

Prescribing and Clinical Effectiveness Bulletin

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NUTRITION SPECIAL

Welcome to this special edition of the *PACE Bulletin* which focuses entirely on issues relating to the treatment of under-nutrition in primary care. This bulletin has been produced in association with Katherine Green and her colleagues from the Dietetics Team at United Lincolnshire Hospitals NHS Trust.

GUIDELINES FOR THE TREATMENT OF UNDER NUTRITION IN THE COMMUNITY

Key Points

- **NICE recommends that nutritional screening should be carried out in all groups at risk of malnutrition (e.g. patients in community hospitals and residential care homes, patients with chronic diseases and the elderly). Nutritional screening should be undertaken using the Malnutrition Universal Screening Tool (or MUST). The MUST screening tool can be accessed electronically from www.bapen.org.uk**
- **Patients will emerge from MUST screening classified according to their overall risk of malnutrition (i.e. Low Risk, Medium Risk or High Risk). For patients at Medium or High Risk, first line treatment should be dietary advice and information to boost nutritional intake.**
- **Detailed dietary advice and a patient leaflet entitled 'Eat Well Feel Well' are enclosed.**
- **Patients classified as Medium Risk by the MUST screening tool should usually be reassessed and weighed after four weeks of dietary advice. Those at High Risk will need to be reassessed and weighed weekly or more frequently as clinically indicated. Where there is no improvement, dietary advice will need to be reinforced and the introduction of sip feeds considered.**
- **Detailed advice on appropriate sip-feed prescribing, including a product selection algorithm, is enclosed.**
- **The following products do not have a high enough energy content and are not recommended for prescribing except under dietetic supervision: Fresubin Original Drink, Fortimel Liquid and Ensure 250 ml can.**

Introduction

The NICE Clinical Guideline on *Nutrition Support in Adults* (February 2006) raised the profile nationally of the importance of nutritional screening in those at risk and offered guidance on the most appropriate and effective interventions. It is the purpose of this bulletin to summarize the key NICE findings and to provide practical advice to GPs and their staff on implementation.

Importance of Nutritional Screening

There is evidence that malnourished patients:

- have longer periods in hospital.
- have increased morbidity and mortality.
- have impaired wound healing.
- have poorer quality of life.
- cost the NHS £260 million a year.

NICE recommends that nutritional screening should be carried out in all groups at risk of malnutrition (e.g. patients in community hospitals and residential care homes, patients with chronic diseases and the elderly). Nutritional screening should be undertaken using the Malnutrition Universal Screening Tool (or MUST).

The Malnutrition Universal Screening Tool (MUST)

MUST is a five step screening tool to identify adults, who are malnourished, at risk of malnutrition (under-nutrition) or obese. Further details on MUST and a copy of the screening tool can be found on the British Association for Parenteral and Enteral Nutrition website at www.bapen.org.uk.

Ideally, the patient's height and weight should be known, although MUST can still be used for those in whom height and weight are difficult to obtain as a range of alternative measures and subjective criteria are available to enable calculation of Body Mass Index (BMI) by alternative means.

Patients will emerge from MUST screening classified according to their overall risk of malnutrition (i.e. Low Risk, Medium Risk or High Risk).

For patients at Medium or High Risk, first line treatment should be dietary advice and information to boost nutritional intake.

First Line: Dietary Advice

Dietary counselling to encourage the use of energy and protein rich foods should be recommended first line in most circumstances. **There is usually no role for prescribed sip-feeds at this stage.** Patients should be urged to take the following advice:

- Have nourishing snacks and drinks between meals and a snack supper before bed.
- Drink more milk based drinks (e.g. milky coffee, malted milk, hot chocolate and milkshakes).
- Consume at least one pint of full fat milk each day.
- Avoid low fat, low sugar products – look for full-fat, high-sugar varieties to provide more calories.
- Enrich food and drinks such as cereals, milk puddings, canned fruit, potatoes, soups and vegetables with cream, evaporated milk, condensed milk, sugar, cheese, unsaturated margarines and oils.
- Consider purchasing proprietary food supplement products, such as Complan or Build-Up.

