

Irritable Bowel Syndrome and the Low FODMAP diet

In IBS the gut can be hypersensitive leading to symptoms including:

- abdominal pain/discomfort
- bloating
- wind
- urgency to open bowels
- a feeling of being unable to pass all stool (incomplete evacuation);
- diarrhoea or constipation (or variable bowel habit swinging between these);
- nausea
- gurgling / rumbling
- belching, heartburn and reflux
- tiredness / lethargy

These symptoms can vary and may be present every day, or come and go. Other illnesses, stress, anxiety or a hectic lifestyle may lead to a flare up of worsening symptoms at times.

IBS type symptoms may also occur in those with other gastro-intestinal conditions e.g. inflammatory bowel disease (IBD) coeliac disease or even bowel cancers. This diet may also be of help here, but it is important to discuss this with your doctor or dietitian before starting to check if it is right for you.

Diet and IBS

Many foods and drinks may trigger IBS symptoms, e.g. caffeine, alcohol, spicy or rich, fatty foods, chewing gum.

How you eat is also very important; erratic eating patterns, missing meals or eating very large meals, or eating very quickly may make symptoms worse. Food triggers can be difficult to spot, especially when you have a flare of IBS symptoms.

The low FODMAP diet:

Particular starches and sugars have been shown to worsen IBS type symptoms in some people. These carbohydrates are called **FODMAPs**, which stands for **F**ermentable, **O**ligo-saccharides, **D**i-saccharides, **M**ono-saccharides **A**nd **P**olyols. Foods containing FODMAPs do not get fully digested or absorbed in the gut, so pass to our large bowel partially undigested, where our gut microbiome ferments these.

This is a normal process that happens in everyone, but people with IBS-type symptoms can be much more sensitive to the effect caused by gases and water changes that occur in the bowel when the diet contains FODMAPs. Reducing FODMAPs has been shown to improve symptoms in most people with IBS. Other starches and sugars however can be well tolerated, so the low FODMAP diet is not a low carbohydrate diet.

FODMAP's are found in lots of different foods and in all food groups, including some grains (such as wheat, rye and barley), some vegetables, pulses, some fruits, some sweetening agents, some dairy foods such as milk or yogurt.

The low FODMAP diet only requires foods with high levels of FODMAP's to be avoided or limited. The diet does not exclude any entire food groups, so it is possible to have a fully balanced diet whilst following the FODMAP exclusion, but it is very important to eat as many of the foods you are allowed to as possible.

Following the low FODMAP diet:

Follow the low FODMAP diet as closely as possible to give you the best chance to improve your symptoms. Usually, 4-8 weeks is long enough to identify if symptoms will respond to a low FODMAP diet.

After the initial 4-8 weeks it is important to reintroduce the avoided foods to identify which particularly cause you symptoms. Tolerance to FODMAPs is different for everyone, and you may find you tolerate some high FODMAP foods well. Finding out which foods you are not sensitive to helps to increase food choices in your diet.

The tables below provide an overview of the foods that should be avoided and those that can be eaten whilst following a low FODMAP diet. It is not an exhaustive list. Further details on other foods and safe quantities can be found on the Monash University FODMAP app:

<https://www.monashfodmap.com/ibs-central/i-have-ibs/starting-the-low-fodmap-diet/>

How a food is processed can affect its FODMAP content.

- Canning or pickling vegetables or pulses can reduce their FODMAP level. You may see the food listed as high and low FODMAP in different sections - this may be due to processing.
 - e.g. pickled beetroot is allowed freely (low FODMAP) but fresh beetroot is only allowed in very small amounts (moderately high FODMAP)
- How a food is made from its base ingredients
 - e.g. spelt – spelt flour is considered a high FODMAP food, but when it is used to make spelt sourdough bread, the finished bread product is low FODMAP as the sourdough process to make the bread reduces its FODMAP content.
 - You will see different limits for the different foods made from soya, coconut and oats (e.g. yogurts, milks, flours etc), and other foods in the lists below – please follow the limits carefully.

