

Nutrition & Dietetics

How to provide a fortified (high protein, high calorie) diet in residential care homes

A guide for care home staff



Dr. Hans Clean says “The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Wash your hands with soap and warm water and dry thoroughly. Use hand gel, if provided, in care facilities.
- If you have symptoms of diarrhoea and vomiting stay at home and do not visit relatives that are vulnerable in hospital or in residential care. You will spread the illness.
- Keep the environment clean and safe. Let’s work together to keep it that way. Prevention is better than cure”.

Introduction

Care home residents are at higher risk of becoming undernourished than the general population for a number of reasons, including:

- Underlying health problems, for example neurological conditions like MND or MS, cancer, chest disease, bowel and stomach conditions, alcoholic liver disease, dementia and depression.
- Physical problems eating and drinking. E.g. because of poor dentition, arthritis, neurological conditions (like Parkinson's disease) and stroke (which may cause weakness in the affected side and sometimes dysphagia).
- Poor appetite. May be associated with ageing, change in lifestyle, immobility, side effects of medications.
- Environmental issues. E.g. adapting to eating with other people, not being able to choose exactly what they want, not wanting to ask staff for specific items or for help in eating.

Therefore every resident should be assessed for their risk of undernutrition on admission, and thereafter at least monthly. This will pick up early signs of someone becoming malnourished, through current weight or weight loss (or both) or through poor dietary intake.

Food alone is an effective treatment for undernutrition in the majority of cases. Therefore a "food first approach" is recommended for those individuals identified as being at risk of undernutrition. This leaflet describes how nutritional intake can be optimised through food.

What is a fortified diet?

A fortified diet describes meals, snacks and drinks to which additional nutrients have been added through foods such as cream, butter, milk and milk powder. The aim is to provide a diet which has a higher nutrient density without increasing portion size.

Calories

Otherwise known as “energy”. Increasing the calories in an individual’s diet can help to prevent weight loss and may promote weight gain. High calorie foods which can be used to fortify meals and snacks include butter, cream, full fat milk and cheese.

It is relatively easy to increase the calories in someone’s diet. However, a nutritious diet also requires:

Protein

Protein foods are important to help with wound healing and skin integrity and contribute to other vital functions. Protein foods include meat, fish, eggs, dairy foods and beans and pulses. Protein foods which can be used to increase the protein content of other foods include grated cheese, milk and skimmed milk powder.

Vitamins and minerals

A variety of vitamins and minerals are essential for health. If an individual is not eating well and is losing weight, it is likely that they are also missing out on essential vitamins and minerals. In addition to ensuring that an individual is taking adequate calories and protein, you also need to ensure that they eat a wide range of foods including fruit and vegetables. If an individual chooses to eat only a restrictive diet lacking variety, a multi-vitamin supplement with or without multi-minerals may be required.

How to provide a fortified diet

People who are at risk of undernutrition or who have a poor appetite should be offered small meals with nourishing snacks and drinks between. You cannot force an appetite by leaving long gaps between meals – that is more likely to worsen a poor appetite.

The information below provides some examples of how to boost calories and protein in an individual’s diet.

Examples of how to fortify standard meals

Basic food & approximate quantity	Approximate nutrition provided in basic food item		Additional food as a fortifier	Approximate nutrition provided in fortified food item	
	Calories (kcal)	Protein (g)		Calories (kcal)	Protein (g)
Mashed potato (1 scoop)	45	1	Knob of butter 1 tablespoon of double cream	195	1
Scrambled eggs (2) on hot buttered toast (1 slice)	330	20	1 tablespoon double cream	400	20
Custard small dish made with full fat milk (100ml)	120	4	1 tablespoon double cream	200	4
Porridge made with full fat milk (160g)	185	8	1 tablespoon cream 2 teaspoons of sugar	300	8