Some patients may be reluctant to eat high-fat, high-sugar foods, so it is important to reinforce the message that the dietary needs of the under-nourished are different to that of the healthy population (i.e. general healthy eating messages do not apply to this group). Patients should be advised on the aim of their therapy (i.e. to improve their nutritional status, to reach or maintain an agreed weight or to slow the rate of weight loss etc).

A patient information booklet entitled 'Eat Well Feel Well' has been devised and is appended to these guidelines.

Second Line: Prescribing Sip Feeds

Patients classified as Medium Risk by the MUST screening tool should usually be reassessed and weighed after four weeks of dietary advice as outlined above. Those at High Risk will need to be reassessed and weighed weekly or as clinically indicated. Where there is no improvement, dietary advice will need to be reinforced and the introduction of sip feeds considered. **Initially two per day in addition to normal food should be prescribed, although patients unable to take normal food may require more.** There are a number of key points that need to be taken into account when prescribing sip feeds:

- **The use of sip feeds should usually only be considered when first-line dietary measures have failed to improve nutritional intake or status.**
- **Sip feeds should only be prescribed for patient's suffering from conditions approved by the Advisory Committee on Borderline Substances (ACBS).** The 'disease related malnutrition' category is often a useful catch-all term that covers many of the patients under consideration.
- Unless supplements have already been tried and patient preferences established, **the initial prescription should be for a 1 week supply only and marked 'mixed flavours' (endorsed ACBS).** This enables the community pharmacist/ dispenser to dispense a selection of flavours for the patient to sample. Determining the patient's tastes in this way will avoid potential waste resulting from the patient being issued with large stocks of a product that they do not like and will not take. Once the patient's tastes have been confirmed this information can be used to inform further repeat prescribing. Patients may get flavour fatigue and wish to try new flavours or styles of sip feed; to overcome this, feeds can be mixed and matched (e.g. one milkshake style and one juice style each day).
- **Once the patient's preferred choice of product has been established, prescriptions should generally be given for 1 month's supply; usually 2 sip feeds per day, taken in addition to meals should be sufficient. In general, prescribing should be retained on acute prescription only as this will highlight the need for regular review.**
- More than 2 supplements a day may be required if the patient's dietary intake is very poor or if their nutritional requirements are very high. If this is the case long-term, a referral to a dietitian for further assessment should be considered.
- Patients receiving sip feeds should be monitored using MUST on a weekly to monthly basis (depending on the level of risk previously identified) to assess whether the aim of therapy is being met. The management plan should be recorded in the patient's notes with the following specific issues recorded:
 1. weight/BMI/alternative measurements (use appropriate record chart);
 2. changes in dietary intake following the advice given;
 3. compliance with supplements.
- When the agreed target weight or aim of therapy is achieved, supplements should be gradually reduced and monitoring continued for at least 3 months after stopping.

Which sip feed?

The following information, used in conjunction with the Treatment Algorithm and Supplement Selection Tables should help to facilitate clinical decision making and product selection within this notoriously difficult and confusing area.

Milk Based Complete Sip Feeds

These milkshake-style supplements contain 1.5kcal/ml of energy and protein in addition to vitamins and minerals. They include: Fresubin Energy, Ensure Plus, Fortisip, Clinutren and Resource Shake. All of these products are broadly comparable in terms of price, pack size, range of flavours, protein and energy content and selection should be made on the basis of availability and patient preference. **They should be used first line with a usual frequency of 2 cartons per day with a maximum frequency of 6 to 7 cartons per day.** A 1.5 kcal/ml sip feed should be used in preference to a 1kcal/ml product. **The prescription of the following products is not recommended except under dietetic supervision: Fresubin Original Drink and Ensure 250 ml can.**