The foods listed below do not contain any FODMAPs and so are not limited:

Meat, poultry, fish, eggs or vegetarian protein foods.

Eat 2 portions per day from the list below. One portion is approx. 100-125g or 2 eggs. Eat a variety of these. *For a healthy diet try eating less red and processed meats.*

- Fresh and frozen meats without sauce or coating: beef, chicken, duck, lamb, pork (including bacon and ham), turkey.
- Fresh or frozen shellfish, white fish, oily fish.
- Tinned fish in brine or oil.
- Eggs
- Firm tofu, tempeh.
- Quorn – mycoprotein (*Check ingredients: some varieties contain onion and/or garlic*)

Fats, oils & spreads

Oils and pure fats are low FODMAP, *but for a healthy diet try to eat less high fat foods*. High fat foods can contribute to IBS symptoms in some people. Choose polyunsaturated (sunflower, corn, vegetable) or monounsaturated types (olive, rapeseed) where possible.

- Cooking oils, butter, ghee, lard, suet margarine*, low fat spreads* (**check no lactose added.*)

Starchy Foods

*Minor wheat ingredients in a food **do not** need to be avoided (e.g. thickeners and flavourings).*

<u>Foods to avoid</u> (high in fructans, GOS or polyols):	<u>Suitable foods</u> <i>Choose wholegrain where possible. Check ingredient label for problem fruit, FOS, inulin, oligofructose.</i>
Cereal Grains <ul style="list-style-type: none"> Wheat (including spelt, bulghur wheat, couscous, semolina) Rye, Barley Amaranth 	Cereal grains and starchy foods <ul style="list-style-type: none"> Rice (and rice bran), oats (and oat bran), tapioca, potatoes (white) buckwheat, polenta, corn, quinoa
Bread All wheat bread and rolls: <ul style="list-style-type: none"> white, wholemeal, multigrain, Pitta bread, bagels, ciabatta, focaccia, Panini, naan bread, chapatti Croissants, muffins, brioche, pastries crumpets and most bakery goods Garlic bread, pizza bases Rye bread, rye sourdough. Spelt bread. 	Bread <ul style="list-style-type: none"> Wheat free / Gluten free bread and rolls Bread made from: oat, rice, corn, tapioca, potato flours 100% spelt sourdough is low FODMAP Wheat free or gluten free pizza bases, pitta bread, ciabatta, naan bread. <i>Homemade wheat free bread using a bread maker is a good option</i>
Flour <ul style="list-style-type: none"> <u>All wheat flour</u> white, wholemeal, plain, strong, self-raising Rye, barley, gram (Chick Pea) flours coconut flour, spelt flour, soya flour 	Flour and raising agents <ul style="list-style-type: none"> Wheat free / gluten free flour buckwheat, tapioca flour cornflour, maize flour, polenta, potato, millet flour, rice flour. Baking powder, bicarbonate of soda, cream of tartar, yeast. arrowroot,
Pasta and noodles <ul style="list-style-type: none"> All fresh and dried pasta (white and wholemeal), Gnocchi, spelt pasta, chick pea /lentil pasta Egg noodles, Hokkein, Udon, Pot noodles, Supernoodles, Ramen 	Pasta and noodles <ul style="list-style-type: none"> Wheat free / gluten free pasta (<i>not made from lentils/chickpeas</i>), buckwheat, quinoa pasta Rice noodles, buckwheat noodles, kelp noodles, soba noodles
Breakfast cereals <ul style="list-style-type: none"> Wheat or bran-based cereals (weetabix, shredded wheat, bran flakes, All-bran, cheerio's, muesli), wheat bran, wheat germ, spelt flakes 	Breakfast Cereals <ul style="list-style-type: none"> Porridge / oat cereals (oatibix, oat flakes), oat bran cornflakes, rice krispies, some wheat free or gluten free muesli and cereals (<i>check fruit</i>).