Small tin baked beans or ravioli (150g)	125	7	Matchbox size of grated cheese	250	15
Portion of rice/pasta (200g)	250	5	2 teaspoons of oil/butter	300	5
Side serving of vegetables (60g)	15	0	Knob of butter	90	0
Fruit canned in syrup (100g)	57	0	3 tablespoons of evaporated milk	125	4

Examples of between meal snacks

Basic food & approximate quantity	Approximate nutrition provided in basic food item	
	Calories (kcal)	Protein (g)
Nutritious snacks to encourage (over 200kcal)		
Large rice pot (200g)	210	6
Matchbox size chunk of cheese (30g), 2 crackers with 14g butter	225	8
Mini pack of biscuits (e.g. bourbon) 40g	200	2
Thick 'n' creamy yoghurt (115g)	200	7
2 slices of hot buttered toast (27g) x 2 with 14g of butter	300	6
2 crumpet with butter (2 x 40g)	240	5
Handful of peanuts (50g)	300	13
Small block chocolate (50g)	260	4
Less nutritious snacks to avoid (under 200kcal)		
Jam tart (35g)	140	2
Small sandwich (1 slice bread, buttered with ham, cheese spread or pâté)	140	5
2 cocktail sausage rolls (30g)	130	2
Small individual trifle (105g)	150	2
½ packet sweets (eg fruit pastilles, fruit gums) or 6-8 boiled sweets	65	0
2 plain biscuits (2 x 20g)	140	2
2 finger Kit Kat (25g)	125	2

Examples of drinks

	Approximate nutrition provided in basic food item	
	Calories (kcal)	Protein (g)
Nutritious drinks to encourage		
Glass of full fat milk (200mls)	135	6
Fortified milkshake (200mls) - see appendix for recipe	300	8
Milky tea with 2 teaspoons of sugar (200mls)	70	2
Coffee made with ½ milk (full fat) ½ water and 2 teaspoons of sugar (200mls)	100	3
Horlicks/ Ovaltine made with whole milk (200mls)	275	8
Less nutritious drinks to avoid		
Cup of tea/coffee with small amount of milk and no sugar (200mls)	15	1
Instant drinking chocolate (1 mug)	100	2
Glass of sugar free squash (250mls)	5	0

Other considerations for individuals at risk of undernutrition

Environment

Consider things in the environment that may influence an individual's intake or appetite:

- Try and encourage and enable residents to eat in pleasant surroundings, like a designated dining room. However, respect that some may want to eat alone in their own room.
- Be aware of smells that may be off-putting. Some residents may even be put off by the behaviour of others.
- Condiments like salt, pepper, mustard, ketchup etc may make a meal more palatable for some residents, but ensure that others don't use by mistake.

Eating problems

Find out and know whether residents have problems eating. For example, poorly fitting dentures, arthritis in hands and fingers, problems with vision, tremor, co-ordination problems. Know what action is needed to help each individual to eat.

Provide help at mealtimes to those residents who need it. Ensure that you and your staff know how to feed individuals correctly.

Swallowing problems

- Know which residents have swallowing problems which may require them to have specific textures of food, for example mashed or pureed.
- Don't restrict the texture unless necessary, as this may compromise an individual's appetite and restrict the variety of their diet.

Poor appetite

- Be aware of individuals who have a poor appetite and of those in whom you notice a change in their appetite. Make use of food record charts to enable you to monitor food intake.
- Consider reasons for a poor appetite.
 - Underlying health problems and some treatments may contribute to a poor appetite. Ensure that symptoms like nausea, constipation, pain and diarrhoea are controlled.
 - A change in appetite may represent a new underlying health problem, monitor and discuss with GP if the problem continues.
- Small meals, presented on a smaller plate can help, but you need to provide nutritious between meal snacks in addition.

Sore mouth

- Ensure mouth care is being carried out regularly.
- Check for signs of thrush, and seek advice from GP if necessary.
- Ensure dentures are clean and request input from a dentist if dentures are not fitting correctly.

