



Department of Nutrition and Dietetics

Dietary advice and Pseudomyxoma Peritonei (PMP)

Dietary advice and Pseudomyxoma Peritonei (PMP)

One of the most common problems caused by PMP is a change in bowel habit due to the disease pressing on the bowel, which can prevent the absorption of food. The accumulation of mucus in the abdomen can also cause you to lose your appetite and feel full up more quickly. This can lead to **weight gain** around the abdomen caused by the disease, but at the same time, **weight loss** from the face, arms and legs.

A patient with PMP said:

“Obviously my eating habits were still not very good and then I thought I was putting weight on. I’m a slim build anyway and my stomach just slowly got bigger and bigger and that’s the only place I was putting weight on. I thought ‘well hang on a minute that’s a bit odd,’ until it got to the point where it stopped me working.”

Another patient described the problems he had when he was eating:

“The only real symptoms that I had when the swelling really started was that my stomach started to feel very tight and I couldn’t sort of finish a full meal without feeling very bloated.”

If the disease affects the stomach and bowel you may need to change the amount of food and the times you eat. If you feel full after eating only a small amount of food, the disease could be pressing on your stomach preventing you eating your regular portion sizes. It may be better to eat small amounts frequently throughout the day, for example 5 to 6 times a day, rather than focusing on three meals a day. It is also important to drink plenty of fluids to avoid getting constipated. These measures should help you have less abdominal pain.

Maintaining your diet

Eating well helps to ensure your body has the energy and nutrients needed to rebuild damaged tissue, fight infection and cope with treatment side effects. You may need to change your diet to make sure you are getting sufficient nutrition, but first get advice from the doctors looking after you. PMP may make it difficult to get all the calories your body needs, so you may need to eat foods that are higher in fat and sugar than normally recommended for a healthy diet, in order to obtain more energy. Enriching your diet can help you avoid losing weight or regain any weight that you may have lost. If you are finding it difficult to manage all your meals and/or have lost your appetite, here are some useful tips.

- Eat when you feel hungry and make the most of any times when your appetite is better, for example in the morning.
- Try different foods - you may find you like things you don’t usually eat.
- Don’t overface yourself with large meals. Eat small amounts but try to eat more frequently. Aim for 6 small meals or nourishing snacks each day.
- Make the food you eat as nourishing as possible. Some suggestions on how to enrich your meals and drinks are given below.
- Don’t tire yourself with cooking and shopping. Let others help you and keep to simple meals. Convenience foods can be useful standbys and can be just as nourishing.
- Try to relax and enjoy what you eat. A short walk before a meal or just some fresh air may help give you an appetite.

Ways to enrich food and drinks

Milk and dairy products can be used to add energy and protein to food:

- Try to use full fat dairy produce, especially milk and yoghurts, instead of low fat options.
- Add milk powder to soups, sauces, milky puddings and custards to increase the protein content.
- Keep a box of grated cheese ready in the fridge to add to soups, sauces, sandwiches and potatoes.
- Serve evaporated milk, yoghurt, cream or fromage frais with cereals, puddings and pies or add to soups, sauces and desserts. Also use when making jellies or instant puddings.
- Make fortified milk by mixing 4 tablespoons of skimmed milk powder with one pint of whole milk. Use whenever you would use ordinary milk in drinks or with foods.

Fats and sugars can be used to add extra energy to food:

Examples of fats and fatty foods:

- butter or margarine - these are higher in calories than low fat spreads
- mayonnaise and salad dressings
- cream, cream cheese, sour cream and crème fraîche
- nuts* - including peanut butter
- chocolate - including chocolate spread.

If you are able to eat these foods, use them wherever you can. Spread them on bread, toast, cakes and scones. Add them to hot vegetables, potatoes, fish, pasta and rice or stir into puddings or soups.

Examples of sugar and sweet foods:

- white or brown sugar
- jam*, marmalade* and lemon curd
- honey, syrup or treacle

All of the above can be added to cereals, drinks or desserts.

Ideas for snacks

Here are some ideas for foods to keep handy so you can eat them whenever you feel hungry:

- crisps, nuts* and savoury biscuits
- small sandwiches or rolls
- cakes and biscuits
- cheese and crackers, cheese cubes
- dried fruit mixtures*
- chocolate biscuits, mini chocolate bars
- chewy oat bars*
- ice-cream, sorbet or frozen yogurt
- small sausage rolls or pies
- cereal and milk

* If you are experiencing bowel symptoms and need to follow a low fibre diet, omit or choose lower fibre varieties of these foods (see section on Low fibre diet).