<p align="center"><u>Foods to avoid</u></p> <p align="center">(high in fructans, GOS or polyols):</p>	<p align="center"><u>Suitable foods</u></p> <p align="center"><i>But check ingredients label for problem fruit, FOS, inulin, oligofructose.</i></p>
<p>Savoury Biscuits</p> <p>Water biscuits, crisp breads, Cornish wafers, cream crackers, spelt crackers</p> <p>Rye crispbreads</p>	<p>Savoury Biscuits / snacks</p> <p>Rice crackers, corn cakes, oatcakes, wheat free or gluten free crackers.</p> <p>Plain / salted popcorn or plain crisps</p>
<p>Sweet Biscuits</p> <p>All biscuits made with wheat flour (digestives, shortbread, rich tea, custard creams etc)</p>	<p>Sweet biscuits</p> <p>Some Florentines, macaroons, oat-based biscuits, flapjacks.</p> <p>Most 'free from' biscuit varieties</p>
<p>Cakes</p> <p>All cakes made with wheat flour (fruit cake, fairy cake, Victoria sponge, chocolate cake etc)</p>	<p>Cakes</p> <p>Flourless cakes, meringues, cornflour sponge.</p> <p>'free from' cakes are usually wheat free e.g. lemon, chocolate.</p>
<p>Pastry</p> <p>All pastry made with wheat flour (shortcrust, puff, flaky, filo,)</p> <p>Shop brought pastry and pastry goods (pies, quiche, pasties)</p>	<p>Pastry</p> <p>Wheat free or gluten free varieties and mixes.</p>
<p>Breadcrumbs and batter</p> <p>Crumbed fish and poultry, fish fingers, fish in batter, tempura batter, scotch eggs.</p>	<p>Breadcrumbs</p> <p>Polenta, oats, cornflake crumbs, gluten free breadcrumbs/ batter</p>

