



Fiber in the Management of Irritable Bowel Syndrome (IBS)

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Did you know that dietary fiber intake can affect your irritable bowel syndrome (IBS) symptoms?

Irritable bowel syndrome (IBS) is a condition characterized by abdominal (belly) pain and abnormal bowel habits (such as diarrhea, constipation, or a combination of both), bloating, distension, and excessive flatulence (gas). The amount of fiber you eat also plays a role in managing symptoms and normalizing bowel habits. *In IBS, too much or too little fiber can affect symptoms, and certain types of fiber may be better tolerated than others.* Working with a dietitian can help get you started to consider the effect of fiber on your IBS symptoms.

IFFGD's **Dietitian Listing** is a resource that allows you to search for a dietitian that is in your area or treats a specific condition.
<https://www.iffgd.org/resources/dietitian-listing.html>

What is a normal bowel habit?

Before modifying your fiber intake to help in normalizing your bowel habits, you should examine what is considered a normal bowel habit. Normal bowel habits vary between individuals and depend upon:

- **Frequency** – Anything from several times a day to several times a week can be normal. However, a sudden change in bowel habits can signal a problem and reason to consult your healthcare provider.
- **Texture** - The texture of your stool is more important than the frequency. Stools should be soft, sausage-shaped, and easy to pass. Diarrhea occurs when your stools are very watery and unformed. By contrast, constipation is characterized by stools that are hard, dry, pebble-like, or difficult/painful to pass. It should only take around one minute to empty your bowels.
- **Color** - Stools should be brown, although you may notice a change in color if you eat pigmented foods. See your healthcare provider if your stools are very dark/black or very light grey/brown.
- **Smell** – It is normal for stools to smell and simply a result of bacteria residing in your large intestine.
- **Gas** – It is normal to experience some gas, which is a sign of healthy digestion. However, excessive wind/gas can be problematic in IBS. If this is troubling you, see a dietitian as dietary changes can help.

- **Sudden changes in bowel habits** – Certain changes in bowel habits can signal the presence of problems other than IBS and should be mentioned to your doctor. These are sometimes called 'red flags' or 'alarm signals' and include blood in the stool, bowel motions at night, and severe/ongoing diarrhea.

What is fiber?

Fiber is the non-digestible, carbohydrate component of plants foods. These are fruits and vegetables, whole grain breads and cereals, legumes, nuts and seeds. Fiber can either be consumed from food or taken as a supplement (for example bran, psyllium and methylcellulose).

Fiber has several beneficial effects for our bodies. For example, fiber helps to:

- Lower blood glucose levels
- Lower cholesterol levels
- Lower blood pressure
- Increase satiety (the feeling of fullness after a meal)
- Improve laxation (through increased stool bulk and viscosity)
- Feed our gut bacteria (acting as a prebiotic-increasing bacterial numbers and improving bacterial composition)

Learn more about diarrhea with IFFGD Fact Sheet No. 214 *Understanding Intestinal Gas*

- Increase production of beneficial fermentation by-products (the compounds produced when fiber is broken down by our gut bacteria)

Fiber types

Many foods can be classified as fiber, and different types of fiber can affect the way they behave in our gut, and how well tolerated they are in patients with IBS. Characteristics that vary between fibers include their chemical structure, chain length (molecular size), solubility (ability to dissolve), viscosity (ability to thicken liquids once dissolved), and fermentability (extent and rate at which our gut bacteria break them down). In IBS, the fermentability of fiber may be particularly important.

Readily Fermentable fibers

As the name suggests, readily fermentable fibers are easily and quickly broken down by our gut bacteria, producing gases and other fermentation by-products. Examples include inulin, fructo-oligosaccharides (FOS) and pectin, which are often added to manufactured foods ranging from yogurts and snack bars to bread products to make them “high fiber.” The gas and other by-products produced via the fermentation of these fibers may cause problems in some people with IBS.

So, do you need to restrict your fermentable fiber intake?

For most people, there is no need to specifically restrict foods that naturally contain fermentable fibers. With this said, IBS is a highly individualized condition, and some people may experience added benefits by modifying the type of fiber they ingest. If you feel this is the case for you, a trial period of avoiding some fiber types may improve IBS symptoms. Working with a dietitian to understand which and fibers you tolerate may be helpful as well.

Getting enough fiber

Too much fiber can cause a problem for people with IBS, but for most people, the problem is eating too little fiber. Despite recommendations that adult women consume 25g fiber per day and men consume 38g fiber per day¹, the average fiber intake is just 16g fiber per day². There are a number of reasons for this poor fiber intake: Beliefs that all grain based foods are good sources of fiber; uptake of gluten-free, wheat-free, and grain-free diets which limit or eliminate fiber-rich grains from the diet; and beliefs that high

fiber foods are expensive, unpalatable, and complicated to prepare³.

If you have IBS, not eating enough fiber can make symptoms worse (such as constipation and abdominal pain); however, eating enough fiber can help to relieve symptoms. Eating enough fiber is easier than you think with a few small changes to your diet.