Product name	Protein content	Energy content	Pack size	Flavours	Cost	Comments
Fresubin Energy (Fresenius Kabi)	11.2g	300kcal	200 ml carton	Vanilla, Strawberry, Chocolate, Cappuccino, Tropical Fruit, Blackcurrant, Neutral, Banana, Lemon.	£1.66 per 200ml pack	Lactose Free Gluten Free
Ensure Plus (Abbott)	12.5 g	300 Kcal	220 ml carton	Vanilla, Banana, Strawberry, Orange, Neutral, Blackcurrant, Raspberry, Chocolate, Caramel, Fruits of the Forest, Peach, Coffee	£1.73 per 220ml Tetra-pak/ Bottle	Gluten Free, Clinically Lactose Free.
Fortisip Bottle (Nutricia)	12 g	300 Kcal	200ml bottle	Vanilla, Banana, Chocolate, Orange, Toffee, Strawberry, Tropical Fruits, Neutral	£1.74 per 200ml bottle	Gluten Free Clinically Lactose Free
Clinutren 1.5 (Nestle Clinical)	11.2 g	300 Kcal	200ml cup	Vanilla, Apricot, Banana, Chocolate, Coffee, Strawberry-raspberry	£1.60 per 200ml cup	Gluten Free Clinically Lactose Free
Resource Shake	9 g	300 Kcal	175ml carton	Strawberry, Toffee, Lemon, Vanilla, Banana, Summer Fruits, Chocolate	£1.46 per 175ml carton	Gluten Free Low Lactose

A 1.5 kcal/ml sip should be used in preference to 1kcal/ml product wherever possible. The prescription of the following products is therefore not recommended unless under dietetic supervision: Fresubin Original, Fortimel Liquid and Ensure 250 ml can.

Fibre Containing Sip Feeds

These milkshake style supplements contain 1.5kcal/ml of energy in addition to protein, fibre, vitamins and minerals. Examples include: Fresubin Energy Fibre, Ensure Plus Fibre, Fortisip Multi Fibre and Clinutren 1.5 Fibre. All of these products are comparable in terms of price, pack size, range of flavours, protein and energy content and selection should be made on the basis of availability and patient preference. **The usual frequency is 2 cartons per day, with a maximum frequency of 6-7 cartons per day.** A fibre containing sip feed may be useful as an aid to the prevention of constipation through the replacement of fibre absent from the patient's normal diet.

Product name	Protein content	Energy content	Pack size	Flavours	Cost	Comments
Fresubin Energy Fibre (Fresenius Kabi)	11.2g	300Kcal	200ml carton	Strawberry, Chocolate, Caramel, Cherry, Vanilla, Banana	£1.74 per 200ml pack	Lactose Free Gluten Free
Ensure Plus Fibre (Abbott)	12.5g	306Kcal	200ml Tetrapack	Banana, Strawberry, Fruits of the Forest, Chocolate, Raspberry, Vanilla	£1.74 per 200ml pack	Lactose Free Clinically Lactose free.
Fortisip Multi Fibre (Nutricia)	12g	300 Kcal	200ml Tetrapack and Bottle	Chicken, Tomato (Tetrapak) Banana, Orange, Strawberry, Vanilla, Chocolate (Bottle).	£1.79 per 200ml bottle. £1.74 per Tetrapak	Gluten Free Clinically Lactose free
Clinutren 1.5 Fibre (Nestle Clinical)	11.4g	300kcal	200ml cup	Vanilla Plum	£1.60 per 200ml cup	Lactose Free Gluten Free

Yoghurt Style Sip Feeds

If the patient likes yoghurt and suffers from flavour fatigue with milkshake-style products, a yoghurt-style sip feed may be the answer. Examples include: Ensure Plus Yoghurt and Fortisip Yoghurt Style. These products are broadly comparable in terms of price, pack size, range of flavours, protein and energy content. Selection should be made on the basis of availability and patient preference. **The usual frequency is 2 cartons per day with a maximum frequency of 6 to 7 cartons per day.**

Product name	Protein content	Energy content	Pack size	Flavours	Cost	Comments
Ensure Plus Yoghurt (Abbott)	13.8 g	330 Kcal	220ml Tetrapack/ Bottle	Orange, Peach, Pineapple, Strawberry	£1.73 per 220ml pack	Gluten Free Clinically Lactose Free
Fortisip Yoghurt Style (Nutricia)	12 g	300 Kcal	200ml Bottle	Vanilla & Lemon, Peach & Orange, Raspberry	£1.74 per 200ml pack	Gluten Free

