weight,
* BMI,
* Number of days without eating,
* Likely further number of days without eating,
* Any unexpected weight loss and waist circumference.

For clients identified as requiring nutritional support, interventions should be evidence-based and tailored to the clients’ needs and preferences, where possible. This should result from a coordinated multidisciplinary approach and, where possible, made with full input from the client and/or their family/carers.

Clients should be fully informed with access to information in a format, language and way that is suited to their individual requirements. Nutritional support should be considered in people who are malnourished, as defined by any of the following:

* a BMI of less than 18.5 kg/m2
* unintentional weight loss greater than 10% within the last 3–6 months
* a BMI of less than 20 kg/m2 and unintentional weight loss greater than 5% within the last 3–6 months.

Also, for people at risk of malnutrition, as defined by any of the following:

* have eaten little or nothing for more than 5 days and/or are likely to eat little or nothing for the next 5 days or longer.
* have a poor absorptive capacity and/or have high nutrient losses and/or have increased nutritional needs from causes such as catabolism.

**Enteral Tube Feeding**

Enteral tube feeding is indicated for clients who are malnourished or at risk of malnutrition, as detailed above, and have:

* an inadequate or unsafe oral intake, and
* a functional, accessible gastrointestinal tract.

Options for enteral tube feeding should be considered as follows:

* nasogastric (NG) feeding for clients with a functional upper gastrointestinal system
* post-pyloric (duodenal or jejunal) feeding for clients with upper gastrointestinal dysfunction
* gastrostomy feeding for clients requiring long-term (>4 weeks) enteral tube feeding.

**Administering Enteral Feed**

Ensure patient is sitting in an upright position of a

45° angle during enteral feeding and for one hour post enteral nutrition.

Pre -administration, ensure tube position has been checked.

* Wash your hands before and after using the enteral tube, use an aseptic non touch technique.
* Explain the procedure to the client and obtain verbal consent.
* Check the nutritional prescription against the client
* Position of feeding tubes must be checked before administration of any flush, feed, or medication.
	+ Never start feeding before confirmation of the tube position.
	+ Document the position of the tube, findings and actions clearly.
* Confirming the position of the Nasogastric tube - after placement and before each use by aspiration and pH graded paper, **[delete as appropriate**] x-ray can be performed if necessary.
	+ Depth of the tube to the edge of the nostril should be recorded and used in case it is not possible to aspirate or there is gastric suppression preventing an accurate pH (tube retention devices can be considered for those continually removed by the client)
* Confirming the position of the Naso-jejunal tube - Confirm the position of the tube by checking the position of the mark made on the tube after initial placement.
* Confirming the position of the post-pyloric tubes - abdominal x-ray will be required if there is movement.
* Confirming the position of the Gastrostomy tubes – check length of the tube at fixation daily and rotate tube weekly to avoid granulation.

If at any time, there is any concern that an enteral feeding tube is no longer correctly positioned it must not be used. Specialist clinical input must be sought.

If you suspect a blockage or you experience resistance when flushing the tube, do not force water into the tube. Do not use the tube, contact specialist support immediately.

1. Administration of feed. Feeds can be administered via syringe (bolus feed), gravity feeding set or feeding pump. The method selected is dependent of the nature of the feed and clinical status of the client. Always administer as per prescription, if using a pump follow manufacture guidelines.
* Flush the tube using a 60ml syringe before and after the administration of feed and medication or every 4–6 hours if feeding is not in progress (except during the night) to prevent the tube from blocking. Flush with 30ml sterile water or as otherwise directed by the managing healthcare professional.
* Syringe (Bolus feed). Remove the plunger from the syringe and place the tip of the syringe into the enteral tube connector at end of the enteral tube.

Holding the syringe and enteral tube straight, pour the prescribed amount of feed into the syringe. Let it flow slowly through the tube.

Pour the prescribed amount of water into the syringe and allow to flow through to flush the feeding tube appropriately.

* Using gravity feeding for bolus, intermittent feeds and continuous feeds.

