

HealthMap

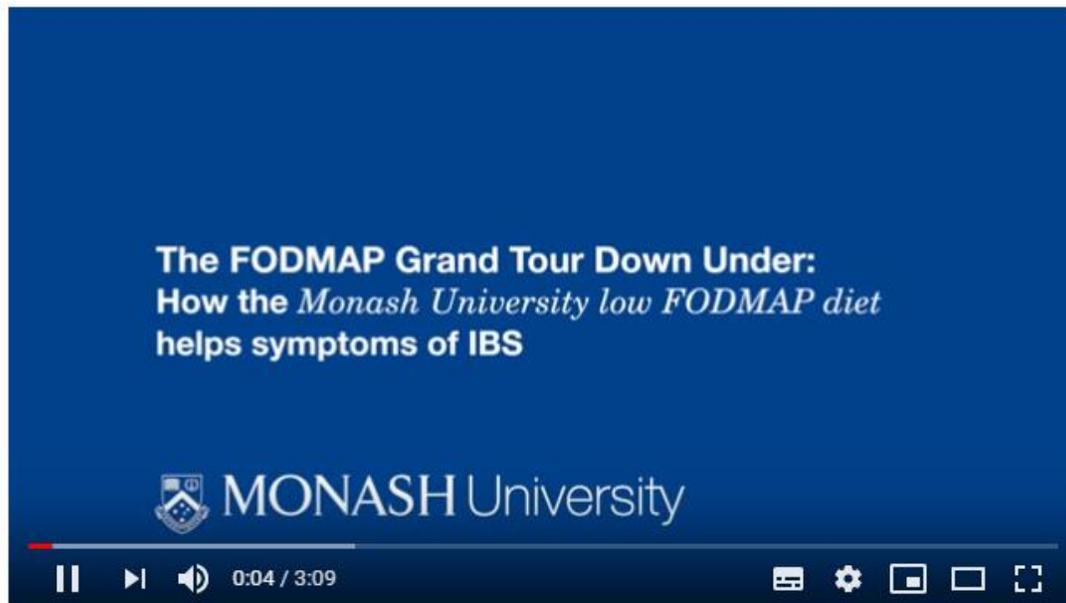
Gut Health Professionals

FODMAPs

(Fermentable Oligo, Di, Monosaccharides And Polyols)

What are they and how do FODMAPs react in your gut?

Watch this video by Monash University: https://www.youtube.com/watch?v=Z_1Hzl9o5ic



IBS symptoms, the low FODMAP diet and the Monash app that can help

If you have bloating, gas, constipation and/or diarrhea and general feeling on unwell you may have problems digesting certain sugars or carbohydrates that are called FODMAPs. FODMAPs are sugars or carbohydrates that are either slowly absorbed in your small intestine or not digested at all so they cause discomfort.

The FODMAP sugars or carbohydrates attract water into your intestine and are involved in fermentation in your large intestine which is done by your gut bacteria which ends in gas production. This production of gas can cause discomfort as it causes bloating and pushes out your intestines which can also cause hypersensitivity within your gut.

FODMAPs is an acronym for:

Fermentable

Oligosaccharides (eg. Fructans and Galacto-oligosaccharides (GOS))

Disaccharides (eg. Lactose)

Monosaccharides (eg. excess Fructose)

and

Polyols (e.g. Sorbitol, Mannitol, Maltitol, Xylitol and Isomalt)

What are Oligosaccharides?

- Fructans and galacto-oligosaccharides (GOS) e.g. maltodextrin, galacto-oligosaccharides, fructo-oligosaccharides, isomalto-oligosaccharides and xylo-oligosaccharides
- Fructans and GOS contain many sugar units linked together. Fructans have a large number of fructose units. GOS contain units of glucose, fructose and galactose. Both are poorly absorbed by all of us, but not everyone gets troublesome symptoms from them.
- These are not absorbed in the small intestine because we don't have the enzymes to break the down the sugars. Instead they are fermented by gut bacteria in the large intestine which produces gas.
- GOS consumption promotes the growth of beneficial groups of bacteria *Bbifidobacteria* and *Lactobacilli*.
- Foods rich in fructans and GOS include wheat, rye, barley, legumes, onions, garlic, leeks, artichokes, asparagus, Brussels sprouts, Savoy cabbage, feijoas, persimmon, cashews, almonds and pistachio nuts.

What are Disaccharides?

- sucrose, lactose, maltose, isomaltose and trehalose
 - Why does this happen? Normally lactose is absorbed in your small intestine, but if you don't have the enzyme to break down lactose into glucose and galactose it will go to your large intestine intact. In your large intestine, Lactose will attract water and will be fermented by gut bacteria. This can give you symptoms like bloating, flatulence, pain and diarrhea.
 - Because you may not produce enough of the, called lactase, that breaks down the sugar lactose.
- What's it found in?

