

Low FODMAP Nutrition Therapy

FODMAP is an acronym for:

Fermentable

Oligosaccharides

Disaccharides

Monosaccharides

And

Polyols

These are food components found in carbohydrates. This diet is recommended to reduce symptoms for those who have irritable bowel syndrome (IBS) or inflammatory bowel disease (IBD).

Fermentable means that bacteria in your gut can ferment these food components when eaten in large portions. This can result in gas, bloating, abdominal pain, and diarrhea.

Oligosaccharides	Wheat, rye, garlic, onion, leeks and artichokes (fructan sources) Beans, lentils, soybeans, and nuts, including cashews (galacto - oligosaccharides /GOS sources)
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Disaccharides	Dairy products and ingredients from cow, goat, or sheep's milk (lactose sources)
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Mono-saccharides	Certain fruits, honey, and high fructose corn syrup (fructose sources)
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And

Polyols	Apricots, avocados, cherries, nectarines, peaches, plums, and mushrooms (food sources) Sorbitol, mannitol, maltitol, erythritol, xylitol and isomalt (sweetening agents)
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If your digestive tract does not digest or absorb these foods well, they can cause water to be pulled into your digestive tract. The bacteria there may cause fermentation that leads to symptoms of gas, bloating and diarrhea.

Limiting or eliminating these foods may improve your symptoms.

Fiber

Fiber is a part of carbohydrate that is not digested by your body. Fiber is found in plant foods such as fruits, vegetables, whole grains, and legumes (dried beans, peanuts).

Since some high-fiber foods are also high FODMAP, this diet may limit your fiber intake. **Plan your meals carefully to include alternative sources of fiber.**

Preparing for the Low-FODMAP Diet

1. Keep a food record of your usual intake and symptoms for 7 days. Each day record:

- Your food and beverage intake (when and how much you ate or drank)
- Your symptoms (type, severity, and timing or onset of symptoms)

2. Read food labels carefully

- By law, ingredients must be listed in order of greatest amount present in the food to the least. (In other words, ingredients listed first make up most of the product.) Use the ingredient list to identify FODMAP foods you should avoid and those you can eat.
- Check the amount of fiber. You should aim to include low-FODMAP foods containing 3 or more grams of fiber per serving in your daily meals to meet your daily fiber goals.

Following the Low-FODMAP Diet

Step 1: Eliminate high-FODMAP sources from your diet

Follow the low- FODMAP diet for 2-6 weeks to reduce your symptoms.

- Aim to drink 64 ounces of water daily.
- Avoid foods that are made with high amounts of dairy: high FODMAP fruits and vegetables; regular pasta and bread that contain wheat, barley, rye as ingredients; and sweeteners such as high fructose corn syrup, honey, and inulin.
- Limit portion sizes at each meal to keep the FODMAP level low enough to avoid symptoms. Here are the recommended portion sizes per serving.

Portion sizes

Dairy	6 ounces of lactose-free* yogurt 8 ounces of lactose-free* milk 1 ounce of aged cheese *if not lactose-free, serving size is smaller
Vegetables	1/2 cup serving
Fruit	1 small banana 1 small orange 1 small handful of berries (1/4 cup to 1/2 cup) 1 small handful of grapes (1/4 cup to 1/2 cup) 1/3 to 1/2 cup of 100% juice (not made from fruit on the high-FODMAP food list)
Grains	1 slice of bread ¹ ¹ Traditionally made sourdough breads baked with wheat or spelt can be included in a low-FODMAP diet. Avoid other breads made with wheat, rye, and barley.) 1/2 cup cereal or grains ² ² Choose grains that are low in gluten (wheat, barley, and rye should not be major ingredients). You do not need to totally avoid gluten unless you have been diagnosed with celiac disease. If you do not have celiac disease, you may consume gluten-containing foods in small amounts only. For example, you can eat the crumb coating on chicken.

Step 2: Test your tolerance to FODMAP foods by introducing high FODMAP foods

After the initial strict phase of the diet, introduce high - FODMAP groups one at a time to help learn which foods cause your symptoms. Try introducing 1 type of high-FODMAP food each day or, for a slower approach, 2 foods in a given week.

As you reintroduce new foods, keep detailed records of your symptoms to identify all triggering foods that cause symptoms.

Continue to limit portion sizes at each meal to a single serving size. This will make it easier to identify the foods causing your symptoms. The following pages contain lists of foods that are **OK to eat** and **foods to limit**, by category.

