# Understanding FODMAPs

Canadian Digestive Health Foundation

## What are FODMAPs?

FODMAPs are a group of small carbohydrate (sugar) molecules found in everyday foods. Carbohydrates are made up of carbon, hydrogen and oxygen and provide an important source of energy for the body. FODMAPs are carbohydrates that may be poorly absorbed in the small intestine of some people.

FODMAPs move through the digestive tract to the large intestine (colon), where they can draw water into the colon and are rapidly fermented (digested) by naturally-occurring gut bacteria. The fermentation of FODMAPs produces gas and otherby-products.

**FODMAP is an acronym for Fermentable – Oligosaccharides – Disaccharides – Monosaccharides – And – Polyols.**

**It is estimated that up to 70% of people with IBS may benefit from a low FODMAP diet, however the quality of scientific evidence is still low. Of these people, there is possible benefit for overall symptoms such as abdominal pain, cramping, bloating, excess gas, constipation and/or diarrhea.**

**F** **Fermentable:** Fermentable carbohydrates are sugars that are broken down and digested by bacteria in our intestines, producing gas and other by-products.

**O** **Oligosaccharides:** Oligosaccharides are short chains of carbohydrate molecules linked together. Fructans (a chain of fructose molecules) and galacto-oligosaccharides (a chain of galactose molecules) are oligosaccharides that humans cannot break down and properly absorb in the small intestine.

**D** **Disaccharides:** Disaccharides are two carbohydrate molecules linked together. Lactose, the sugar found in milk and dairy products, is a disaccharide composed of glucose and galactose. Lactose must be broken down by the digestive enzyme lactase before it can be absorbed in the small intestine. In people with lactose intolerance, the level of lactase enzyme is insufficient to properly digest lactose and lactose travels to the colon where fermentation occurs.

**M** **Monosaccharides:** Monosaccharides are single carbohydrate molecules. Fructose, the sugar found in many fruits and some vegetables, is a monosaccharide and does not require and digestion before it is absorbed. When foods containing equal amounts of fructose and glucose are eaten, glucose helps fructose to be completely absorbed. However, when fructose is present in greater quantities than glucose, fructose absorption depends upon the activity of sugar transporters located in the intestinal wall. The ability to absorb excess fructose varies from person to person. In people with fructose malabsorption, the capacity of sugar transporters is limited and excess fructose travels to the colon where fermentation occurs.

**A** **AND**

**P** **Polyols:** Polyols, or sugar alcohols, are a type of carbohydrate that humans can only partially digest and absorb in the small intestine. Polyols, such as sorbitol, mannitol, xylitol, maltitol and isomalt, mimic the sweetness of sucrose (table sugar), however, because their absorption is much slower, only a small amount of what is eaten is actually absorbed. Polyols are often used as low-calorie sweeteners in sugar-free and diet products.

# Low FODMAP Grocery List.

Keep this list on you and handy as a reference sheet while cooking or making trips to the grocery store. Replace any high-FODMAP foods you may have been eating with these items instead. This is just a basic list, remember to always work with a registered dietitian while on this diet.

## Vegetables

- Aubergine / Eggplant
- Beans (green)
- Bok choy
- Bell pepper
- Carrot
- Cucumber
- Lettuce
- Potato
- Tomato
- Zucchini

## Fruits

- Cantaloupe
- Grapes
- Kiwi Fruit
- Mandarin Oranges
- Pineapple
- Strawberries

## Dairy & Alternatives

- Almond milk
- Brie/Camembert
- Feta Cheese
- Lactose Free Milk
- Soy Milk
- Hard Cheeses:
  - Cheddar
  - Parmesan
  - Swiss
  - Mozzerella

## Breads & Cereals

- Corn Flakes
- Oats
- Quinoa Flakes
- Quinoa
- Rice
- Corn Pasta
- Rice Cakes
- Sourdough
- Spelt Bread
- Wheat/Rye/Barley Free Breads

## Protein Sources

Eggs, Firm Tofu, Plain Cooked Meats, Poultry, Seafood, Tempeh

## Sugars & Sweeteners

Dark Chocolate, Maple Syrup, Rice Malt Syrup, Table Sugar

## Nuts & Seeds

Macadamias, Peanuts, Pumpkin Seeds, Walnuts

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# Eliminate these foods.

Keep this list on you and handy as a reference sheet while cooking or making trips to the grocery store. Replace any high-FODMAP foods you may have been eating with the low FODMAP items listed on the previous page. This is just a basic list, remember to always work with a registered dietitian while on this

## Vegetables

- Artichoke
- Asparagus
- Cauliflower
- Garlic
- Green Peas
- Leek
- Mushroom
- Onion
- Sugar Snap Peas
- Sundried Tomatoes

## Fruits

- Apples
- Apple Juice
- Cherries
- Dried Fruit
- Mango
- Nectarines
- Peaches
- Pears
- Plums
- Watermelon

## Dairy & Alternatives

- Cow's Milk
- Custard
- Evaporated milk
- Ice Cream
- Soy Milk (made from whole soy beans)
- Sweetened Condensed Milk
- Yogourt
- Ricotta Cheese
- Cottage Cheese

## Breads & Cereals

- Wheat, Rye Barley Based Breads
- Snack products
- Breakfast Cereals
- Biscuits

## Protein Sources

Most Legumes/Pulses, Some Marinated Meats, Marinated Poultry and Seafood, and Some Processed Meats

## Sugars & Sweeteners

High Fructose Corn Syrup, Honey, Sugar Free, Confectionery

## Nuts & Seeds

Cashews, Pistachios

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