

## What is a Low FODMAP DIET?

FODMAPs are carbohydrates / sugars that are found in foods.

Lactose from dairy products, fructose from certain fruits, coconut products and sweeteners, fructans from fibrous vegetables, and polyols from fruit and sugar alcohols are all rich in FODMAPs and can be difficult to digest for people with gut disorders.

**FODMAP stands for:**

### Fermentable

#### Oligosaccharides

Fructans like wheat, garlic, onion, inulin and Galacto-oligosaccharides (GOS) like legumes such as beans, lentils, soybeans, etc

#### Disaccharides

Lactose like dairy

#### Monosaccharides

excess Fructose like fruits, honey, high fructose corn syrup

#### Polyols

Sweeteners with Sorbitol, Mannitol, Maltitol, Xylitol and Isomalt, Stone fruits such as avocado, apricots, cherries, nectarines, peaches, plums, etc

FODMAPs pull water into the digestive tracts, and when not be digested or absorbed well, they will increase intestinal movements or diarrhea.

These carbohydrates are not well absorbed in the body and remain in the digestive tract for longer periods, and will be fermented by bacteria in the gut when eaten too much. The symptoms of bloating, constipation, gas pain, flatulence will be exacerbated especially if you have small intestinal bacterial overgrowth (SIBO).

While a low-FODMAP diet can be somewhat restrictive, especially at first, it's rarely necessary to completely eradicate FODMAPs from the diet. Most people improve significantly simply by greatly reducing their consumption of these foods. FODMAP intolerance is not like other food sensitivities like gluten or casein intolerance. In those cases, the immune system reacts—regardless of how much of that food you eat

### **STEP 1: Generalized avoidance**

Restrict **ALL** high FODMAPs for **4-6 weeks**, or until good symptomatic control is achieved. This is done by:

- substituting high FODMAP foods with lower options, or
- by reducing the total FODMAP load consumed at each meal or across the day.

### Healthy Tip

1. Liver from pastured animals one to two times weekly will help to replenish your vitamin B12, iron, and other nutrients you may be deficient in due to dysbiosis.
2. Homemade bone broths can be very healing for the GI tract.
3. Meats are most easily digested when prepared at low cooking temperatures, using moist cooking techniques. Consider using a slow-cooker, stewing, braising or poaching for at least 30 days.
4. Vegetables should be well-cooked with any seeds removed to improve digestibility; minimize your intake of raw, fibrous fruits and vegetables
5. Be very careful when eating out, and consider calling ahead to ask about preparation methods and ingredients to find an option that works for you.

### STEP 2: Reintroduction

Most patients do not have the same reaction to each class of FODMAPs listed above. Some people seem to have no trouble with lactose but do very poorly with excess fructose. Others may tolerate polyols but not fructans. After removing all FODMAPs x 4-6 weeks, reintroduce them category by category to see which ones are well tolerated. E.g. Reintroduce fruits and vegetables in the fructan category. Once the patient knows how fructans affect her, then you could recommend reintroducing the foods with excess fructose, and so forth. Then develop an individualized plan by identifying specific FODMAP foods that cause symptoms.

**Healthy Rule 1** If you are concerned about a single food, test it for yourself, Then you'll know if it is Fodmap friendly for you.

**Healthy Rule 2** All carbohydrates have some FODMAP in it, so stick with a diet with moderate healthy fats and proteins, and low in carbohydrates

**Healthy Rule 3** With FODMAP intolerance, it's more of a "threshold response": if a person is eating a lot of FODMAPs on a daily basis, the threshold for tolerating FODMAPs will be low. However, if the overall intake of FODMAPs is low, the patient may be able to tolerate a small amount of them without much problem. This can make things a little easier when people are eating out, traveling, or are in an environment where they don't have as much control over their food choices.

**Healthy Rule 4** It is best to use the low-FODMAP diet for the short term and then gradually reintroduce some of the well-tolerated FODMAPs into the diet. At least two studies have shown that long-term FODMAP diets reduce the levels of beneficial bacteria in the colon, which is obviously not desirable. You can read more about this topic and clinical treatments in [this article](http://chriskresser.com/why-diet-alone-is-not-enough-to-treat-sibo). (<http://chriskresser.com/why-diet-alone-is-not-enough-to-treat-sibo>)

