

5 ingredients that are
silently wreaking havoc on
your gut + health

GLYPHOSATE

More than half of bacterial species in the human gut microbiome are potentially sensitive to glyphosate; the herbicide that most dry crops are sprayed with.

Glyphosate works by inactivating the enzyme 5-enolpyruvylshikimate-3-phosphate synthase. This enzyme is used in the shikimate pathway of plants to form aromatic amino acids. By inhibiting the enzyme, glyphosate causes the death of the plant. The shikimate pathway is present in many of the beneficial bacteria in the human gut and the gut of other animals and insects. Consuming food which contains glyphosate may, therefore, kill off beneficial bacteria populations, which can have significant adverse effects on health.

Glyphosate also increases homocysteine, a known risk factor for cardiovascular disease, and disrupts the gut microbiota. Glyphosate has been associated with several diseases, including thyroid disorders rheumatoid arthritis (RA) and systemic lupus erythematosus.

Glyphosate gets into the food you eat, and it can't be washed off. Unfortunately, it's tied to a slew of gut issues, and some of the the top glyphosate offenders may really surprise you!

Genetically Modified (GMO) and Non-Organic wheat products, oats, corn, soy products, almonds, beets, canola oil, carrots, corn and corn oil, quinoa, sweet potatoes, and vegetable oil are among some of the worst glyphosate culprits.

Another helpful list is The Dirty Dozen: which refers to produce with the highest amount of pesticides. These foods include: Strawberries, Spinach, Kale/Silverbeet/Mustard Greens, Apricots, Pears, Nectarines, Apples, Grapes, Capsicum and Chillies, Cherries, Blueberries, and Green Beans.

So where possible, look for Organic and Non-GMO foods, ,Ancient Grains with minimal processing, and if the price of organic products is an obstacle, your next best option may be to seek out local growers with whom you can have a real conversation about their growing practices, or grow your own!

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GUAR GUM

Unlike xanthan gum, which is a product of bacterial fermentation, guar gum is derived from an actual food: the Guar Bean, which grows primarily in India and Pakistan.

Guar gum is used as a thickener, emulsifier, stabiliser, and blending agent. You'll find it in many processed and packaged foods—plant based milks, yoghurts, some coconut milks/creams, and dairy free alternative products, breakfast cereals, and ice-cream.

Guar gum adversely impacts the gut microbiota activity and colonic immune response and increases susceptibility to colonic inflammation. Unfortunately even small amounts could cause unpleasant symptoms in those with sensitive digestive systems, and I've had clients with gut issues improve after removing guar gum from their diet. With that in mind, I think it wise to avoid guar gum if you have gut issues, like small intestinal bacterial overgrowth (SIBO) or IBS, unless of course you've removed it and added it back into your diet without noticing any harmful effects.

ARTIFICIAL SUGARS

Artificial sugars should be somewhere in the top priority of ingredients to avoid for gut health.

If you're someone who consumes processed/packaged foods on the reg, then there's a very good chance your gut is paying the price.

Studies have shown, when consumed for as little as two weeks, common alternatives to sugar affect intestinal bacterial communities, with some reducing the body's ability to regulate blood glucose levels.

Besides having no calories, many artificial sweeteners pass through the body unchanged. As a result, they have been labelled metabolically "inert"- sugary ghosts that leave no trace.

So one would think that's good, right? Not exactly.

As we now know, the trillions of bacteria in our gut play a vital role in human health, influencing everything from immunity to metabolism. But historically, regulatory research has neglected the importance of the microbiome when studying new substances.

Whilst artificial sweeteners pass unabsorbed through the small intestine, that means they travel to the colon, interacting with our gut bacteria along the way. Emerging evidence suggests that artificial sweeteners aren't so "inert" after all but can cause pathological changes in the body by altering the microbiome.

An in vitro study (outside of a living organism) found that around two diet coke cans worth of saccharin, sucralose, and aspartame may transform commensal bacteria into pathogenic ones; meaning disease-causing.

More specifically, the study demonstrated that these common sweeteners increased the ability of two model bacteria- *E. coli* and *E. faecalis*- to attach, invade and kill cells in the gut lining.

When exposed to sweeteners, these bacteria exhibited increased biofilm formation, whereby bacteria secrete a glue-like substance to stick to an object and reproduce. Clusters of bacteria within a biofilm are more likely to release toxins and possess greater resistance to anti-microbial treatment, potentially increasing disease risk. Increased pathogenic qualities could increase the risk of bacteria escaping into the bloodstream via the gut, triggering inflammation, and other adverse health outcomes.

We often associate Artificial sweeteners with diet products, but the truth is, they are found in virtually all processed foods! MALTODEXTRIN is one of the worst, and has been shown to detrimentally impact the intestinal environment by promoting depletion of the protective mucus layer and favouring the development of intestinal inflammation. Splenda, which contains both sucralose and maltodextrin, impacts the intestinal microbiota in a manner that promotes Crohn's-type disease in genetically susceptible hosts.