Ensure the roller clamp is closed, attach the set to the feeding container with the correct prescribed amount of feed and hang the container on the pole. Squeeze the drip chamber until it is one third full of the feeding solution. Remove the protective cap from the end of the giving set and open the roller clamp, allowing the feed to run down to the end of the giving set (to prime the line), then close the roller clamp. Connect the giving set to the enteral tube connector at the end of the enteral tube. Open the roller clamp and set the flow rate by counting the drops per minute. As a guide, 20 drops of standard feed are approximately 1ml. Use the following equation or the table below to calculate the drip rate: (ml/hour) /3 = drops/minute

Open and close the roller clamp until the desired drip rate is set correctly. Check the drip rate regularly to ensure the feed is still running at the required rate.

* An enteral feeding pump can be used for intermittent, bolus or continuous administration of feeds, follow manufacture guidelines.
1. Complications, these should be reviewed as follows:
* mouth discomfort or infections – maintain good oral hygiene and consider regular mouth care products, such as artificial saliva products, and/or offer regular opportunities to rinse mouth with water
* Pressure sores – Ensure regular movement of the NJ/NG tube 4-6hourly, monitor nasal cavity closely. Change dressings when required.
* reflux and vomiting - feed in an upright position or at a minimum of 30-45º. If continues, consider other causes: feeding regimen; temperature of feed; medications; tube position and constipation, gas or gastrointestinal obstruction
* diarrhoea – consider hydration and electrolyte replacement; temporary change or break in feeding; stool culture; changes to the feed regimen that may improve symptoms; temperature of feed and tube position
* constipation – consider possible medications causing constipation; fibre intake; fluid intake and changes in mobility.
* tube displacement – Once a tube is displaced it must not be used until a specialist healthcare practitioner has resisted and confirmed in the medical notes the tube is safe to use. All feed must be stopped immediately, and specialist support must be sought immediately.

**Storing of enteral feed**

Feed must be stored as per prescription and pharmacy guidelines; some feeds will require refrigeration. All feed and giving sets will have an expiry date and these must be adhered to as per the client’s dietary prescription plan.

**Expiry of equipment and feed**

Follow manufacture and pharmacy direction for expiry of equipment. Equipment used will be single patient use (apart from the feed pump).

**Home Parenteral Nutrition Feeding**

Home Parenteral nutrition is indicated in clients who are malnourished or at risk of malnutrition, as detailed above, and meet either of the following criteria:

* inadequate or unsafe oral and/or enteral nutritional intake
* a non-functional, inaccessible or perforated (leaking) gastrointestinal tract.

Home Parenteral nutrition should be introduced progressively, usually starting at no more than 50% of the estimated needs for the first 24–48 hours.

Treatment should be closely monitored (refer to monitoring of nutritional support section).

If the client establishes adequate oral or enteral nutrition, and their nutritional status is stable, then Home Parenteral nutrition can be withdrawn in a planned manner as per the nutritional prescription, with daily reviews of the clients progress by a competent healthcare provider.

Home Parenteral nutrition must be administered through a dedicated peripherally inserted central catheter, a dedicated centrally placed central catheter or through a dedicated port of a multi-lumen centrally placed central catheter. For clients requiring long-term Home Parenteral feeding (more than 30 days) a tunnelling subclavian line should be used.

Central catheters must only be inserted by appropriately trained personnel in an appropriate environment. The skin around the entry site and catheter tip position (for peripherally inserted catheters) should be checked daily and documented for signs of infection, inflammation and thrombophlebitis.

**Administration Connection and Disconnection of Home Parenteral Nutrition - To be performed by a Specialist Competent Healthcare Practitioner Only.**