Fruit and Vegetables

<u>Foods to avoid</u>	<u>Suitable</u>
<p>Fruit (Fresh, dried or juice)</p> <p>Apple, Apricot, Blackberry, Cherries, Dates, Figs, Mango, Nectarine, Peach, Pear, Plum/prune, Sultanas, Watermelon,</p> <p>Tinned fruit in apple or pear juice.</p> <p>Tropical fruit juice, or juices from fruits above</p> <p>Jams, sauces or chutneys containing fruits above.</p>	<p>Fruit</p> <p><i>Aim for 2-3 portions spread through the day. One portion at a time= 80g fresh fruit, 1tbs dried fruit or 100ml fruit juice.</i></p> <p><i>Portion sizes in brackets () are max amounts for fruits which need to be eaten in smaller amounts*.</i></p> <p>Banana* (1/2 only if ripe), Blueberry*(20) , Cantaloupe , Clementine, Cranberries, Galia melon, Grapes* (5-6), Grapefruit* (<half), Honeydew melon, Kiwi, Lemon, Lime , Lychee* (<5) Mandarin, Orange, Passion fruit, Papaya, Pineapple, Pomegranate*(half small) Raspberry(10), Raisins Rhubarb, Strawberry*(4)</p>
<p>Vegetables</p> <p><i>Vegetables underlined must be <u>strictly avoided</u>. Those with * may be eaten in very small quantities (<2tbs /day).</i></p> <p>Artichoke hearts*, <u>Artichoke (Jerusalem)</u>, Asparagus*, Avocado* (<1/4). Beetroot*, Broccoli stalks*, Brussels Sprouts*, Butternut squash*, <u>Cauliflower</u>, Celery*, Cherry tomatoes* <u>Chicory root</u>, Fennel* (bulb and leaves) <u>Garlic</u>, <u>Leek</u>, Mange tout*, <u>Mushroom</u>, Okra*, <u>Onion (red, white, Spanish, shallots)</u>, Red pepper* Peas*, Savoy Cabbage*, <u>Spring onion (white part)</u>. Sugar snap peas, Sweet potato*, Sweetcorn*,</p> <p><u>Beans and pulses-</u> avoid dried, canned* (chickpeas, broad beans, soy beans, black eyed beans, butter beans, lentils, kidney beans*, split peas). <u>Baked beans</u></p>	<p>Vegetables</p> <p><i>Try to have at least 3 portions per day. One portion is 80g (3-4tbs).</i></p> <p>Alfalfa, Aubergine, Bamboo shoot, Beansprouts, Broccoli (heads) Carrot, Chard, Chilli, Chive, Courgette, Cucumber, Edamame beans, Endive, Green beans, Kale, Leek (green tops only) Lettuce, Olive, Pak Choy, Parsnip, Pepper (green, orange, yellow), Plantain, White Potato, Pumpkin, Radish, Rocket, Seaweed, Spinach, Spring onion (<i>green part only</i>), Swede, Tomato, Turnip, Water chestnuts, White or red cabbage</p> <p>Pickled: beetroot, onion (2 only), garlic (1 clove) kimchi (50g)</p>
<p>Flavoured crisps, soups, stocks, gravy, sauces, dressings, & ready meals</p> <p>These should be <u>avoided</u> as they routinely contain garlic or onion ingredients</p> <p><u>Garlic or onion ingredients:</u> <i>These should be avoided as they are a concentrated source of FODMAPs. Check ingredients labels.</i></p> <p>Dried onion or garlic, garlic or onion extract, garlic or onion powder, garlic or onion puree, garlic or onion salt.</p>	<p>Soups, stocks, gravy, sauces, dressings & ready meals</p> <p>Use homemade alternatives with dried herbs and spices or chives. Garlic infused oil (strained) may be used and Asafoetida powder (Hing) can provide onion flavour.</p> <p>Salt, pepper, white/rice vinegar, balsamic vinegar (1tbs only) any herbs, spices, chilli, chives, cinnamon, coriander, ginger, lemon/lime juice green part of leek/spring onion, marmite, miso, mustard, tamarind, peanut butter, wasabi, Worcestershire sauce</p>

<u>Foods to avoid</u>	<u>Suitable</u>
<p>Sugars, preserves, sauces and confectionary</p> <p><i>Honey, Agave nectar, Fructose syrup, Molasses, treacle Coconut sugar</i></p> <p>Sweet and savoury sauces, snack bars.</p> <p><i>Check ingredients label for: glucose-fructose syrup, fructose-glucose syrup, high fructose corn syrup and high fructose corn syrup solids.</i></p> <p>Added Polyols</p> <p>Sugar-free mints, Sugar-free chewing gums, sugar-free lollies, sugar-free chocolate, some 'diet/low calorie' products, protein powders and supplement drinks.</p> <p><i>Check ingredients label for sorbitol, mannitol, xylitol, erythritol, isomalt.</i></p> <p>Added Fructans</p> <p>Foods or tablets with added fibre or prebiotics e.g some yoghurts, fermented milk drinks, snack bars, breakfast cereals.</p> <p><i>Check ingredients labels for FOS, inulin, oligofructose.</i></p>	<p>Sugars, preserves and confectionary</p> <p>Sugar, maple syrup, golden syrup (1tbs), jam and marmalade (from suitable fruits).</p> <p><i>Check ingredients in low sugar or reduced sugar jam and marmalade for sorbitol /mannitol/xylitol.</i></p> <p>Some artificial sweeteners: aspartame, acesulfame K, saccharin, Canderel, Silver spoon Splenda, Hermesetas.</p> <p><i>For a healthy diet try eating less food with added sugars. High sugar foods contain more than 15g per 100g and low sugar foods contain up to 5g per 100g.</i></p>
<p>Nuts and seeds</p> <p>Cashew and Pistachio Nuts.</p> <p>Coconut (dried) in large quantities.</p>	<p>Nuts and seeds</p> <p>Most are suitable in moderation (<i>small handful</i>)</p> <p>Brazil nuts, chia seeds, Macadamia nuts, peanuts, pecans, pine nuts, pumpkin seeds, sesame seeds, sunflower seeds, walnuts.</p> <p>Coconut, dried (<3 tbs)</p> <p>Almonds and hazelnuts - <i>maximum 10.</i></p> <p>Peanut butter</p>
<p>Drinks</p> <p>Chicory (Camp), Dandelion tea, <i>Camomile, Chai, Fennel.</i></p> <p><i>Check fruit and herbal squashes/ teas for unsuitable fruit (apple).</i></p> <p>Alcohol-Dark Rum, Dessert wine. Cocktails containing fruit juices</p>	<p>Drinks</p> <p>Drink 6-8 glasses or 1.5-2.0 litres of fluid daily. Choose water or non-caffeinated drinks. Limit fizzy drinks.</p> <p>Alcohol – is a stimulant and may increase IBS symptoms. While most alcoholic drinks are low in FODMAP's, if alcohol increases your symptoms, limit your intake.</p>

