



Information on a reduced fat diet for people with biliary malabsorption

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Why do I need to reduce the fat in my diet?

You have been given this information sheet because you are unable to properly digest (break down) and absorb the fat from the food you eat. You may have experienced symptoms of frequent, pale, floating, oily or foul smelling stools. These are all signs that you struggle to digest fat. You may experience discomfort, pain and/or tummy rumbling when you eat high fat foods. You may be losing weight as your body cannot obtain the energy from fat in the foods you eat, or you may be unable to eat enough.

To digest fat and prevent the above symptoms, your body needs bile (produced in the liver and stored in the gall bladder) and enzymes (produced in your pancreas). If either, or both, of these systems are disrupted it is difficult to digest fat properly.

Lack of enzymes from the pancreas can usually be treated with medication which will allow most people to have a normal diet. However, where there is a lack of bile, people often find a reduced low fat diet helpful. Reasons why you may need to reduce your fat intake include:

- The liver being unable to produce or release enough bile
- A blockage in the bile duct which is stopping or reducing the flow of bile into the small bowel
- Difficulty reabsorbing enough bile in the small intestine, this is known as 'bile acid malabsorption'

Reducing your intake of higher fat foods will allow better digestion and absorption of nutrients. Your body will cope better with small amounts of fat at a time. This should improve your bowel habits and help to minimise weight loss.

If you choose not to follow this advice you may continue to have symptoms of malabsorption and weight loss.

How can I eat less fat?

The table on the following page will help to guide you on choosing lower fat foods. It is important to remember that everyone's tolerance to fat will be different. Try to judge how much fat your body can tolerate by monitoring your symptoms and try to keep as much fat in your diet as possible in order to prevent unwanted weight loss and to provide you with fat soluble vitamins and essential fatty acids.

	Low fat – eat freely	Medium fat – eat in moderation, if tolerated	High fat – limit /avoid these foods
Cooking method	Grill, bake, microwave, steam, boil, poach	Minimal amount of fat used in cooking e.g. stir frying or roasting in ½ teaspoon of oil	Foods fried or roasted in fat (including all types of oil or spreads)
Fats	Spray cooking oils	Low fat / 'light' spreads	Butter, margarine, lard, suet, all oils including; olive oil, vegetable oil, sunflower oil etc.

Sauces and spreads

Pickles / chutney, ketchup, BBQ sauce, brown sauce, chilli and sweet chilli sauce. cranberry sauce, gravy made with granules and water, mango chutney, light mayonnaise, mint sauce, mustard, soy sauce, Worcestershire sauce, herbs and spices, garlic, lemon juice, yeast extract, vinegar, jam, marmalade, honey, low-fat salad dressings, white sauce (made with corn flour and low-fat milk). tomato-based sauces

Guacamole, horseradish sauce,reducedfat hummus, light mayonnaise, sweet & sour sauce, thousand island dressing, white sauce Béarnaise sauce, salad dressings, coleslaw, hollandaise sauce, hummus, peanut butter, chocolate spread, mayonnaise, pesto, salad cream, tartar sauce, gravy made with meat juices

Meat, fish and eggs (protein foods)

Chicken, turkey, lean ham, white fish, fish fingers, fish cakes, tuna in brine, seafood, lean mince (<5% fat), Quorn, tofu, fat-free vegan bacon, Potatotopped pies (if vegetables and / or meat from low fat section chosen) Poached and boiled eggs

Red meat (<20% fat), small portion of lean grilled bacon Small portion oily fish e.g. salmon, trout, herring, mackerel, sardines, breaded fish e.g. fish fingers Scrambled eggs made with semiskimmed milk

Battered meat or fish e.g. from chip shop, scampi, chicken kiev. Fried or processed meats e.g. sausages, burgers, salami, meat paste or pate. Pork, spare ribs, lamb and duck, Oily fish, fish tinned in oil. sausage rolls. quiche, pasties and pies, Fried eggs, scotch eggs