Meats, Poultry, Fish, Eggs, Protein Foods	
OK to Eat	Limit these Foods
<ul style="list-style-type: none">• well cooked, unseasoned, beef, chicken, turkey, fish, lamb, pork, or shellfish• canned tuna• eggs or egg substitute	<ul style="list-style-type: none">• fatty and fried meats• sausage foods• meats made with high FODMAP fruit sauces, high fructose corn syrup (HFCS), or sweeteners (BBQ sauce, sweet chili, marmalades, honey, corn syrup, sorbitol)
Dairy	
OK to Eat	Limit these Foods
<ul style="list-style-type: none">• lactose-free milk• lactose-free ice cream• lactose-free yogurt/kefir• lactose-free cottage cheese• small amounts of cream cheese or half and half• 1 ounce hard, aged, or ripened cheese (brie, cheddar, Colby, camembert, feta, goat, Havarti, mozzarella, parmesan, Swiss)• sorbet made from suitable fruit/sweeteners	<ul style="list-style-type: none">• buttermilk• chocolate milk• milk (cow's, goat's, sheep's)• soy milk• cottage cheese• ice cream• yogurt• milk-based or cheese-based sauces• sweetened condensed milk• evaporated milk• ricotta cheese• sour cream• whipped cream• custard

Non-Meat, Non- Dairy Alternatives, Legumes, Protein Foods	
OK to Eat	Limit these Foods
<ul style="list-style-type: none"> almond milk rice milk ice cream made from rice milk soy milk made from soy extract tofu, firm (drained) smooth nut butters nuts*and seeds* (almonds, Brazil nuts, chestnuts, pecans, macadamias, pine nuts, walnuts. poppy, pumpkin and sunflower seeds) 	<ul style="list-style-type: none"> coconut milk, coconut cream beans, baked beans black eyed peas cashews hummus lentils split peas pistachios soy beans, soy milk made from soy beans soy products

Fruits*	
OK to Eat	Limit these Foods
<ul style="list-style-type: none"> bananas blueberries cantaloupe dragon fruit grapes grapefruit honeydew kiwi kumquat lemon lime mandarin orange orange passion fruit pineapple plantains raspberries rhubarb star fruit strawberries tangelos tangerines 	<ul style="list-style-type: none"> apples, applesauce apricots avocado blackberries boysenberries cherries dried fruits fig guava lychee mango nectarines papaya pears peaches, plums, prunes persimmon pomegranate watermelon

Grains	
OK to Eat	Limit these Foods
Gluten/wheat-free grains <ul style="list-style-type: none"> • arrowroot • buckwheat flour • cornmeal/corn flour • cornstarch • gluten-free flour • glutinous rice • ground rice • millet • oat bran • oatmeal • polenta • potato flour • quinoa • rice (brown, white) • rice bran • rice flour • sago • sorghum • sourdough breads made of wheat or spelt • tapioca • teff • wild rice Pasta/Noodles <ul style="list-style-type: none"> • rice noodles • rice vermicelli • gluten-free pasta Cereals <ul style="list-style-type: none"> • baby rice cereal • cream of buckwheat • rice-based breakfast cereals • corn-based breakfast cereals • grits • oatmeal • toasted oat cereal 	Products containing: <ul style="list-style-type: none"> • almond meal • barley • bulgur • chickpea flour • chicory root • coconut flour • couscous • freekeh • gnocchi • lentil flour • mixed grain cereals • muesli • multigrain flour • pea flour • pumpernickel • rye • semolina • soy flour • spaetzle • spelt • triticale • wheat (other names for wheat: einkorn, emmer, kamut, spelt) • wheat flour (other names for wheat flour: bromated, durum, enriched, farina, graham, semolina, white flour) • wheat germ

Grains (continued)	
OK to Eat	Limit these Foods
Baked Goods/Snacks <ul style="list-style-type: none"> • gluten-free breads • corn tortilla/taco shell • corn-based crackers • popcorn • potato chips • pretzels (1/2 cup) • plain rice cakes • plain rice crackers • gluten-free products (bagels, breads, cookies, crackers, cakes/pastries, pretzels, tortillas, waffles) 	

Vegetables*	
OK to Eat	Limit these Foods
<ul style="list-style-type: none"> • alfalfa, arugula • bamboo shoots • bean sprouts, bell peppers • bok choy, broccoli • Brussel sprouts • cabbage • cucumbers • carrots, celery • collard greens • corn, endive • eggplant, fennel • green beans, kale • leafy greens, lettuce • okra, olives, • parsnips, pumpkin • potatoes – white & sweet • radishes, rutabaga • scallions (green part only) seaweed • squash, (butternut, winter, spaghetti) • spinach, Swiss chard tomatoes • turnip • water chestnuts • zucchini 	<ul style="list-style-type: none"> • artichokes • asparagus • beets • cauliflower • leeks • mushrooms • onions • peas • sauerkraut • scallions (white part) • summer squash • shallots • snow peas • sugar snap peas • yucca root

Desserts	
OK to Eat	Limit these Foods
<ul style="list-style-type: none"> any made with allowed foods gluten-free pastries/cookies lactose free ice-cream sorbet made from suitable fruit/sweeteners lactose-free whipped cream 	<ul style="list-style-type: none"> <u>any</u> containing high fructose corn syrup (HFCS) regular ice cream yogurt chocolate cow's milk custard