## FODMAP FOOD LIST

Foods	OK to EAT	May Cause symptoms	AVOID
<b>Vegetables</b>	Alfafa Bamboo shoots Bell peppers Bok Choy Carrot Cherry tomatoes Chives Cucumber Eggplant Ginger Green beans Kale Lettuce Olives Parsnip Pickles Seaweed, nori Spinach Spring onion (green part only) Swiss chards Squash Tomatoes Water chestnuts Zucchini	Avocado (polyol) Brussels sprouts (fructans) Celery (polyol) Fennel bulb (fructans) Green peas (fructans) Mushrooms (polyol)	Artichoke (fructose) Asparagus (fructose) Broccoli (fructans) Cabbage (fructans) Cauliflower (polyol) Garlic (fructans) Jerusalem artichoke (fructans) Leeks (fructans) Okra (fructans) Onion (fructans) Shallots (fructans) Snow peas (fructans, polyols) Sugar snap peas (fructose) Raddichio (fructans) Tomato sauces and tomato paste (fructose, fructans)
<b>Fruits</b>	Banana,ripe Blueberries Grapefruit Kiwi Lemon Lime Mandarin Melons (including cantaloupe and honeydew) Orange Papaya Passionfruit Pineapple Raspberries Rhubarb Strawberries	Banana, unripe Longon (polyol) Lychee (polyol) Rambutan (polyol) Grapes (fructose)	Apple (fructose and polyol) Apricot (polyol) Cherries (fructose and polyol) Mango (fructose) Nectarine (polyol) Peach (polyol) Pear (fructose and polyol) Persimmon (polyol) Plum (polyol) Watermelon (fructose and polyol)

<b>Grains / Starch</b>	<p>Arrowroot Buckwheat Cornmeal Gluten free grains or Chips or cereal:</p> <ul style="list-style-type: none"> <li>- Amaranth</li> <li>- Corn</li> <li>- Oats</li> <li>- Potato</li> <li>- Quinoa</li> <li>- Rice / Rice Bran</li> <li>- Tapioca</li> <li>- Millet</li> <li>- Spelt</li> </ul> <p>White potatoes White Rice Plantains Turnip Rutabaga Taro / Cassava / Yuca</p>	<p>Sweet potato (polyol) Yam (polyol) (&lt;½ cup)</p>	<p>Legumes (galactans) Wheat Rye Gluten containing products</p>
<b>Nuts</b>	<p>All nuts may be difficult to digest, and caution should be taken. Sprouted nuts or homemade sprouted nut butters may be best tolerated.</p>	<p>Most nuts and nut butter: (&lt;¼ cup)</p>	<p>Pistachios (fructans) Almonds Hazelnuts</p>
<b>Dairy</b>	<p>Ghee</p>	<p>High-fat, low-lactose dairy products made from the milk of pastured cows, ideally raw; only if tolerated:</p> <ul style="list-style-type: none"> <li>- Cream Kefir (fermented 24 hours)</li> <li>- Yogurt (fermented 24 hours)</li> </ul> <p>Aged cheese</p>	<p>Cheese All commercial dairy products made from non-pastured, grain-fed cows: Condensed milk Fresh cheese Milk (cow, goat, sheep) Soft cheese (ricotta, cottage, mascarpone, cream) Sour cream Ice cream Yogurt</p>
<b>Protein</b>	<p>Meat Poultry Fish and Seafood Eggs</p>		<p>Chickpeas Lentils Dried beans (all) (all galactans)</p>

	Bacon (no additives) Tofu		
<b>Fats</b>	Coconut oil Ghee, butter, cream Lard Olive oil Macadamia oil Homemade mayo Olives	Avocado (<¼ avocado)	
<b>Treats / Sweeteners</b>	Brown Sugar Cane sugar Rice syrup Sucrose Glucose Gelati Sorbet	Dried coconut (<¼ cup) Coconut sugar Cocoa powder Coconut milk / cream/ butter Dark Chocolate Maple syrup Molasses	Agave syrup (fructose) Artificial sweeteners (Splenda, aspartame, etc.) High-fructose corn syrup (fructose) Honey (fructose) Refined sugars
<b>Seasonings</b>	Salt Pepper Fresh herbs Dried herbs Ginger Garlic infused oil Spices (avoid blends with onion and garlic powder) Vinegars <ul style="list-style-type: none"> <li>- Balsamic</li> <li>- Red Wine</li> <li>- Apple Cider</li> </ul> Asafoetida powder Seaweed, nori Olive tapenade Sun-dried tomatoes		Sugar-, grain-, soy- or gluten- containing seasonings or condiments (ketchup, soy sauce, some tamari sauces, balsamic glaze, commercial mayonnaise and salad dressings)  Chicory (fructans) Sugar alcohols (sorbitol, mannitol, xylitol, etc.) Gums, carrageenan, soy lecithin MSG and colorings
<b>Drinks</b>	Water Tea Homemade bone broth	Teas with unsafe fruit Dry wines Coffee	Sweet wines Port wines Fruit Juices Sodas (fructose) Beer (most contain gluten and/or mannitol)

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3. Shepherd SJ, Parker FJ, Muir JG and Gibson, PR Dietary triggers of abdominal symptoms in patients with irritable bowel syndrome- randomised placebo-controlled evidence *Clin. Gastroenterol. Hepatol.* 2008;6(7):765-771 <http://www.sciencedirect.com/science/article/pii/S1542356508001511>
4. Halmos, EP, Power VA, Shepherd SJ, et al. A Diet Low in FODMAPs Reduces symptoms of Irritable Bowel Syndrome *Gastroenterology* 2014;146(1)67-75
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