- cows' milk, soft cheeses, custard, sweetened condensed milk, evaporated milk, and ice cream

What are **Monosaccharides**?

- glucose, fructose, galactose, xylose and arabinose
- Naturally found in apples, cherries, figs, mango, pears, watermelon, sugar snap peas and honey.
- Glucose (another sugar) can help your bowel absorb fructose as it gets a 'piggy-back ride' on glucose to help it across the gut wall. Some fruits contain enough glucose to match the amount of fructose. These are tolerated in moderate amounts, but there is still a limit to how much total fructose you can absorb at any one time.

Note: Fructose is a master of disguises. It has 4 different forms in food:

- It can be a monosaccharide (fructose)
- It can be a disaccharide (sucrose), made up of glucose and fructose in equal amounts
- It can be an oligosaccharide (fructan)
- Or it can be a polysaccharide (e.g. inulin)

Fructose and Polyols (below) are absorbed in the small intestine slowly. This causes water to come into the small intestine. If these sugars do get to the large intestine, they are fermented by bacteria which creates gas.

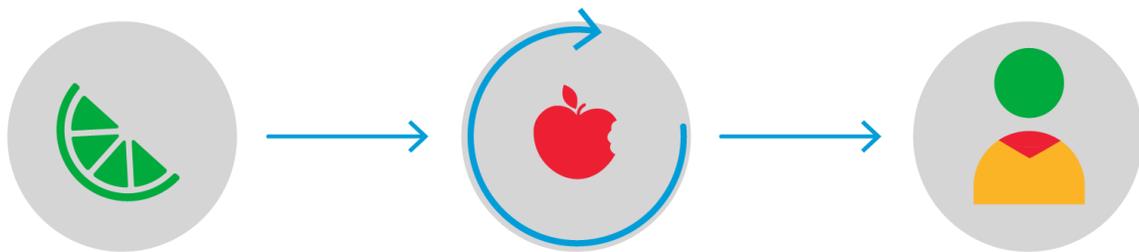
What are **Polyols (sugar alcohols)**?

- sorbitol, mannitol, lactitol, xylitol, erythritol, maltitol, and isomalt
- Naturally occur in fruit and vegetables (e.g. Apples, Apricots, Avocado, Cherries, Nectarines, Pears, Plums, Prunes and Mushrooms)
- Natural sources of sorbitol are sweet corn, stone fruits, pears, apples, and blackberries.
- Natural sources of mannitol are found in vegetables like cauliflower, mushroom and snowpeas.
- You will also find added polyols in processed foods (e.g. sugar free chewing gum, mints and some lollies) some sugar substitutes and humectants (a food additive, used to reduce the loss of moisture).
- Sugar polyols that have been added to manufactured foods can be identified from the following numbers on the product ingredient list: sorbitol (420), mannitol (421), maltitol (965), xylitol (967) and isomalt (953).
- You may also have seen on some packages 'excessive consumption may have a laxative effect' which means that there is polyols in the product.

Why Do I need to try a low FODMAP diet?

The FODMAP diet is a short-term diet to help us diagnose what (if any) FODMAPS may be causing the symptoms you have been experiencing. There are three phases to the FODMAP diet.

The 3 steps of the FODMAP diet



1. Low FODMAP Diet

2. FODMAP Reintroduction

3. FODMAP Personalization

Ref: <https://www.monashfodmap.com/blog/3-phases-low-fodmap-diet/>

Phase 1: Low FODMAP diet (2-6 weeks)-using the Monash Low FODMAP App or book or both. Set the filter on the safe serving sizes-set sensitivity to HIGH to start with.

Phase 2: FODMAP reintroduction or rechallenging is where we introduce high FODMAP foods back into your diet so we know exactly which one is causing the symptoms. This step is also used to expand your diet and give you more diversity in your diet.

Phase 3: FODMAP personalisation which is designed to suit your individual FODMAP problem area.

What about Gluten? Isn't it a FODMAP?

Gluten is not a FODMAP. Gluten is a protein found in Wheat, Rye and Barley. People who go on a gluten free diet may feel better and have relief from their symptoms, however, it is usually not the gluten they have a problem with.

What appears to be a gluten intolerance problem is actually a problem with **Fructans** or GOS (FODMAPs) as these can also be found in the same foods as gluten. These foods are mentioned above under the [What are Oligosaccharides?](#) section. By removing gluten from your diet you are also removing these FODMAPs and it is difficult to know who the culprit is! If this applies to you we can work on that as well.