Beverages	
OK to Eat	Limit these Foods
<ul style="list-style-type: none"> water mineral water soda water tonic water coffee (black) espresso tea (black <i>weak</i>, green, honeybush, peppermint or rooibos) cocoa 100% pure cranberry juice (<i>max 4 ounces</i>) orange juice - not from concentrate (<i>max 4 ounce</i>) <p>Alcohol**:</p> <ul style="list-style-type: none"> Gin Vodka Whiskey 	<ul style="list-style-type: none"> <u>any</u> containing high fructose corn syrup (HFCS) apple, mango, pear, tropical juices orange juice from concentrate black (strong), chamomile, dandelion, oolong, and fennel teas kombucha chicory-based drinks carob powder malted milk powder coconut water <p>Alcohol**:</p> <ul style="list-style-type: none"> Fortified wines (sherry, port) Grenadine Rum Tequila

Seasonings and Condiments	
OK to Eat	Limit these Foods
<p>Seasonings</p> <ul style="list-style-type: none"> • asafetida, basil • cardamom, chili • chives, cilantro • clove, coriander • cumin, curry • fennel, flaxseed • garlic-flavored oil • ginger, lemongrass • mint, dried mustard • nutmeg, paprika • parsley, pepper • rosemary, sage • salt, saffron • tarragon, thyme • wasabi <p>Condiments (must not contain onion, garlic, or high fructose corn syrup/HFCS)</p> <ul style="list-style-type: none"> • balsamic vinegar • homemade broth • butter, ghee • chili sauce • garlic-infused oil • hot sauce • ketchup • margarine • mayonnaise • mustard • olives • olive oil • salad dressings • soy sauce • tamari • vegetable oils • vinegar 	<p>Seasonings</p> <ul style="list-style-type: none"> • Garlic (fresh, jarred, powdered, granulated, and garlic salt) • Onion (fresh, canned, or frozen; onion extract, powder, or salt) <p>Condiments</p> <ul style="list-style-type: none"> • <u>any</u> containing HFCS, garlic, or onion • broth (commercially made) • bouillon cubes • chutney • coconut • gravies with onion or garlic • jams • jellies • molasses • pickles • relish • salad dressing/sauces containing onion, garlic or high fructose corn syrup (HFCS)

Sweeteners and Baking	
OK to Eat	Limit these Foods
Sugars <ul style="list-style-type: none"> • brown, cane, raw, maple, superfine, table, white, and confectioner's sugar • corn syrup (not high-fructose variety) ⬆ • glucose • sucralose • dark chocolate • maple syrup • molasses Artificial sweeteners <i>not</i> ending in "ol" <ul style="list-style-type: none"> • acesulfame potassium • aspartame (Equal®) • saccharine (Sweet'N Low®) • stevia (Truvia®) • sucralose (Splenda®) Baking <ul style="list-style-type: none"> • baking powder or soda • cocoa powder • coconut • gelatin • salt • vanilla 	<ul style="list-style-type: none"> • agave (syrup or nectar) • corn syrup solids ⬆ • high fructose corn syrup (HFCS) ⬆ • fructose • fruit juice concentrate • honey • inulin • isomalt • milk chocolate • molasses • polydextrose • white chocolate • sweeteners ending in "ol": lactitol, maltitol, mannitol, sorbitol, xylitol

Symbols Used in Charts

*	Foods marked with an asterisk (nuts, seeds, fruits, vegetables) should be limited if you are lowering your fiber intake because of inflammatory bowel disease (IBD) or irritable bowel syndrome (IBS), diarrhea, or severe loose stools. Instead, choose canned and well-cooked fruits and vegetable without seeds, skins, or hulls to reduce fiber. Portion size should be no greater than 10 for nuts. Refer to example portion sizes.
**	You should only consume alcohol if approved by your physician. If you choose to consume alcohol, follow recommended limits per the AICR Cancer Prevention Guidelines: 1 drink per day limit for women 2 drinks per day limit for men. (1 drink = 12 ounces beer, 5 ounces wine or 1 ½ ounces 80 proof liquor)
⬆	Corn syrup solids and corn syrup are identified as different ingredients on a food label.

Processed Foods

If you eat processed foods and are unsure of the ingredients on the food label, please contact the registered dietitians at Roswell Park for additional information.

Oral Liquid Supplements Allowed

- Boost® High Protein
- Boost® Optimum
- Carnation® Breakfast Essentials Ready-to-Drink
- Whey protein isolate (low lactose variety)

Questions?

- Resource for more information: **The Low FODMAP Diet** from Monash University, includes a blog with a chart that shows the FODMAP content of various types of flour: www.monashfodmap.com
- **If you have any questions, please call the Nutrition Department at Roswell Park: 716 -845-2398**