

## Low FODMAP Diet

### FODMAP? What does that stand for?

**F**ermentable

**O**ligosaccharides (*oligo* –“few,” *saccharide* – “sugar”)

**D**isaccharides (“two sugars”)

**M**onosaccharides (“one sugar”)

**A**nd

**P**olyols (these are sugar alcohols)

### OK, but what are FODMAPs and who should avoid them?

FODMAPs are a type of carbohydrate, or “sugar,” found in certain foods. Carbohydrates give us energy, along with fat and protein. People with irritable bowel syndrome (IBS), a slow moving gut, or other bowel disorder may not tolerate foods with FODMAPS. This is because FODMAPS are not easily absorbed by the bowel.

Symptoms of FODMAP intolerance include gas, abdominal discomfort, distention, bloating, fullness, nausea, and/or pain after eating foods containing FODMAPS.

Foods that do not contain carbohydrates are not a concern. This includes meat, poultry, fish, eggs, butter, oils, and hard cheeses.

Carbohydrates that are Considered FODMAPS	
Fructans and Galactans	Polyols
➤ Fructose	➤ Sorbitol
➤ Lactose	➤ Mannitol
➤ Fructooligosaccharides	➤ Xylitol
➤ Galactooligosaccharides	➤ Maltitol

### Fructose

Fructose is a naturally occurring sugar found in fruit, vegetables, and honey. Fruits and fruit juices with higher levels of fructose may cause gas, bloating, abdominal cramping, and diarrhea. For some people, even a small amount of fruit juice may worsen symptoms.

Glucose is also a naturally occurring sugar. Fruits and juices with more glucose (and less fructose) may be more “intestine friendly.” The tables in the following section list which fruits, juices, and other foods may be better choices if you have FODMAP intolerance.

### **High Fructose Corn Syrup (HFCS)**

HFCS is an ingredient in many processed foods. HFCS is made up of almost half glucose and half fructose, similar to regular table sugar (i.e., “sucrose”). HFCS may not be a problem for people with FODMAP intolerance. So, foods and drinks with HFCS, such as soft drinks, may be ok to include in your diet as long as they are limited to 12 oz per day and are taken with a meal.

But for some people, even a small amount of processed fruit juice or HFCS may cause intestinal discomfort and/or malabsorption.

### **Sorbitol**

Sorbitol (or sorbose) is a sugar alcohol that is found naturally in fruits and fruit juices. It is used as an artificial sweetener. It can also be found in many “diet foods” or “diabetic” foods like diet soft drinks, sugarless gum, sugar-free jelly/jam, and other sugar-free foods. It may also be found in liquid medications. Sorbitol often creates similar symptoms as fructose – especially when fructose and sorbitol are taken together.

### **Medications**

Many liquid medications and some personal care items may contain sugar alcohols (sorbitol, mannitol, xylitol, maltitol, isomalt). Examples include: liquid pain relievers (including liquid gel caps), cough medicines, and cough drops. If possible, choose a tablet or caplet form instead of liquid medication.

If you have eliminated FODMAPs from your diet and are still having symptoms, talk to your pharmacist to see if any of your medications contain lactose or sugar alcohols.

### **Three Steps to a Low FODMAP Diet**

The low FODMAP diet is not a traditional diet like ones you may have heard of or tried. Instead, it’s a learning process that will help you find out which foods make your symptoms worse, without taking away any that don’t.

*Step 1:* First, look over the list of high FODMAP foods. If you eat much of any of them, try cutting them out first.

*Step 2:* If you feel a lot better, that may be all you need to do. If not, try to cut out all high FODMAP foods as much as you can for 6-8 weeks.

*Step 3:* After 6-8 weeks of cutting out all high FODMAP foods, bring foods back in one at a time. That way, if your symptoms get worse, you will know which food caused it.

There has not been enough research on the low FODMAP diet to know for sure what the best way is to bring foods back. Here are three ways:

- *Option 1:* Bring back lower FODMAP foods first, slowly working up to the highest FODMAP sources.
- *Option 2:* Bring back high FODMAP foods first.
- *Option 3:* Bring back your favorite FODMAP foods first.

<b>Tips for Starting a Low FODMAP Diet</b>
✓ Eliminate products with ingredients that list fructose, crystalline fructose (not HFCS), honey, and sorbitol on the label.
✓ Avoid sugar alcohols. These include sorbitol, isomalt, lactitol, maltitol, mannitol, xylitol, erythritol, and lactatol. These are often found in "diet" or "diabetic foods" such as diet drinks, ice cream, candy, processed goods, etc.
✓ Limit drinks with HFCS. If you drink them, drink less than the recommended serving size – less than 12 oz of soda. It may help to drink with a meal.
✓ Check your medications for fructose and sorbitol. They are not always listed on the label, so check with your pharmacist or the manufacturer.
✓ Keep in mind the amount of fructose found in 2 apples (or 2 oz of honey) is the same as the amount of fructose in 1 can of soda, but apples have other nutritional benefits.
✓ Follow guidelines below to choose fruits, vegetables, and other foods that are friendlier to your intestines!

