

## **The Low FODMAP Diet (FODMAP=Fermentable Oligo-Di-Monosaccharides and Polyols)**

FODMAPs are carbohydrates (sugars) that are found in foods. Not all carbohydrates are considered FODMAPs.

The FODMAPs in the diet are:

- Fructose (fruits, honey, high fructose corn syrup (HFCS), etc)
- Lactose (dairy)
- Fructans (wheat, garlic, onion, inulin etc)
- Galactans (legumes such as beans, lentils, soybeans, etc)
- Polyols (sweeteners containing isomalt, mannitol, sorbitol, xylitol, stone fruits such as avocado, apricots, cherries, nectarines, peaches, plums, etc)

FODMAPs are osmotic (means they pull water into the intestinal tract), may not be digested or absorbed well and could be fermented upon by bacteria in the intestinal tract when *eaten in excess*

Symptoms of diarrhea, constipation, gas, bloating and/or cramping may occur in those who could be sensitive to the effects of FODMAPs. A low FODMAP diet may help reduce symptoms, which will limit foods high in fructose, lactose, fructans, galactans and polyols.

The low FODMAP diet is often used in those with irritable bowel syndrome (IBS). The diet could be possibly used in those with similar symptoms arising from other digestive disorders such as inflammatory bowel disease.

This diet will also limit fiber as some high fiber foods are also high in FODMAPs (Fiber is a component of complex carbohydrates that the body cannot digest, found in plant based foods such as beans, fruits, vegetables, whole grains, etc)

<b>Food Group</b>	<b>Low FODMAPs</b>	<b>High FODMAPs (avoid)</b>
<b>Eggs, Meats, Poultry, Fish</b>	beef, chicken, deli slices, eggs, fish, lamb, pork, shellfish, turkey	made with HFCS/foods to limit
<b>Dairy</b>	lactose free dairy (any), <u>low lactose dairy</u> : cream cheese, half and half, hard cheeses (cheddar, colby, parmesan, swiss, etc), soft cheeses (brie, feta, mozzarella, etc), sherbet, yogurt (greek), whipped cream	<u>high lactose dairy</u> : buttermilk, chocolate, creamy/cheesy sauces, custard, ice cream, milk (cow's, goat's, sheep's, condensed, evaporated), soft cheeses (cottage, ricotta, etc), sour cream
<b>Meat, Non-Dairy Alternatives</b>	milk alternatives (almond, coconut, rice, soy (made from soy protein)), nuts (walnut, macadamia, peanut, pecan, pine), nut butters, tempeh, tofu	cashews, beans, black eyed peas, bulgur, lentils, miso, pistachios, soybeans, soy milk (made from soybeans)
<b>Grains</b>	<u>made with gluten free/spelt grains (corn, oats, potato, quinoa, rice, tapioca, etc)</u> : bagels, biscuits, breads, cereals, chips, crackers, noodles, pancakes, pastas, pretzels, tortillas, waffles oatmeal, oat bran, popcorn, quinoa, rice, rice bran	made with wheat/barley/rye when it's the major ingredient, gluten free/spelt grains made with foods to limit, chicory root, inulin
<b>Fruits</b>	bananas, blueberries, cantaloupe, cranberries, grapes, honeydew, kiwi, lemon, lime, mandarin, orange, passion fruit, pineapple, raspberries, rhubarb, strawberries, tangerine	apples, applesauce, apricots, blackberries, boysenberries, canned fruit, dates, dried fruits, figs, guava, mango, nectarines, papaya, peaches, pears, plums, persimmon, prunes, watermelon
<b>Vegetables</b>	alfalfa/bean sprouts, bamboo shoots, bell peppers, bok choy, carrots, cabbage (common), cucumbers, eggplant, green beans, kale, lettuce, parsnips, pumpkin, potatoes, radishes, rutabaga, seaweed (nori), spinach, squash, tomatoes, turnips, water chestnuts, zucchini	artichokes, cauliflower, mushrooms, sugar snap peas
<b>Desserts</b>	made with foods allowed	made with HFCS/foods to limit
<b>Beverages</b>	fruit and vegetable juices/smoothies made with foods allowed (limit to ½ cup at a time), coffee, tea	made with HFCS/foods to limit, fortified wines (sherry, port)
<b>Seasonings, Condiments</b>	jam, jelly, pickle, relish, salsa, sauce, salad dressing made with foods allowed, most spices and herbs, broth (homemade), butter, chives, cooking oils, garlic/onion infused oil, maple syrup without HFCS, mustard, margarine, mayonnaise, onion (spring-green part), olives, pepper, pesto, salt, seeds (chia, flax, pumpkin, sesame, sunflower), sugar, soy sauce, vinegar	chutney, jam, jelly, pickle, relish, salsa, sauce or salad dressing made with HFCS/ foods to limit, agave, garlic, garlic salt/powders, honey, hummus, molasses, onions (brown, leeks, shallots, spanish, white, spring-white part), onion salt/powders, tomato paste, artificial sweeteners (isomalt, mannitol, sorbitol, xylitol)

