

# FODMAP



FODMAPs are types of carbohydrates found in certain foods, including wheat and beans.

There are strong links between FODMAPs and digestive symptoms like gas, bloating, stomach pain, diarrhoea and constipation.

## What are FODMAPs?

FODMAP stands for “Fermentable oligo-, di, mono-saccharides and polyols”

These are the short chain carbs that are resistant to digestion. Instead of being absorbed into your bloodstream, they reach the far end of your intestine where our gut bacteria reside.

Your gut bacteria then use these carbs for fuel, producing hydrogen gas and causing digestive symptoms in sensitive individuals.

## Common FODMAPs includes:

- **Fructose:** A simple sugar found in many fruits and vegetables that also makes up the structure of table sugar and most added sugars.
- **Lactose:** A carbohydrate found in dairy products like milk.
- **Fructans:** Found in many foods, including grains like wheat, spelt, Rye and barley.
- **Galactans:** Found in large amounts in legumes.
- **Polyols:** Sugar alcohols like xylitol, sorbitol, maltitol and mannitol. They are found in some fruits and vegetables and often used as sweeteners.

## ❖ What happens after consuming FODMAPs?

FODMAPs pass through your intestine unchanged.

They are completely resistant to digestion and are categorized as a dietary fibre.

When FODMAPs reach your colon, they get fermented and used as fuel by gut bacteria.

The same happens when dietary fibres feed your friendly gut bacteria, which leads to various health benefits.

However, the friendly bacteria tend to produce methane, whereas the bacteria that feed on FODMAPs produce hydrogen, another type of gas, which may lead to gas, bloating, stomach cramps, pain and constipation.

Many of these symptoms are caused by distention of the gut, which can also make your stomach look bigger.



F	ERMENTABLE
O	LIGOSACCHARIDES
D	ISACCHARIDES
M	ONOSACCHARIDES
A	ND
P	OLYOLS

## ❖ Benefits of A Low-FODMAP Diet

The low-FODMAP diet has mostly been studied in patients with irritable bowel syndrome (IBS).

This is a common digestive disorder that includes symptoms like gas, bloating, stomach cramps, diarrhoea and constipation.

A low-FODMAP diet may also be beneficial for other functional gastrointestinal disorders (FGID) — a term that encompasses various digestive problems.

If you are intolerant, then the benefits of a low-FODMAP diet may include:

- Less gas
- Less bloating
- Less diarrhoea
- Less constipation
- Less stomach pains

It may also cause positive psychological benefits, as these digestive disturbances are known to cause stress and are strongly linked to mental disorders like anxiety and depression.



## Animal Free Eggs



Animal free egg proteins are being produced using fermentation technology. A technique has been developed to produce nature identical lab cultured egg whites.

Growing demand for plant-based alternatives has increased the market for meat, poultry and dairy replacements.



The aim of this technique is to retain the taste, functional, textural and culinary properties of the egg protein. Using advance yeast engineering and fermentation techniques, precision fermentation is done.

This product can replace the conventional egg in sports nutrition, bakery industry and other food industries.

They can be used to prepare any dishes like a conventional egg for example scrambled eggs, omelette, pancakes and cakes but all vegan.



These proteins are safe to eat more sustainable and healthier as compared to conventional eggs. Some of the major advantages of animal free egg is no bird flu and other poultry related diseases.

Some researchers are developing vegan eggs using protein isolation techniques in lentils as lentils are known for its rich protein content. These products will inspire non vegetarians to switch to plant based diets. It will have zero cholesterol as compared to conventional eggs.

## Acacia Gum



Acacia gum can act as a formulation of sugar-free and sugar reduced products in food and beverage industries. It is a natural additive and ingredient extracted from the hardened exudates of plants *Acacia senegal* and *Acacia seyal*.

Acacia gum compensates the loss of volume, texture and mouthfeel in sugar-reduced products. It improves rheology of the products and flavour nice colour and flavours.

For overall better preservation Acacia gum is being used as it is known for its property of providing stability by reducing the water activity. A mix of Polyols such as acacia gum and sucralose can be used to compensate the loss of creaminess and bitterness that occurs in sugar-free food. Acacia gum will also act as a bulking agent and can provide masking effect on the aftertastes generated by sweeteners.

Acacia gum is considered as a good ingredient as it enhances the fibre content of food products without compromising with their texture, appearance, texture, or flavour of the food product.

Acacia gum is a great asset for the formulation of healthy products, sugar reduced and sugar free products and reduced glycemic index products because the consumption of acacia gum substituted products induce a lower glycemic response as compared to the products containing sugars instead of acacia gum. Acacia gum also benefits in areas such as bowel function, gut health, immunity, blood-glucose control and glycemic index.

# FACTS



## **BERRY FLAVOURS**

Berries are highly nutritional and healthy, they work well in endless applications and are attractive to the eye, which makes them 'instagramable' and shareable on any digital platform. These includes berries like strawberries, raspberries or blueberries, and also new, more exotic varieties like goji berries.



## **TROPICAL TEMPTATION**

“Consumers dream of being on vacation all year round and there are several types of tropical flavours which can gives the feel of holidays like Passion Fruit, Mango, Guava, Jackfruit and papaya. These flavours can have drinks, bakery, snacks and sports nutrition applications.

## **MUSHROOM**

Mushrooms help the body adapt to stress and provide a normalizing effect on it. Most mushrooms identified as adaptogens are associated with immunity, cognitive health and stress relief.



## **CITRUS BENEFITS**

Citrus fruits are 'distinctively' high in potassium, calcium and phosphorous. Blood oranges, in particular, boast high level of vitamin C, fibre and carotenoids. Blood orange juice, also reduce oxidative stress in diabetic patients and to limit weight gain.







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