Fruit Juice Style Sip Feeds

Fruit juice style sip-feeds can be useful for patients who do not like milk. However, they are not nutritionally complete as they do not contain fat or essential fatty acids. They should be used with caution in patients with diabetes. Examples of products include: Provide XTRA, Ensure Plus Juice, Fortijuice, Clinutren Fruit and Resource Fruit Flavoured Drink. These products are broadly comparable in terms of price, pack size, range of flavours, protein and energy content and selection should be made on the basis of availability and patient preference. **Do not exceed 8 to 10 cartons per day; patients taking more than four a day need a dietetic review as their diet is in danger of becoming nutritionally compromised.**

Product name	Protein content	Energy content	Pack size	Flavours	Cost	Comments
Provide XTRA (Fresenius Kabi)	7.5 g	250 kcal	200ml carton	Apple, Orange & Pineapple, Cherry, Melon, Lemon and Lime, Blackcurrant, Citrus cola, Tomato, Carrot & Apple	£1.63 per 200 ml carton	Gluten Free Lactose Free Fat Free
Ensure Plus Juice (Abbott)	10.6 g	330 kcal	220ml bottle	Apple, Fruit Punch, Lemon & Lime, Peach, Pineapple, Strawberry, Grapefruit, Orange	£1.69 per 220ml bottle	Fat Free Gluten Free Clinically Lactose free.

Fortijuce (Nutricia Clinical)	8 g	300 Kcal	200 ml bottle	Lemon & Lime, Apple, Orange, Strawberry, Tropical, Blackcurrant, Fruits of the Forest	£1.74 per 200ml	Fat Free Gluten Free Clinically Lactose free.
Clinutren Fruit (Nestle Clinical)	8 g	250 kcal	200ml cup	Grapefruit, Orange, Pear & Cherry, Raspberry & Blackcurrant.	£1.61 per 200ml cup	Gluten Free Low Lactose
Resource Fruit Flavour Drink (Novartis)	8 g	300 kcal	200ml carton	Apple, Orange, Pineapple	£1.49 per 200ml carton	Fat Free Gluten Free, Low Lactose

Powdered Milkshake-Style Supplements

Powdered milkshake-style sip feeds have more calories per ml than sip feeds, but are not nutritionally complete. They are useful in patients with high-energy requirements and are often found to be more palatable than alternatives because they are made with fresh milk. The patient or their carer must be able to mix these up for themselves. Calshake Powder, Enshake and Scandishake Mix are the three alternative products. They are broadly comparable in terms of price, pack size, range of flavours, protein and energy content. Selection should be made on the basis of availability and patient preference. **Take one a day; do not exceed two without specialist dietetic advice as these are not nutritionally complete.**

Product name	Protein content	Energy content	Pack size	Flavours	Cost	Comments
Calshake (Fresenius Kabi)	11.7g per serving	590 kcal per serving	87-90g sachet	Strawberry, Banana, Vanilla, Neutral, Chocolate	£1.87 per 87- 90g sachet	Gluten Free Make up with 240mls whole milk
Scandishake Mix (Nutricia)	11.7g per serving	588 kcal per serving	85 g sachet	Banana, Caramel, Chocolate, Strawberry, Unflavoured	£1.95 per 85g sachet	Make up with 240mls of whole milk
Enshake (Abbott)	16g per serving	600 kcal per serving	96.5g sachet	Banana, Chocolate, Strawberry, Vanilla	£1.87 per sachet	Gluten free Make up with 240ml of whole milk

High Protein Sip Feeds

These products are useful when the patient has increased protein requirements (e.g. those with pressure ulcers or impaired wound healing). Examples include: Fresubin Protein Energy, Fortisip Protein and Resource Protein. They are broadly comparable in terms of price, pack size, range of flavours, protein and energy content and selection should be made on the basis of availability and patient preference. **Normally, 2 cartons per day will be sufficient. Do not exceed 3 to 4 cartons per day; particular concerns exist around the use of these products in the elderly, those with lower protein requirements and those with renal impairment.**