### **Additional Resources**

- Visit [www.GInutrition.virginia.edu](http://www.GInutrition.virginia.edu) and go to Nutritional Issues in Practical Gastroenterology. Find the December 2012 article: A FODMAP Diet Update: Craze or Credible?
- Visit [www.ibsgroup.org](http://www.ibsgroup.org) and look under the Diet tab. They have a nice printable FODMAP food list.
- Books: IBS: Free at Last by Patsy Catsos, MS, RDN, LD and the new edition: *The IBS Elimination Diet and Cookbook* that will be out in 2017-- [www.ibsfree.net](http://www.ibsfree.net).
- Monash University site: <http://www.med.monash.edu/cecs/gastro/fodmap>. Originated the low FODMAP diet and continues to do research in the area.

Food Group	Serving Size and Suggestions	Low FODMAP	Moderate FODMAP	High FODMAP
<b>Fruits</b>	<p>½ cup of cut fruit or a medium (baseball size) whole fruit.</p> <p>Limit to 1 to 2 servings per day.</p> <p>Fresh or fresh frozen fruit may be better tolerated than canned fruit.</p> <p>Tolerance may depend on the amount you eat at one time.</p> <p>Limit concentrated sources of fruit, such as dried fruit and fruit juices.</p>	<p>Bananas Blueberries Cantaloupe Grapefruit Grapes Honeydew Kiwi Lemons Limes Oranges Papaya Passion fruit Pineapple Raspberries Rhubarb Strawberries Tangelos</p> <p><i>Note: Avoid eating large amounts of any fruit.</i></p>	Canned fruit	<p>Apples Applesauce Avocados Blackberries Dried fruits (e.g., raisins, dates) Fruit juice Lychees Pears Persimmons Watermelons</p> <p>Stone fruits: Apricots Cherries Mangos Nectarines Peaches Plums Prunes</p>
<b>Vegetables</b>	<p>½ cup for most vegetables or 1 cup of leafy greens</p> <p>Limit to 1½ to 3 servings per day.</p>	<p>Bamboo shoots Bok choy Carrots Celery Chives Cucumber Eggplant Green beans</p>	<p>Corn Green peas Tomatoes</p>	<p>Artichokes Asparagus Beets Broccoli Brussels sprouts Cabbage Cauliflower Fennel</p>

Food Group	Serving Size and Suggestions	Low FODMAP	Moderate FODMAP	High FODMAP
<b>Vegetables (continued)</b>	<p>Cooked vegetables may be tolerated best since cooking causes a loss of free sugars.</p> <p>Keep in mind tolerance may depend on the amount you eat at one time.</p>	<ul style="list-style-type: none"> <li>Kale</li> <li>Lettuce</li> <li>Parsnips</li> <li>Pumpkin</li> <li>Radish</li> <li>Red bell pepper</li> <li>Spinach</li> <li>Squash</li> <li>Sweet potato</li> <li>Turnip</li> <li>White potato</li> <li>Zucchini</li> </ul>		<ul style="list-style-type: none"> <li>Garlic</li> <li>Green bell peppers</li> <li>Leeks</li> <li>Mushrooms</li> <li>Okra</li> <li>Onions</li> <li>Shallots</li> <li>Sweet corn</li> <li>Tomato paste</li> </ul>
<b>Dairy</b>		<ul style="list-style-type: none"> <li>Kefir</li> <li>Lactose-free milk</li> <li>Lactose-free cottage cheese</li> <li>Lactose-free yogurt</li> <li>Hard or aged cheeses</li> <li>Butter</li> <li>Cream</li> <li>Cream cheese</li> </ul>	American cheese	<ul style="list-style-type: none"> <li>Milk</li> <li>Yogurt</li> <li>Ice cream</li> <li>Cottage cheese</li> <li>Ricotta cheese</li> </ul>
<b>Grains</b>		<ul style="list-style-type: none"> <li>Quinoa</li> <li>Rice</li> <li>Millet</li> <li>Cornmeal</li> <li>Gluten-free products</li> </ul>	<ul style="list-style-type: none"> <li>Oats</li> <li>Buckwheat</li> <li>Sourdough white bread</li> </ul>	<ul style="list-style-type: none"> <li>Wheat</li> <li>Barley</li> <li>Rye</li> </ul>

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<b>Legumes and Nuts</b>		Firm and medium tofu Pumpkin seeds Sesame seeds Sunflower seeds	Canned and drained chickpeas and lentils  Nuts and nut butters except pistachios and cashews  Flax seeds	Soy (silken tofu, textured vegetable protein, edamame, soy nuts, soy milk)  Beans Chickpeas, hummus Lentils Pistachios Cashews
<b>Beverages</b>		Espresso Filtered coffee Green tea Peppermint tea Black tea		Soft drinks that include high-fructose corn syrup or crystalline fructose; Apple juice Other fruit juices Apple cider Instant coffee Chamomile tea Fennel tea
<b>Sweeteners</b>		Granulated sugar Evaporated cane juice Brown sugar Brown rice syrup Pure maple syrup Corn syrup Sugar cane molasses Aspartame Saccharin Sucralose Stevia	Cocoa	High-fructose corn syrup Crystalline fructose Honey Agave Sugar beet molasses Sorbitol Xylitol Mannitol Maltitol