

To your health

PRE vs PRO “BIOTICS”

Healthy gut bacteria, called the microbiome, are critically important in maintaining the health of the entire immune system. Looking after the gut and the ‘bugs’ that live there is the simplest way to support overall health. The microbiome is greatly affected by the foods we eat, in particular, foods that feed beneficial bacteria. Both the amount of fibre and the diversity of foods eaten help modulate our microbiome.

In recent years there has been an upward trend in the use of probiotics. These are of particular importance if the gut microbiome has been eradicated by taking a course of antibiotics. However, prebiotics from foods are of equal importance. Both probiotics and prebiotics have very different roles to play in the gut. So what is the difference?

Probiotics

Probiotics are live, beneficial bacteria created by the process of fermentation and often recommended to increase levels of gut bacteria. However, supplemental probiotics are transient so only useful whilst taken.

Prebiotics

Prebiotics are the non-digestible part of foods that pass along the digestive tract to feed the good bacteria so they increase in number and may have more sustainable, modulating effects on the microbiome and improved overall health.

Humans have evolved eating a wide variety of plants providing us with a large array of phytonutrients (plant chemicals) and large quantities of fibre. Archaeological evidence reveals that our fibre consumption used to be around 135g per day. Today, this amount is only found in remote indigenous communities like the Hadza tribe in Tanzania. They eat an average of 100g fibre per day! It is recommended we eat a minimum of 30g of fibre a day but estimations show our consumption is only approximately 18.7g.

To encourage healthy guts, a combination of both would be ideal, but rather than consuming copious amounts of probiotics (unless prescribed to recover from antibiotics), aim to include some probiotic food and drink daily, but focus on prebiotic foods to feed your good bacteria as shown in the table.

Non digestible, prebiotic fibre reaches the large intestine mostly unchanged where it can be fermented by gut bacteria and positively impact some functions of the body. For example, prebiotics found in asparagus, garlic and onions can increase lactobacilli and bifido bacteria while also decreasing the harmful E-coli bacteria.

Prebiotics also help the gut produce short-chain-fatty-acids (SCFA's), which can lower intestinal

PRO-BIOTICS

Lacto-fermented foods which contain live “good” bacteria. They can be digested so they don’t always survive to the lower intestine.

SAUERKRAUT – a German tradition of fermented, finely cut raw cabbage.

MISO – a Japanese fermented mix of soy, salt and koji sometimes with rice, barley and/or seaweed

TEMPEH – a traditional Indonesian soy product made from fermented soybeans.

KEFIR – fermented milk drink originating from eastern Europe containing high doses of lactobacilli & bifidobacteria. 50 types of bacteria can be found in organic kefir.

KIMCHI – Korean tradition based upon fermented vegetables especially cabbage and radish.

NATTO – a Japanese food based upon fermented soybean

KOMBUCHA – a fermented drink often based on tea.

pH and prevent the growth of “pathogenic” bacteria. Butyrate is one form of SCFA and the main energy source for the cells of the intestinal tract. Butyrate can reduce intestinal permeability and lower inflammation in inflammatory bowel conditions. Prebiotics are also useful alongside anti-microbial protocols for imbalances such as

PRE-BIOTICS

Selectively fermented carbohydrates feed good bacteria and encourage growth. They cannot be digested so they survive to the lower intestine.

Inulin/fructooligosaccharides: artichokes, asparagus, banana, garlic, onions, chicory, barley

Galacto-oligosaccharides: Breast milk, animal milk, green peas, beans, chickpeas, pistachios

Pectin: Oranges, pear, apple, okra

Arabinogalactans: Leek, carrot, radish, pear, tomato, turmeric.

Beta-glucans: oats, barley, mushrooms

Resistant starches: cooked and cooled rice, pasta and potatoes. Green bananas, beans and legumes.

small intestinal bacterial overgrowth (SIBO). Adding prebiotics to a diet should be gradual if your diet has been low on these types of foods. If added too quickly, reactions can create intestinal gas, but this often reduces after 2-3 weeks. Despite the noisy effects, prebiotics are creating positive change in the gut by reducing pathogenic bacteria.

Everyone is at a different stage in their gut health journey so there is never a “one-size-fits-all” approach. As a general rule, “low and slow” increases are recommended. ▲

TOP PREBIOTIC FOODS:

Vegetables: Artichokes, asparagus, beets, bell peppers, broccoli, Brussel sprouts, cabbage, carrots, cauliflower, chicory root, cucumber, daikon radish, dandelion greens, fennel bulb, garlic, leeks, mushrooms, onions, peas, radishes, seaweed, sweet potatoes.

Fruits: Apples, avocado, bananas, berries, cherries, kiwi, mango, olives, pears, tomatoes

Other sources: Chia seeds, coconut flour, dark chocolate, flax seeds, ginger root, hemp seeds, organic honey, legumes, quinoa, wild rice

Top tip: to increase diversity, eat the parts of the plant that often end up in the bin: Broccoli stalks, cauliflower leaves, carrot tops, etc. can all be used - add to smoothies, soups, or casseroles for additional nutrition. ▶

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