Tips to achieve adequate fiber:

- Snack on fruits (e.g., raspberries, rhubarb, kiwifruit, mandarin, strawberries, passionfruit and oranges)
- Include vegetables with meals (e.g., carrot - skin on, green beans, potato - skin on, corn, eggplant)
- Check food labels when buying bread and cereal products. Compare products in the per 100g column to find higher fiber options. Examples include quinoa flakes, brown rice, gluten-free multigrain bread, rice bran, sourdough spelt bread and porridge (oats).
- Add canned lentils/ canned chickpeas to a casserole/salad
- Snack on nuts (e.g., macadamias, almonds, and peanuts)
- Add rice bran or linseeds/flax to breakfast cereal

Note: Wheat bran is not recommended in IBS.

Also, when increasing fiber intake, do this gradually, so your bowel has time to adjust.

Fiber supplements

If you are having difficulty achieving your dietary intake requirements, you may need to try supplementing your diet with a commercially available dietary fiber supplement. Avoid fiber supplements made using readily fermentable fibers such as wheat bran and inulin (also known as chicory root). This is because fiber supplements are highly concentrated sources of fiber, and the dose provided in supplement form may be poorly tolerated.

You should discuss a suitable fiber supplement with a dietitian or health care provider. Generally, a serving of these fiber supplements contains around 5 grams of dietary fiber. Discuss how many servings per day you require with your dietitian or medical provider. Suitable options may include:

- psyllium/ispaghula
- linseeds/flax
- sterculia
- methylcellulose
- partially hydrolyzed guar gum (PHGG)

Adding high fiber foods

As mentioned, most people don't eat enough fiber, and this can cause problems in IBS. The chart below summarizes the fiber content of high fiber foods. Look for ways to add an additional 10g of fiber per day to your diet.

The following sample meal plan shows how easily you can incorporate these foods into your diet to boost your fiber intake.

Breakfast	Quinoa porridge (or oatmeal) + 1 tablespoon linseed and strawberries
Morning snack	1 orange + low lactose yogurt
Lunch	Sandwich (sourdough bread) with cheese + salad
Afternoon snack	Popcorn
Dinner	Salmon with brown rice and pan-fried greens
Evening snack	1 cup grapes + walnuts

About IFFGD

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Fiber content of food

	Food	Serving size
Add 1 g fiber	Bulgur wheat, uncooked	1/4 cup (44 g)
	Lentil, green, boiled	1/4 cup (23g)
	Nut, almond, with skin, raw	10 nuts (12 g)
	Seed, sunflower	2 teaspoons (6g)
	Tomato, sundried	3 pieces (8g)
Add 2 g fiber	Banana, common, unripe	1 medium (100g)
	Bean, green, fresh, raw	15 beans (75g)
	Bell pepper (Capsicum), red, fresh, raw	1/4 of 1 medium (75g)
	Chickpea, canned, drained	1/4 cup (42g)
	Corn, fresh on the cob, raw	1/2 cob (38g)
	Eggplant, unpeeled, fresh, raw	1 cup (75g)
	Goji berry, dried	3 teaspoons (10g)
	Kale, raw	1/2 cup chopped (75g)
	Mandarin orange, peeled, raw	2 small, peeled (125g)
	Nut, hazelnut, raw	10 nuts (15g)
	Nut, peanut, with skin, raw	32 nuts (28g)
	Nut, walnut, raw	10 nut halves (30g)
	Potato, unpeeled, raw	1/2 medium (75g)
	Chard (Silverbeet)	1 ½ cups chopped (75g)
Add 3 g fiber	Broccoli, fresh, raw, whole	3/4 cup (75g)
	Carrot, mature, peeled, fresh, raw	1 medium (75g)
	Kiwifruit, gold, peeled, raw	2 small, peeled (150g)
	Nut, brazil, raw or blanched	10 nuts (40g)
	Nut, macadamia, raw	20 nuts (40g)
	Orange, peeled, raw	1 medium (130g)
	Parsnip, peeled, fresh, raw	1 medium (75g)
	Pineapple (cayenne), peeled, raw	1 cup chopped (140g)
	Pomegranate, peeled, raw	1/4 cup seeds (45g)
	Quinoa, cooked in water	1 cup cooked (155g)
	Raspberry, raw	30 berries (60g)
	Rhubarb, stalk, raw	1 cup chopped (150g)
	Rice, brown, boiled	1 cup cooked (180g)
	Spinach, baby, fresh, raw	1.5 cup chopped (75g)
Add 4 g fiber	Seed, linseed or flaxseed	1 tablespoon (15g)
	Strawberry, raw	10 medium chopped (150g)
	Tahini, sesame seed pulp, unhulled	2 tablespoons (30g)
Add 5 g fiber	Bread, spelt sourdough	2 slices (82g)
	Coconut, fresh, mature fruit, flesh	2/3 cup (64g)
	Grape, red globe, raw	1 cup (150g)
	Noodle, soba, dry	1/3 cup (90g)
	Oats, rolled, uncooked	1/2 cup (52g)
Add 6 g fiber	Kiwifruit, green, peeled, raw	2 small, peeled (150g)
	Passionfruit, raw	2 fruits (46g)
	Tofu, firm	2/3 cup cubed (160g)
Add 7 g fiber	Buckwheat groats, cooked	3/4 cup cooked (135g)
Add 8 g fiber	Seed, chia, dried	2 tablespoons (24g)
	Popcorn, commercial	½ packet – 3.5 cups (60g)