* Connection of Total Parental Nutrition (HPN) to ensure a non – touch technique is adhered to two practitioners may be required.
1. Wash your hands before and after, use an aseptic non touch technique.
2. Clean dressing trolley with detergent wipes
3. Collect equipment
4. Remove HPN
5. Check HPN prescription order against the prepared HPN as per medication policy
6. Wash hands
7. Explain the procedure to the client and obtain verbal consent, check prescription against patient
8. Attend hand hygiene, don PPE
9. Set up sterile field
10. Attend hand hygiene and apply sterile gloves
11. Assemble lines, line filters and extension
12. Access insertion port on HPN bag
13. Swab insertion port on HPN bag with Chlorhexidine 2% alcohol 70% for 10 seconds. Allow to dry for **30 seconds.**
14. Spike the prepared HPN bag using aseptic non touch technique (ANTT)
15. Hang the bag on the intravenous pole and re-apply light protect cover
16. Prime intravenous giving set
17. Select the HPN setting on the infusion pumps
18. Set infusion rate and volume to be infused as per the HPN prescription
19. Remove gloves and wash/gel hands
20. Apply new pair sterile gloves
21. Maintaining asepsis, draw up 0.9% Sodium Chloride flush using blunt drawing up needle
22. Using sterile gauze, lift dedicated HPN CVAD lumen and place sterile towel underneath
23. While still holding CVAD lumen, swab CVAD intravenous cap vigorously with Chlorhexidine 2% alcohol 70% for 10 seconds. Allow to dry for 30 seconds
24. Flush lumen with 0.9% Sodium Chloride 10mls using pulsatile action to ensure patency – If the line is hep locked aspirate first.
25. While still holding CVAD lumen, swab CVAD intravenous cap vigorously with Chlorhexidine 2% alcohol 70% for 10 seconds, allow to dry for 30 seconds, place on sterile towel and discard gauze
26. Using sterile gauze, lift HPN infusion line
27. Use sterile gauze to remove infusion line cap and discard cap and gauze
28. Using sterile gauze, lift lumen and connect to HPN infusion line, ensuring that all connections are secure
29. Remove sterile gloves and perform hand hygiene
30. Commence infusions
31. Dispose of used equipment in line with organisational requirements
32. Sign HPN order and document in notes

**Disconnecting Parental Nutrition**

1. Wash hands
2. Ensure patient privacy
3. Confirm order to cease infusion
4. Confirm client identification against prescription
5. Explain procedure to client and obtain consent
6. Attend hand hygiene
7. Apply clean nonsterile gloves
8. Disconnect HPN line from CVAD
9. Swab CVAD bung vigorously with chlorhexidine 2% alcohol 70% swab for 10 seconds. Allow to dry for **30 seconds.**
10. Flush lumen with 10mLs of 0.9% Sodium Chloride using pulsatile action
11. Dispose of HPN bag into the clinical waste bin
12. Wash hands

**Line Blocking/Trouble Shooting**

Line clogging or obstruction should be prevented by limiting the number of manipulations and flushing the line before and after each manipulation.

If prescribed and part of the clients plan, locking the line with heparin-saline, or a thrombolytic agent can be tried to unclog the line.

Specialists’ healthcare input must be sought.

**Storing of Parental Nutrition and expiry of equipment.**

Ensure Pharmacy, dietitian and manufacture guidance is followed. All IV giving sets/feed expire within twenty-four hours. When giving sets are disconnected from the clients the feed/set must not be reused.

**Prescribing**

Client preference, convenience and drug administration should be considered when prescribing.

If insulin administration is needed, it may be safer and more practical to administer feeding continuously over 24 hours.

If clients are identified as having delayed gastric emptying and are not tolerating enteral tube feeding, a motility agent should be considered, unless contraindicated, with post-pyloric enteral tube feeding and/or Home Parenteral nutrition being considered if the motility agent is ineffective.

If a client subsequently establishes an adequate oral intake, enteral tube feeding should be stopped/reviewed.

All prescriptions for nutritional support should consider the clients total nutrient intake and be clearly documented to ensure consistent administration.

Prescriptions will be reviewed and amended regularly in line with the clients clinical care plan, factors considered will include:

* energy, protein, fluid, electrolyte, mineral, micronutrients and fibre needs
* activity levels and the underlying clinical condition
* gastrointestinal tolerance, potential metabolic instability and risk of refeeding
* the likely duration of nutrition support.

**Prescriptions for clients who are not severely ill or injured, nor at risk of refeeding syndrome.**

 The suggested nutritional prescription for total intake should provide all the following:

* 25–35 kcal/kg/day total energy (including that derived from protein)
* 0.8–1.5 g protein (0.13–0.24 g nitrogen)/kg/day
* 30–35 ml fluid/kg (with allowance for extra losses and input from other sources)
* adequate electrolytes, minerals, micronutrients (allowing for any pre-existing deficits, excessive losses or increased demands) and fibre, if appropriate.