Dairy products

Skimmed or semi-skimmed milk, soya milk. (Oat. rice. coconut and almond milk are low fat but very low in protein), Low-fat / fat-free / high-protein low-fat / soya yoghurts or virtually fat-free fromage frais Cottage cheese. Light cream cheese

Whole milk, evaporated or condensed milk. Half fat cream / crème fraiche, light soured cream, fromage frais, Full fat yoghurts, Softer cheeses like ricotta, feta, mozzarella. camembert, brie. cream cheese. goats cheese, low-fat hard cheeses (small portions may be required)

Double, soured, clotted, whipped and single cream, crème fraiche. Full fat yoghurt or Greek yoghurt. Hard cheeses such as cheddar, parmesan, edam, blue cheese

Carbo- hydrates	Bread, rolls, bagels, baps, tea-cakes, English muffins, crumpets, paninis, ciabattas, sourdough, spelt bread, tortillas, roti / chapattis, Porridge, breakfast cereals without nuts. Pasta, spaghetti, gnocchi, rice, noodles, potatoes (baked / boiled / mashed with just milk), oven chips, sweet potatoes, couscous, bulgar wheat, quinoa	Croutons, banana bread, focaccia, paratha, naan, brioche, waffles, fruit cakes, sponge cakes without cream, scones, teacakes Nut based cereals e.g. granola, muesli, Chips, roast potatoes (cooked in minimal oil), wedges, baked hash brown, waffles, fried rice (homemade with minimal oil), pizza with a thin crust and	Taco, poppadum, puri, croissant, plain au chocolate, buttered or fried breads, pastries, sweet tarts, cream cakes, garlic bread, pancake, muffins, doughnuts, brownie. Dauphinoise potatoes, fried chips, potato au gratin, potato croquette, fried rice from a takeaway
	wheat, quinoa	not too much cheese	
Fruit, vegetables and pulses	Most fruit and vegetables including salads, peas, beans and lentils (tinned, frozen or fresh)	Avocado, olives, roasted vegetables, low- fat coleslaw	Salad with high-fat salad dressings, coleslaw, fruit crumbles, fruit pie

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Snacks and	Crisp bread, rice	Fig rolls, plain	Filled, coated or
desserts	cake, pretzels,	semi-sweet	fancy biscuits,
	marshmallows,	biscuits, oat	shortbread,
*If you have	boiled / jelly /	biscuits, ginger	chocolate,
diabetes	gummy sweets	biscuits, iced	pastry
discuss this	Jelly, sorbet,	ring, Jaffa cake,	All nuts & seeds,
section	meringue	scone, cream	crisps, bombay
with your	nests, low fat	cracker, water	mix, chocolates
Dietitian,	milk puddings	biscuit, oatcakes	Chocolate torte,
diabetes	and custard,	Home-made	crème brulée,
nurse or	strawberry	popcorn, baked	cheesecake,
doctor	delight,	crisps,frozen	profiteroles, any
doctor	meringue, tinned	yoghurt,	desserts with
	fruit	full fat milk	cream added,
		puddings and	trifle, ice cream
		custard,small	·
		portions of	
		cheese cake,	
		mousse, panna	
		cotta, lemon	
		meringue pie,	
		sticky toffee	
		pudding	

Please note that the fat content of the food in the table above will vary depending on the brand and how it is made. You may find it helpful to read some food labels to check the fat content. These are usually found on the front of the pack and will often be colour coded in red, amber and green to indicate whether it is high, medium or low in fat. You do not need to stick rigidly to these cut off levels but the information below will help guide you towards lower fat options.

	High	Medium	Low
Fat content per 100g	17.5g	3–17.5g	3g or less

It is also important to recognise that total fat content will vary depending on the portion size consumed. You will find it easier to eat smaller amounts of higher fat foods at a time. For example, you might tolerate one slice of pizza and salad, but you might not tolerate two slices of pizza or one slice pizza with coleslaw on the salad. You may find it helpful to aim for no more than 15g fat per meal.

How do I get enough nutrients in my diet whilst following a low fat diet?