- popcorn*
- toast, crumpets, pikelets, currant tea-cakes* or malt loaf*
- baked potato*
- fruit: tinned or fresh
- small pieces of pizza or flan
- sweets and mints
- ready-made desserts such as yogurt, fromage frais, crème caramel, mousse, cheese cake, trifle (especially individual-size portions).

Ideas for drinks

These may be easier to prepare and manage than solid food:

- hot milky drinks, for example Horlicks, Ovaltine, cocoa, coffee
- cold milk shakes with added ice-cream and flavouring
- fruit juice* or vegetable juice
- instant soups, made with whole milk instead of water
- smoothies*
- soya milk (calcium enriched)
- special powdered drinks such as: Complan, Meritene Energis Shake and Meritene Energis Soup. These can replace a light meal and come in a range of sweet and savoury (soup) flavours. They can be bought at most chemists or supermarkets. Try a variety to find the ones you enjoy.

Some special meals replacement drinks are available on prescription – discuss this with your doctor or dietitian. Ask staff for a copy of The Christie booklet ‘Nutritional Products: availability of nutritional drinks, powders and puddings’.

Feeling full?

It is quite common to feel full even after small amounts of food and this can be very uncomfortable. Tips to help:

- Eat small frequent snacks and drinks. Aim for 6 a day.
- Liquids, especially fizzy drinks, can fill you up so try to avoid taking drinks with food or just before meals.
- Keep stocks of the foods you enjoy, so they are available to eat whenever you fancy them.
- Cold food and drinks, for example yoghurts, ice cream, mousse and iced drinks can be easier to take.
- Try to relax when you are eating - eat slowly and chew foods well.
- A little gentle exercise, such as a short walk after meals can be helpful.
- Wind can make you feel very full and bloated so avoid fizzy drinks and large amounts of fibre which can make the problem worse. Some people find peppermint tea, cordial or mints helpful at relieving trapped wind.

Low fibre diet

Your bowel may become slower at moving food through your system because of the disease pressing on it. This can sometimes cause abdominal pain or discomfort as the bowel tries to push food along. Higher fibre foods may cause an increase in bowel irritation and discomfort as the bowel may need to work harder to move food through. Your doctor or dietitian may recommend you follow a low fibre diet to try to minimise any adverse symptoms.

Dietary fibre is the part of cereals, pulses, vegetables and fruits which is not digested and continues to pass down through the bowel. A diet low in fibre may reduce the amount of gas produced and bulk passing through your bowel. This should help to reduce symptoms such as bloating or abdominal discomfort and may also reduce the risk of your bowel becoming obstructed.

If you have been used to eating a diet rich in fruit, vegetables and whole grains, then following a low fibre diet may be challenging and difficult. Remember the purpose of the diet is to help make you feel better by reducing your symptoms.

When you restrict the foods in your diet it may be hard to meet your vitamin and mineral requirements. If you are following this diet for more than a week we recommend taking a complete multivitamin and mineral supplement, for example Centrum or Boots A-Z multi, Sanatogen A-Z Complete and Natures Best A-Z multi. These will help to ensure that you are meeting your daily vitamin and mineral requirements.

If you have diabetes you can still follow the low fibre diet advice but make sure you eat meals and snacks containing low fibre starchy foods such as white bread, white rice and cereals etc from the 'Foods low in fibre' list (overleaf). Once your symptoms have settled, you can go back to your normal diet.

The table below lists examples of foods which are low in fibre and suitable for you to include in your diet and those which may make your symptoms worse. All the foods listed under 'Foods low in fibre' may be eaten freely.

Food group	Foods high in fibre that may make your symptoms worse	Foods low in fibre (can be eaten freely)
Meat, fish and protein alternatives	Peas Beans Lentils, dhal, chickpeas	Meat Poultry Ham, bacon, sausages Fish Eggs Tofu Quorn: quantities allowed per day:- 1 x Quorn sausage Or 50g Quorn pieces Or 50g Quorn mince Or 5 x Quorn meatballs
Breads and flours	Wholemeal, granary or multigrain bread High-fibre white bread Fruit bread Fruit teacakes Hot cross buns Wholegrain bagels Wholemeal chapatti made with flour no.2-4 Wholemeal pitta bread Wholemeal / besan flours Wholemeal puri Pakorras / bhajis Whole-wheat crackers Matzos Paratha	White bread and flour White bagels Bread sticks Rice cakes Crumpets White chapatti made with flour no.1 White pitta bread White naan bread made with flour no.1 White flour puri Cream crackers White muffins Croissants Pancakes Poppadums Food containing cornflour, tapioca or semolina
Cereals	Weetabix / whole-wheat cereal biscuits Shredded Wheat Muesli Fruit and Fibre Bran and oat cereals Porridge	Rice Krispies, puffed rice cereals Cornflakes Special K (with no additional fruit) Coco Pops Frosted flakes
Rice and pasta	Brown rice Whole-wheat pasta and spaghetti Whole-wheat noodles	White rice White pasta and spaghetti White noodles Couscous Gnocchi