Some more examples of artificial sweeteners include: aspartame, sucralose, dextrose, sorbitol, maltitol, maltodextrin, and saccharin. All of these can increase blood glucose levels, cause indigestion and weight gain, aggravate allergies, decrease beneficial bacteria in the gut, and more. They're found in diet drinks, salad dressings, sauces, meat alternatives, processed meats, and most processed foods.

Ultimately, they provide no nutritional value. Obvs, avoid processed foods, and when it comes to sweetening your coffee, switch to nutrient dense natural sugars such as Jaggery, Rapadura, Coconut Sugar, Maple Syrup and Honey.

NATURAL FLAVOURS

Contrary to their name, natural flavours aren't exactly natural, and the problem with 'natural flavours' is that it is an extremely broad term.

So is there really much difference between natural and artificial flavours? In short, no. The chemical compositions of natural and artificial flavourings are very similar and both are still made in a laboratory.

The main difference is that natural flavours are derived from a natural source, whether that is from plant, animal or fungal origin. Natural flavours are more expensive to produce than their synthetic alternatives, however, natural flavourings "are in fact no better in quality, nor are they safer, than their cost-effective artificial counterpart.

The term natural flavour or natural flavouring means the essential oil, oleoresin, essence or extractive, protein hydrolysate, distillate, or any product of roasting, heating or enzymolysis, which contains the flavouring constituents derived from a spice, fruit or fruit juice, vegetable or vegetable juice, edible yeast, herb, bark, bud, root, leaf or similar plant material, meat, seafood, poultry, eggs, dairy products, or fermentation products thereof, whose significant function in food is flavouring rather than nutritional."

Essentially, anything added for flavour that is not an artificial flavour is a “natural flavour.” And, since food manufacturers do not need to disclose the ingredients of the “natural flavours” added, it can pretty much include anything.

What this means, is that ‘natural flavours’ can be made up of up to 2,000 different chemical substances, which may include plant or animal tissues. For example, castoreum is a secretion made from the anal glands of mature beavers and is used as a ‘natural flavour’ in vanilla flavoured ice cream and raspberry flavoured lollies and syrups - YUK! If that’s put you off those foods, well Sorry but not Sorry!

So what does this have to do with gut health?

Since there is little transparency into what natural flavours are made up of, many products may be hiding gut irritating ingredients. For example: people following the low FODMAP elimination phase and those who avoid fructans during the maintenance phase should be careful when eating savoury foods with natural flavours. Natural flavours can indicate onions or garlic powder, depending on which food item. Both of these foods are high in fructans. Fructans, which are carbohydrates that can be highly fermented by our intestinal bacteria, may cause gastrointestinal symptoms in IBS patients. Bottom line: people with severe food allergies, sensitivities or other dietary restrictions should avoid eating foods and beverages that contain natural flavours.

INDUSTRIAL SEED OILS

You might be thinking but seeds are au naturale?

However, the general process used to create industrial seed oils is anything but natural. The oils extracted from soybeans, canola (GMO version of rapeseed), corn, cottonseed, safflower seeds, and rapeseeds must be refined, bleached, and deodorised before they are suitable for human consumption.

- 1. First, seeds are gathered from the soy, corn, cotton, safflower, and rapeseed plants.**
- 2. Next, the seeds are heated to extremely high temperatures; this causes the unsaturated fatty acids in the seeds to oxidize, creating byproducts that are harmful to human and animal health.**
- 3. The seeds are then processed with a petroleum-based solvent, such as hexane, to maximise the amount of oil extracted from them.**
- 4. Next, industrial seed oil manufacturers use chemicals to deodorise the oils, which have a very off-putting smell once extracted. The deodorisation process produces trans fats, which are well known to be quite harmful to human health.**
- 5. Finally, more chemicals are added to improve the colour of the industrial seed oils.**

Research suggests that industrial seed oils may harm gut health, contributing to conditions such as irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD). Studies suggest a link between industrial seed oils and GI conditions. Women with IBS demonstrate significantly elevated levels of arachidonic acid, an omega-6 fatty acid abundant in industrial seed oils, and pro-inflammatory PUFA metabolites, compared to healthy controls. Furthermore, an imbalance between omega-6 and omega-3 fatty acids is correlated with IBD.

These findings suggest that consuming high levels of omega-6 fatty acids alters the gut microbiota and promotes gastrointestinal inflammation, thereby contributing to the development of IBS and IBD.

The alternative? Get your gorgeous natural fats from extra virgin olive oil, ghee, coconut oil, inca inchi, wild seafood, avocado, macadamia and walnuts, sesame seeds, and healthy animal fats.