Product name	Protein content	Energy Content	Pack size	Flavours	Cost	Comments
Fresubin Protein Energy (Fresenius Kabi)	20g	300kcal	200ml	Wild Strawberry, Cappuccino, Chocolate, Tropical Fruits, Vanilla	£1.69 per 200ml pack	Gluten and lactose-free
Fortisip Extra (Nutricia)	20g	320kcal	200ml bottle	Chocolate, Forest Fruits, Mocha, Strawberry, Vanilla	£1.69 per 200ml bottle	Gluten-free
Resource Protein (Novartis)	18.8g	250kcal	200ml bottle	Apricot Chocolate Strawberry, Forest Fruits, Vanilla	£1.33 per 200ml bottle	Gluten free

Dessert-Style Semi-Solid Supplements

Dessert-Style Semi-Solid Supplements are useful in patients with swallowing difficulties. Examples include: Resource Dessert Energy, Clinutren Dessert, Forticreme Complete and Fortisip Fruit Dessert.

Product Name	Protein content	Energy content	Flavours	Cost	Comments
Resource Dessert Energy	6g	200kcal	Caramel, Chocolate, Vanilla	£1.35 per 125g pot	Gluten free
Clinutren Dessert (Nestle Clinical)	12g	160kcal	Caramel, Chocolate, Peach, Vanilla	£1.35 per 125g pot	Gluten free
Forticreme Complete (Nutricia)	12g	200kcal	Vanilla, Chocolate, Banana, Forest Fruits	£1.69 per 125g pot	Gluten free
Fortisip Fruit Dessert (Nutricia)	10.5g	200kcal	Apple	£2.03 per 150g pot	Lactose free

High Protein, High Energy Sip Feeds

All three of these feeds should only be used under the supervision of a dietitian.

Product Name	Protein content	Energy content	Pack Size	Flavours	Cost	Comments
Fresubin 2kcal Drink (Fresenius Kabi)	20g	400kcal	200ml	Vanilla, Fruits of the Forest	£1.69 per 200ml pack	Lactose Free Gluten Free
Fresubin 2kcal Fibre Drink (Fresenius Kabi)	20g	400kcal	200ml	Chocolate	£1.69 per 200ml pack	Lactose Free Gluten Free
Two Cal HN (Abbott)	8.4g per 100ml	205kcal per 100ml	237ml	Unflavoured	£2.40 per 237ml	

Energy/Protein Supplements

These are useful if the patient needs additional calories with or without protein. For those who do not tolerate sip feeds, they can be added to food or drink. Examples include: Calogen liquid for additional calories without protein and Pro-Cal powder for additional calories with protein. These products do not contain vitamins or minerals and should be used under the supervision of, or in consultation with, a dietitian.

Product name	Protein content	Energy Content	Pack size	Flavours	Dose	Cost
Calogen Liquid (SHS)	0g	See flavours	200ml or 500 ml	Unflavoured (450kcal per 100ml), Banana (466kcal per100ml), Strawberry (466kcal per100ml), Butterscotch (455kcal per100ml)	30mls three times daily	£3.67 per 200 ml £9.00 per 500 ml
Pro-Cal powder (Vitaflo)	2g per 15g sachet	100kcal per 15g sachet	15 g sachets	unflavoured	15g four times daily added to food or drink	25 x 15g sachets = £12.83
Pro-Cal shot (Vitaflo)	6.7g per 100ml	334 kcal per 100ml	250ml	Unflavoured	30mls three times daily	6x250ml £25.80 (£4.30 each)

Protein Supplements

The following products are prescribed for biochemically proven hypoproteinaemia and should only be used with dietetic supervision:

Casilan 90 (Heinz)
Maxipro (SHS)
Promod (Abbott)

Carbohydrate/Fat Supplements

The following products must be taken in large amounts to be effective and have no vitamin, mineral or protein content. They should be used under dietetic supervision.

Polycose (Abbott)
Caloreen (Nestle)
Maxijul (SHS)
Polycal (Nutricia)
Duocal (SHS)

Product information taken from *MIMS* March 2008.