Food group	Foods high in fibre that may make your symptoms worse	Foods low in fibre (can be eaten freely)
Cakes and biscuits	Biscuits and cakes made with whole-meal flour, oats or dried fruit or nuts e.g. flapjack, dried fruit biscuits, mince pies, plain or chocolate digestives, oat biscuits Fruit scones Laddu Mesub Fruit pies	Biscuits or cakes made with white flour e.g. Rich tea, custard creams, shortbread, chocolate coated plain biscuits, Madeira cake, sponge cake. Jam tarts, custard tarts. Plain or cheese scones Doughnuts Eclairs Lemon meringue pie
Milk and dairy products	Cheese / cottage cheese with added fruit and nuts Fruit yoghurt or fromage frais with added fruit / cereal / nuts Kulfi with dried fruit / nuts (check labels)	Milk Cheese Plain cottage cheese Cheese spreads Paneer Plain smooth yoghurt or fromage frais Ice cream / ice-lollies / sorbet Kulfi Cream Evaporated and condensed milk Milk jelly Instant whips Crème caramel Milk puddings Custard Blancmange
Miscellaneous	Whole-meal savoury snacks Bombay Mix / chevdo Snacks with besan flour Bonda Falafel Nuts Seeds Popcorn Soups – lentil and vegetable Miso Marmalade or jam with peel or pips	Crisps Shredless marmalade, jelly jam, honey, lemon curd, treacle, syrup Tomato sauce, brown sauce, yeast extract Soy sauce Worcestershire sauce Stock cubes Mayonnaise Soups – ‘cream of’ tomato, chicken or oxtail.

Food group	Foods high in fibre that may make your symptoms worse	Foods low in fibre
Miscellaneous continued	Peanut butter, chocolate spread with nuts Chutney, pickles Coconut / besan barfi Cardamom pods Cinnamon sticks Olives	Sausage rolls Meat pies Plain or milk chocolate Boiled sweets, toffee, fudges, wine gums, mints Jalebi Gulab jamun
Nutritional supplement drinks	Ensure Plus Fibre, Ensure TwoCal (Abbott) Fortisip Multifibre, Fortisip Compact Fibre, (Nutricia) Fresubin Energy Fibre, Fresubin 2kcal Fibre (Fresenius Kabi) Resource 2.0 Fibre (Nestlé)	Complan* (Nutricia) Ensure Plus Juce, Ensure Plus Milkshake Style, Ensure Compact, Ensure Plus Yoghurt Style, Ensure Plus Savoury, Ensure Shake, Enshake (Abbott) Fortijuce, Fortisip, Fortisip Bottle, Fortisip Compact, Fortisip Yogurt Style, Scandishake Mix, Complan Shake (Nutricia) Fresubin Jucy, Fresubin Energy, Fresubin 2kcal, Calshake (Fresenius Kabi) Resource Fruit, Resource Energy (Nestlé) *available over the counter

In addition to these foods you may like to include **up to 3 portions** of suitable fruits and vegetables as listed below under 'Foods low in fibre' into your diet throughout the day. However, if your symptoms worsen you may need to reduce your intake of these foods.

Food group	Foods high in fibre that may make your symptoms worse	Foods low in fibre – have a maximum of 3 portions a day
Vegetables	<p>All vegetables except those listed opposite in the 'Foods low in fibre' list.</p> <p>Vegetable skins and pips Potato skins Salad Vegetable juice 'with bits' Seeds</p>	<p>All freshly cooked potatoes without skins (boiled, mashed, roasted, chipped).</p> <p>All skin to be removed:-</p> <p>2.5cm piece courgette 2.5cm piece cucumber ¼ of an aubergine 1-2 heaped tbsp turnip 1-2 heaped tbsp plantain 1-2 heaped tbsp yam 1-2 heaped tbsp pumpkin 1-2 heaped tbsp butternut squash 1-2 heaped tbsp carrot 1-2 heaped tbsp swede 1 heaped tbsp broccoli/cauliflower florets (avoid stalks) 1 small beetroot 200g passata 100ml smooth vegetable juice (tbsp = tablespoon)</p>
Fruit	<p>All fruit except those listed opposite in the 'Foods low in fibre' list.</p> <p>Fruit with pips, peel or skin. Nuts including coconut Dried fruit Fruit juice 'with bits' Prune juice Tomato juice</p>	<p>All pips, peel or skin to be removed:-</p> <p>1 small banana ½ grapefruit ½ apple ½ custard apple ½ pear ¼ small mango ¼ small melon 6 grapes 3 lychees 6 cherries 1-2 heaped tbsp tinned peaches 1-2 heaped tbsp tinned mandarin oranges 1-2 heaped tbsp tinned orange segments 1-2 heaped tbsp tinned pawpaw 1-2 heaped tbsp tinned fruit cocktail 100ml smooth fruit juice (tbsp = tablespoon)</p>

The sample menu plan below should help to give you more ideas on what to eat at mealtimes. This is to be used together with the previous list of suitable low fibre foods.