### Moderate FODMAPs (limit)

There are some foods that are considered moderate FODMAPs. Follow the serving sizes listed below for these foods. Avoid the foods only if you have symptoms.

Fruits	Vegetables	Nuts
¼ avocado <3 cherries ½ grapefruit (medium) <10 longon <5 lychee ½ pomegranate (small) <3 rambutan < ¼ cup shredded coconut <10 dried banana chips	¼ cup artichoke hearts (canned) <3 asparagus spears 4 beet slices < ½ cup broccoli < ½ cup brussels sprouts < ¼ cup butternut pumpkin < 1 cup cabbage (savoy) 1 celery stick < ½ cup green peas 3 okra pods <10 pods snow peas ½ corn cob < ½ cup sweet potato	< 10 almonds < 10 hazelnuts

### Tips for a low FODMAP diet:

- Review food lists, collect recipes and go grocery shopping first. Once you are ready, start and follow the diet for 6 weeks.
- Read food labels. Avoid foods made with high FODMAP fruits/vegetables, HFCS, honey, inulin, wheat, soy, etc. However, a food could be low in FODMAPs if a high FODMAP food is listed at the end of the ingredient list.
- Buy gluten free grains as they do not have wheat, barley or rye in them. However, you do not need to be on a strict gluten free diet as the focus is to limit FODMAPs, not gluten.
- Limit serving sizes for low lactose dairy to small amounts and low FODMAP fruits/vegetables to a ½ cup per meal (½ cup=size of a tennis ball) if you have symptoms after eating these foods. The symptoms could be related to eating large amounts of FODMAPs all at once.
- Include low FODMAP foods rich in fiber such as oatmeal if you develop constipation while on the diet. Drink plenty of water as well.
- After the trial is over, add high FODMAP foods one at a time back in the diet in small amounts to identify foods that could be "triggers" to your symptoms. Limit those foods if so.

## **Low FODMAP Meals and Snack Ideas**

- gluten free waffle with walnuts, blueberries, maple syrup without HFCS
- eggs scrambled with spinach, bell peppers and cheddar cheese
- oatmeal topped with sliced banana, almonds and brown sugar
- fruit smoothie blended with lactose free vanilla yogurt and strawberries (½ cup)
- rice pasta with chicken, tomatoes, spinach topped with pesto sauce
- chicken salad mixed with chicken, lettuce, bell peppers, cucumbers, tomatoes, balsamic vinegar salad dressing without HFCS
- turkey wrap with gluten free tortilla, sliced turkey, lettuce, tomato, slice of cheddar cheese slice, mayonnaise, mustard
- ham and swiss cheese sandwich on gluten free bread, with mayonnaise, mustard
- quesadilla with corn or gluten free tortilla and cheddar cheese
- beef and vegetable stew (made with homemade broth, beef, allowed vegetables)

## **Resources:**

The Monash University Low FODMAP Diet Department of Gastroenterology, Monash University

*"Extending Our Knowledge of Fermentable, Short Chain Carbohydrates for Managing Gastrointestinal Symptoms"* Nutrition in Clinical Practice June 2013

*"A FODMAP Diet Update: Craze or Credible?"* Nutrition Issues in Gastroenterology December 2012

*"Evidence Based Dietary Management of Functional Gastrointestinal Symptoms: The FODMAP Approach"* Journal of Gastroenterology and Hepatology February 2010

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