A sip feed selection algorithm is provided as an appendix to this bulletin to help with prescribing decisions.

References:

NICE Clinical Guideline 32, *Nutrition Support in Adults* (February 2006)
Malnutrition Advisory Group of the British Association for Parenteral and Enteral Nutrition, *Malnutrition Universal Screening Tool* accessible from www.bapen.org.uk

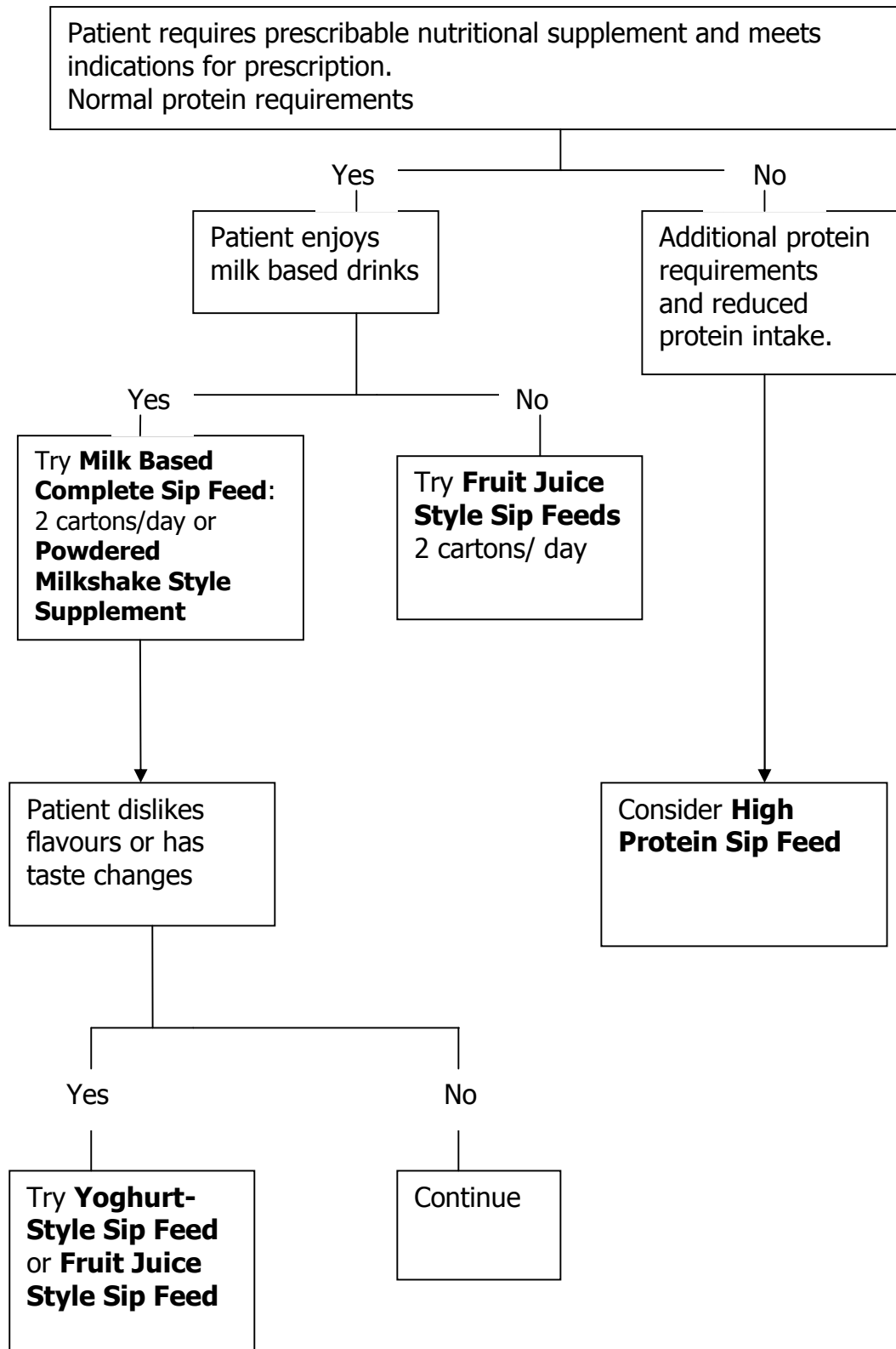
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A **Fibre Containing Sip Feed** may be useful, particularly with constipation.