Sample Menu Plan

Breakfast ideas	Bowl of suitable cereal, milk, sugar White bread toast/croissant/muffin with butter or margarine or seedless jam or shredless marmalade Pancakes Fried/scrambled/ poached egg on white toast or sausage/bacon sandwich Cup of tea/coffee/milk/fruit juice (without 'bits'/smooth variety)
Mid-morning snack ideas	Slice of plain cake/plain biscuit/crisps/crumpet Cheese and crackers Crisps Cup of tea/coffee/milk/fruit juice (without 'bits'/smooth variety)
Mid-day meal ideas	Cream of chicken/tomato soup Cheese on white bread toast Cheese and ham toasted sandwich 'Eggy bread' (French toast) Egg/tuna/ham/chicken and mayonnaise/white bread sandwich Very mild curry* and white chapatti/naan bread/white rice Jelly and ice cream/milk pudding/small portion of suitable fruit and cream Cup of tea/coffee/milk/fruit juice (without 'bits'/smooth variety)
Mid-afternoon snack ideas	Sausage roll Rice cakes and cream cheese Crème caramel/mousse/smooth yoghurt/seedless jam tart Cup of tea/coffee/milk/fruit juice (without 'bits'/smooth variety)
Evening meal ideas	Macaroni cheese/tinned ravioli in tomato sauce/white pasta with meat and passata/carbonara sauce Cheese omelette/pizza/fish in sauce/chicken burger Chicken, pork or lamb chop and gravy Mashed or boiled potato/chips/white rice Small portion of suitable vegetable Cottage/Shepherd's pie/corned beef hash Very mild curry* and white chapatti/naan bread/white rice Plain sponge and custard/yoghurt Tinned fruit and cream Cup of tea/coffee/milk/fruit juice (without 'bits'/smooth variety)
Supper ideas	Toast and cheese spread Plain biscuits Milky drink

*** Caution as spicy foods may irritate your bowel**

Starting to eat fibre foods again

Follow the diet for as long as your symptoms last or as advised by your doctor. When your symptoms have settled talk to your doctor about when to start eating foods containing fibre again.

If you are at risk of bowel obstruction

You may try reintroducing small quantities of fibrous foods into your diet to find out what types and quantities of fibre you can comfortably tolerate and identify any foods that do not agree with you. Fibre foods should be reintroduced one at a time. Start with a very small amount of a fruit, vegetable or cereal, introducing a new food each day. If symptoms reoccur, restart your low fibre diet and contact your doctor or specialist nurse.

Questions and answers

What shall I do if I am still worried about my appetite and am losing weight?

Ask your doctor or specialist nurse to refer you to a dietitian for further advice.

Can I eat food that has been liquidised or sieved with fruit and vegetables?

No, if fruit and vegetables are liquidised or sieved they will still contain the same amount of fibre within the purée therefore they are **not** suitable. Fruit and vegetable juices with no 'bits' in are low in fibre and therefore are suitable.

What can I eat if I'm a vegetarian?

Some vegetarian sources of protein for example, beans, peas, lentils, chickpeas, seeds and nuts are not suitable when following a low fibre diet. It is therefore important to include other suitable protein sources at mealtimes to ensure you get the nutrients your body requires. These could include yoghurts, lassi, tofu, cheese, eggs, milk and milky puddings.

What happens if I become constipated on the low fibre diet?

If you are concerned about constipation discuss this with your doctor or specialist nurse. It is important to make sure that you are taking enough drinks during the day for your bowels to work properly. On average you may need 8 – 10 glasses of liquid a day but this may vary depending on your size.

What can I choose if I am eating out?

Follow the advice in the booklet and choose dishes that are low in fibre.

What if I usually follow a low fat healthy diet?

If your appetite is poor it may not be appropriate for you to be very strict with your low fat diet. It is more important to ensure that you are getting enough energy from your food. Increasing the amount of fat in your diet is an easy way of doing this. However, if you are concerned about this ask your doctor or dietitian for advice.

**If you have any queries about your diet please contact the
Dietetic Department on 0161 446 3729.**



The Christie Patient Information Service November 2015
CHR/PMP/481/30.10.06 Version 3 Review November 2018

www.christie.nhs.uk