**Prescriptions for seriously ill or injured clients.**

 Enteral tube feeding or Home Parenteral nutrition should be started at no more than 50% of the estimated target energy and protein needs and built up to meet their full needs over the first 24–48 hours, according to metabolic and gastrointestinal tolerance.

Full requirements of fluid, electrolytes, vitamins and minerals should be provided from the outset of feeding. Similarly, clients who have eaten little or nothing for more than 5 days should start at no more than 50% of requirements for the first 2 days, before increasing feed rates to meet full needs if clinical and biochemical monitoring reveal no refeeding problems.

**Prescriptions for clients** **expected to be at risk of refeeding syndrome.**

Prescriptions should consider:

* a maximum of 10 kcal/kg/day, increasing slowly to meet full needs by 4–7 days
* only 5 kcal/kg/day in extreme cases, with continuous cardiac monitoring
* restoring circulatory volume and monitoring fluid balance and clinical status closely
* providing oral thiamine, vitamin B co strong and a balanced multivitamin/trace element supplement
* providing oral, enteral or intravenous supplements of potassium, phosphate and magnesium, unless pre-feeding plasma levels are high.

**Additional Considerations**

* Healthcare professionals should refer to NICE for the recommended protocols for nutritional, anthropometric and laboratory monitoring when commencing enteral and Home Parenteral feeding.
* Healthcare professionals should also be aware that the provision of nutritional support is not always appropriate, and any decision to withhold or withdraw nutritional support should be considered from both an ethical and legal perspective, being made in line with guidance issued by the General Medical Council and the Department of Health. Any decisions to withdraw or withhold nutrition should be clearly documented and justified in the client’s records.
* All care provided must be documented in the clients’ clinical notes.

**Monitoring of Nutritional Support**

Competent specialist Healthcare professionals will review the indications, route, risks, benefits and goals of nutrition support at regular intervals, as per the client’s nutritional care plan.

[Company Name] will ensure the clients care needs are being met by a competent specialist.

The time between the clients nutritional monitoring reviews depends on the client type, duration of nutritional support and type of nutrition support the client’s is receiving.

 [Company Name] will ensure NICE guidance Protocol for nutritional, anthropometric and clinical monitoring of nutrition support is followed [1 Guidance | Nutrition support for adults: oral nutrition support, enteral tube feeding and Home Parenteral nutrition | Guidance | NICE](https://www.nice.org.uk/guidance/cg32/chapter/1-Guidance#monitoring-of-nutrition-support-in-hospital-and-the-community) and that all members of the multidisciplinary team are involved.

# Monitoring of Policy

The effectiveness of this policy will be monitored through routine audit, as well as incident reporting and staff and client feedback/complaints.

# Related Policies

* Aseptic Technique Policy
* Care of Invasive Lines Policy
* Consent (Adults) Policy
* End of Life Care (Adults) Policy
* Infection Control Policy
* Mental Capacity Act Policy
* Quality Governance and Risk Policy

# Legislation and Guidance

**Guidance**

* NICE clinical guideline [CG32]: Nutrition support for adults: oral nutrition support, enteral tube feeding and Home Parenteral nutrition.
* [Home Parenteral Nutrition (bapen.org.uk)](https://www.bapen.org.uk/nutrition-support/parenteral-nutrition)
* British Association for Parental and Enteral Nutrition (BAPEN): <https://www.bapen.org.uk/nutrition-support/enteral-nutrition>
* [Home Parenteral Nutrition (bapen.org.uk)](https://www.bapen.org.uk/nutrition-support/parenteral-nutrition)
* Nutricia, Tube Feeding, [Tube Feeding With Nutricia Choice.pdf (nutriciahomeward.co.uk)](https://www.nutriciahomeward.co.uk/uploadedFiles/Pages/Services/Tube%20Feeding%20With%20Nutricia%20Choice.pdf)
* The Royal Marsden Manual Clinical and Cancer Nursing Procedures, 2020

# Summary of Review

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| --- | --- |
| Version | 1 |
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| Reason for Review |  |
| Were changes made? |  |
| Summary of changes |  |
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