<u>High Lactose Foods - limit</u>	<u>Suitable lactose alternatives</u>
<p>Milk</p> <p>Whole, skimmed, semi-skimmed milk, goats, sheeps milk, buttermilk*</p> <p>milk powder, evaporated milk, condensed milk.</p>	<p>Milk <i>Ensure alternative milks are calcium enriched. Check alternative milks for apple juice, fructose and inulin.</i></p> <ul style="list-style-type: none"> • Lactose free milk (Lactofree, own brands) • Almond or hazelnut milk • < 50ml Soya milk • <200ml Rice milk (Rice Dream, Alpro) • <40ml Oat Milk (Oatly Oat Drink) • *$\frac{1}{4}$ cup (50ml) maximum of whole, skimmed or semi –skimmed milk is permitted in a drink, part of a meal or snack
<p>Yoghurt</p> <p>Whole milk, low fat, greek, drinking yoghurts*.</p> <p>Fromage frais.</p>	<p>Yoghurt <i>Check for problem fruit, FOS, inulin, oligofructose. fruit juice concentrate, fructose.</i></p> <ul style="list-style-type: none"> • Lactose free cow's milk yoghurt • Max 125g Soya yoghurt • Coconut yoghurt • *2tbs maximum natural yogurt is permitted as part of a meal or snack.
<p>Cheese*</p> <p>Processed cheese, cheese slices, reduced fat cheddar</p>	<p>Cheese</p> <p>Cheddar, feta, mozzarella, brie, camembert, blue, Edam, goats. other mature/hard cheeses</p> <p>*2 tbs maximum Cottage cheese, ricotta, quark, low fat soft cheese, cream cheese, mascarpone, 2 slices halloumi. Coconut cheese.</p>
<p>Other dairy:</p>	<p>Other dairy:</p> <p>Butter, cream, sour cream, crème fraiche are low lactose in small amounts.</p>
<p>Custard*</p> <p>Standard custard made from cows/goats milk</p>	<p>Custard</p> <p>Soya custard /Custard desserts (Alpro – all flavours)</p> <p>*2 tbs maximum of normal custard is allowed. If making from powder use lactose-free milk.</p>
<p>Ice cream*</p> <p>Dairy ice cream, goats milk ice cream</p>	<p>Ice cream <i>check for other FODMAP's</i></p> <ul style="list-style-type: none"> • Lactose free ice-cream (Lactofree) • Soya ice cream (Swedish Glace) • Oat or coconut ice cream • *1 scoop maximum of normal ice cream.
<p>Chocolate*</p>	<p>Chocolate: Dark chocolate</p> <p>*30g maximum of milk / white chocolate.</p>

*These foods are tolerated in small amounts – see suitable food column for amounts.