Nausea & vomiting

- Identify underlying causes and treat these wherever possible. If medication side effect is a possibility discuss alternatives with GP or prescribing advisor.
- If necessary consider anti-emetics in discussion with GP.
- Offer small meals with nutritious snacks between.
- Avoid exposure to strong smells and ensure that the individual gets some fresh air especially around meal times.

Swallowing problems

- Follow guidance and recommendations provided from the speech and language therapist regarding diet and fluids. This may include not just information on the texture or foods and fluids, but on quantities and techniques on feeding.
- Monitor individuals' intake and note changes, discussing with GP or speech and language therapist if there are concerns that the situation is changing.
- See separate advice on preparing pureed and soft diets.

Other specific dietary needs

Some individuals have a number of health conditions which require different dietary approaches. For example:

- Underweight with heart disease
- Dysphagic with diabetes
- Coeliac disease and at risk of undernutrition
- Cancer and heart disease

In these cases you will need to compromise, but prioritise medical conditions appropriately for the individual, considering the following points:

Cardiovascular disease

If someone is losing weight and underweight, their risk of heart disease and their cholesterol level will be reduced. Many people with heart disease or at risk of a stroke will be on a “statin” which will have a significant cholesterol lowering effect regardless of diet.

A word about sip feeds....

Providing a low fat diet for an individual with a history of cardiovascular disease, but then providing sip feeds to maintain or improve their nutritional status makes no sense. 1 Fortisip provides the same amount of fat as a packet of crisps, a portion of chips or 2 sausages.

Diabetes

Individuals with diabetes will be at higher risk of heart disease and a low fat diet is recommended for a healthy person who has diabetes. However, many care home residents with diabetes will be underweight with other health problems and therefore a low fat diet may not be appropriate. However, encouraging very sugary foods (particularly between meals), like ordinary pop and sweets which provide no other nutritional value is not recommended, even for underweight people with diabetes.

Coeliac disease

It is essential to provide a strict gluten free diet for any resident with proven coeliac disease. Trying to “fatten” up an underweight resident with coeliac disease by providing gluten containing cakes and biscuits is counterproductive as the gluten will damage the intestinal lining and cause malabsorption and weight loss. Take care to ensure that all snacks and foods used to fortify meals are themselves gluten free.

Dysphagic diets

Most food fortification advice can be applied to dysphagic meals, see separate guidelines on providing dysphagic and soft diets.

Appendix

Recipe for Fortified Porridge (10 servings)

180g oats

200g skimmed milk powder with added vegetable fat

1 litre full fat milk

1.1 litre water

Per serving: 230 kcal 10g protein

Recipe for Fortified Custard (10 servings)

50g custard powder

50g sugar

50g skimmed milk powder with added vegetable fat

1 litre full fat milk

Per 100ml: 125 kcal 4g protein

Recipe for Fortified Rice Pudding (12 servings)

200g rice

100g sugar

200g skimmed milk powder with added vegetable fat

2 litres full fat milk

Per serving: 280 kcal 10g protein

Recipe for Fortified Milkshake (10 servings)

2 litres full fat milk

0.3kg skimmed milk powder

0.1kg milkshake powder

Per serving: 300kcal 8g protein

If you require this document in an alternative format e.g., larger print, different language etc., please inform one of the healthcare staff.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਦਸਤਾਵੇਜ਼ ਹੋਰ ਰੂਪ ਉਦਾਹਰਨ ਵੱਜੋਂ ਵੱਡੀ ਛਪਾਈ, ਵੱਖਰੀ ਭਾਸ਼ਾ ਆਦਿ ਵਿੱਚ ਚਾਹੀਦਾ ਹੋਵੇ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਕਿਸੇ ਸਿਹਤਸੰਭਾਲ ਕਰਮਚਾਰੀ ਨੂੰ ਬੇਨਤੀ ਕਰੋ।

Polish

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Russian

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Lithuanian

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Kurdish

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