Lower-fat foods will often be lower in calories. By following a lowerfat diet you are therefore at risk of unintentional weight loss. To help prevent this, you will need to:

- Fat little and often
- Aim for 5–6 small meals and snacks
- Eat plenty of low-fat sources of carbohydrates
- Eat plenty of low-fat high protein foods

What about getting enough vitamins and minerals?

Try to only cut out as much fat you need to. If you can tolerate some fat in your diet, continue to include this because it will help to ensure you get enough of your fat soluble vitamins (A, D, E, and K). If you are worried you do not have a balanced diet you may need to take a general multivitamin and mineral. We do not usually advise taking single vitamin or mineral supplements, except for vitamin D which is recommended for everyone in the UK during the autumn and winter.

What shall I do if I am losing weight unintentionally or would like to gain weight?

It can be more difficult to put on weight whilst following a lower-fat diet. It is recommended that you try to follow the advice above and establish a regular meal and snacking pattern. If you can only manage small portions at a time, it can be helpful to fortify your food so that each mouthful is as high in calories as possible. However, you will need to avoid adding high fat foods such as cream / butter / oil / full fat cheese to foods. Instead you could try to:

- Add skimmed milk powder to milk (4 tablespoons to 1 pint milk)
- Add skimmed milk powder to soup (1–2 tablespoons to 1 bowl)
- Add pulses such as chickpeas / beans / lentils to soups and casseroles
- Add low fat high protein yogurt to mash potato, smoothies and salads
- Add tofu to stir fries / smoothies / desserts
- Add cottage cheese to smoothies
- Include regular snacks (see meal plan)

Your dietitian will also consider MCT based supplements when appropriate. These are oral nutritional supplements containing shorter chains of fatty acids that can be incorporated into your diet with an example provided at he end of this leaflet

If after following this advice you are still struggling to eat adequately and are losing weight, your dietitian will discuss with you other routes of providing nutrition e.g. via a feeding tube.

Suggested meal plan

Choose one option from each section.

Breakfast:

- Breakfast cereal with skimmed milk
- Fruit and low-fat yoghurt
- Toast with baked beans / light cream cheese / turkey slices / jam
- Scrambled eggs / omelette and toast with low-fat spread

Mid-morning snack:

- Glass of skimmed or semi-skimmed milk or milky drink
- 1–2 plain biscuits or jaffa cakes
- Slice of malt loaf / plain sponge cake / toast / crumpet / scone / tea cake with low-fat spread
- Low-fat yoghurt with or without fruit / small portion of mousse or panna cotta
- Crackers / rice cakes with cottage cheese /turkey / lean ham slices
- Pretzels / popcorn / low-fat baked crisps

Lunch:

- Sandwich / crackers with lean meat / fish / egg / low-fat cheese
- Jacket potato / toast with baked beans / tuna and light mayonnaise and salad
- Soup (fortified with 1–2 tablespoons skimmed milk powder and one teaspoon MCT oil) with bread / crackers
- Pasta / rice / couscous with chicken / turkey / tuna / egg / Quorn and salad with light salad dressing
- Scrambled eggs / omelette made with light cream cheese or light cottage cheese / toast with low-fat spread

Dessert (if able) – If eaten straight after main meal, try to opt for lower-fat options.

- Low-fat yogurt / rice pudding / low-fat custard with or without jam or stewed fruit
- Plain cake / fruit cake
- Fruit crumble and low-fat custard

Mid-afternoon snack: see mid-morning snack ideas.

Evening meal:

- Spaghetti Bolognese made with veggie mince / turkey mince or <5% fat beef mince
- Lean meat / chicken / turkey / fish with boiled / steamed vegetables and boiled or baked potatoes or mashed with low-fat milk
- Lean meat / fish / lentil curry (tomato based sauce) with rice / ½
 chapatti / ½ plain naan
- Cottage pie made with Quorn or <5% fat beef mince

Dessert: see lunch ideas.

Bedtime snack: see mid-morning snack ideas.

If you have any further questions after reading this, please contact your Dietitian.

Dietitian:	
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