Low FODMAP Meals: Choose from the following ideas:

Breakfast

- Porridge or wheat free cereal (oat/corn flakes/ puffed rice) with suitable milk
- Wheat/rye- free toast with cheese/suitable jam/peanut butter/marmalade
- 2 eggs on wheat/rye free or 100% sourdough spelt toast
- Cheese and chive omelette +suitable veg
- Smoothie made with suitable fruit (1 portion only), and vegetables and lactose-free yogurt
- Cooked breakfast – bacon, egg, tomato, hash brown with wheat/rye free or sourdough spelt toast

Lunch

- Wheat/rye free sandwich/pitta/wrap or corn/rice/oat crackers with tuna/sardines/salmon/egg/cheese/cold meat/poultry/ham with salad
- Homemade soup made with suitable vegetables and wheat free bread/crackers.
- Baked potato or rice with tuna/ cheese or homemade filling (e.g. chilli)
- Salad/rice salad/potato salad/gluten free pasta salad with cold meat/tuna/eggs/cheese
- Sushi/sashimi
- Suitable fruit/yoghurt

Dinner

- Steak /fish/poultry /tofu/Quorn with suitable vegetables and rice/rice noodles/wheat/gluten free pasta/potato /polenta
- Risotto or omelette with salad
- Gluten free pasta/spaghetti with bolognese (no onion/garlic) with salad
- Corn taco shells with beef mince, crème fraiche and salad
- Suitable fruit/fruit salad/ rice pudding/ice cream/yoghurt/custard.

Beverages

- Water +/- lemon
- Semi-skimmed milk (or alternative milk)
- Tea/coffee
- 1/3 glass (100ml) fruit juice/smoothie made with suitable fruit. Tip: add water to fruit juice to make a longer drink.
- Fruit squash – suitable fruit flavours (*check sweeteners*)

Snacks

- Suitable fruit
- Low fat yoghurt (*check ingredients + lactose free if needed*)
- Vegetable sticks and dip (*check for onion*)
- Cheese and tomato/ peanut butter on rice crackers/corn/oat cakes
- Handful of suitable nuts
- Occasionally: Potato crisps (unsalted, ready salted or salt and vinegar), popcorn, dark chocolate, flapjack, GF biscuit

Eating out on a low FODMAP diet

Eating out can be tricky on a low FODMAP diet. You will need to choose carefully, but some restaurants and food outlets now provide wheat and gluten free options for those that need it, which can be a useful starting point. Do explain your requirements when you get there, or check on-line menus in advance. Many chain restaurants cater well for food intolerances.

Suitable choices for main meal:

- Fish, poultry or meat with potatoes, salad or vegetables (e.g. steak/fish and chips)
- Baked jacket potato with salad and suitable filling (cheese / tuna mayonnaise / prawns)
- Asian style rice or rice/ buckwheat noodle dishes (check vegetables), sushi or sashimi
- Gluten free pizza /pasta (choose your own low FODMAP toppings)

Tips

- Avoid eating coatings, batter, sauces.
- Choose options that are without a sauce (e.g. steak, stir fry, rice) Ask for sauce or gravy to be served in a separate dish
- Gluten free options avoid wheat but check for other ingredients e.g. onion /leek/garlic.

Some people get symptoms when eating out because it is difficult to stick closely to the diet, or perhaps because they may have a larger meal than usual, or perhaps a fizzy or alcoholic drink alongside. However, eating out should be a nice experience and the pro's usually outweigh the symptoms!

What if my symptoms do not improve on a low FODMAP diet?

The low FODMAP diet may not work for everyone. If you have followed the dietary changes closely but your symptoms have not improved after 6 weeks please contact your doctor/dietitian for further advice.

What about foods not listed?

Further details on other foods and safe quantities can be found on the Monash University app

<https://www.monashfodmap.com/ibs-central/i-have-ibs/starting-the-low-fodmap-diet/>

Or for further support, ideas for meals, recipes and information, please view our website for further signposting links.