EAT WELL FEEL WELL

How To Boost Your Food and Energy Intake

This leaflet provides ideas on how you can increase your food and energy intake if you have lost your appetite or are losing weight.

Why Do I Need To Eat Well?

The body needs to be well nourished in order to fight infection and recover from illness. Normally it has stores of some nutrients which will cover your needs for a short while if you are not able to eat properly, but they will eventually run out.

What Should I Eat?

To make sure you have all the nutrients you need, eat a variety of foods and try to have a least 2 foods from each of the following groups every day;

1. Bread, cereals, porridge, potatoes, rice, pasta.
2. Meat, poultry, fish, eggs, cheese, beans, lentils, nuts.
3. Milk, yoghurt, cheese
4. Vegetables, fruit, including juices, salad.

How Can I Boost My Energy (Calorie) Intake?

Your body needs at least 3 meals a day, but if your appetite is poor you may find it better to have 5-6 small meals per day.

We can often eat more if we have two course meals. Have a break between courses if you prefer.

Enrich your food using the following tips;

- Try to have a pint of full cream milk a day. Better still, fortify the milk by using one of the recipes overleaf and use it in hot and cold drinks, soups, sauces, custard, jellies, milk puddings and on breakfast cereal.
- Grate cheese into sauces, mashed potato, soup, vegetables, pasta and fish.
- Put melted butter/margarine on vegetables, into sauces and milk puddings. Spread generously on toast, crumpets, teacakes and scones.
- Have mayonnaise or salad cream in sandwiches and on salads and potatoes.
- Add cream to soups, sauces, desserts, porridge and breakfast cereals.
- Add extra sugar or honey to drinks, cereals, porridge, desserts or stewed fruit.
- Casseroles and soups are often easy to eat. Make sure you add meat, beans, lentils or cheese to ensure they are high in protein.

- Keep nutritious snacks close by you so you can eat them regularly (e.g. chocolate, cheese, nuts, dried fruit, cakes, crisps, biscuits, pastries and sweets. Ice cream and creamy yoghurts make good snacks).
- Avoid low fat and low sugar food and drinks.

Drinks

- Try to have milky drinks between meals (e.g. milky coffee, cocoa, malted milk, milk shakes with added ice cream).
- Build Up and Complan are examples of enriched drinks sold in chemists and supermarkets. Sweet and savoury flavours are available. They are helpful as between meal drinks as they contain a range of nutrients.
- Fresh fruit juice is a good source of vitamins. Alternatively use a fortified squash (e.g. Hi juices or Ribena).
- Alcohol in small amounts can boost your appetite. Check with your Doctor to see if a small drink before a meal is appropriate for you.

Fortified Milk Recipe

1 Pint full cream milk + 4 tablespoons milk powder

Add a small amount of milk to the powder and mix to a paste. Gradually add the remaining milk.

Or

1 Pint full cream milk + 1 small tin evaporated milk mixed together.

Meal Ideas

- Make your meals as easy as possible. Ready made meals can be just as nutritious as home cooked. There are many prepared sauces in jars, tins and packets. Buy frozen roast potatoes or instant mashed potato and add butter. Check if you are entitled to receive delivered meals.
- All day cooked breakfast
- Corned beef hash
- Fish fingers with creamy mashed potatoes and baked beans.
- Toast or jacket potatoes with cheese, beans, pilchards, sardines, tuna, pate, coleslaw
- Pasta with cheese sauce and tomatoes.
- Fish in parsley or cheese sauce with mashed potatoes and peas. (Use fortified milk).
- Condensed soup made up with fortified milk.
- Sandwiches filled with cold meat, bacon, lettuce and tomato, tuna with mayonnaise, egg, cheese, peanut butter. Add interest with pickles, relish and sauces.
- Angel Delight made with fortified milk, bread and butter pudding, treacle pudding and custard, mousses and crème caramel

