Prebiotics: Fuel for Helpful Bacteria

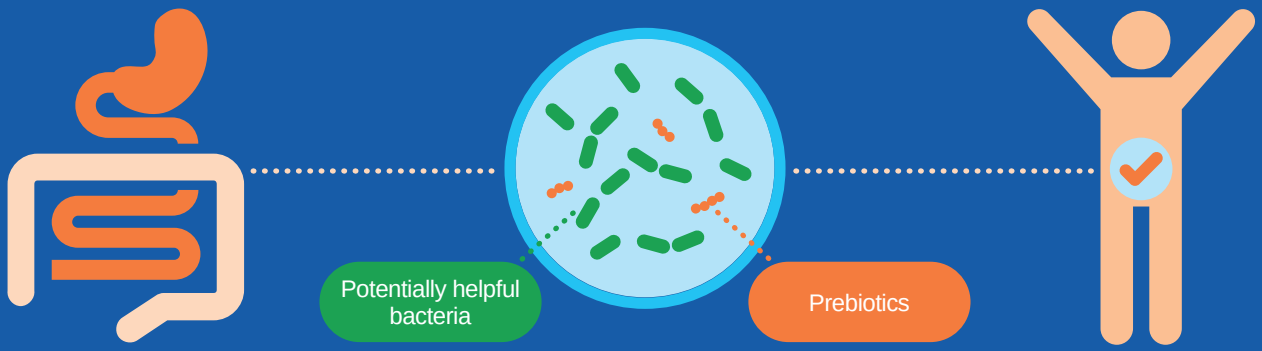
Prebiotics are substrates that are selectively utilised by the host microorganisms that confer a health benefit.[1] Simply put, prebiotics are food components that the human body cannot digest but nourish the helpful bacteria in the gut.

How do they work?

Once consumed, prebiotics travel undigested to the colon.

Prebiotics selectively stimulate beneficial microbes that already live in your colon (e.g. *Lactobacillus*, *Bifidobacteria*).

Prebiotics increase the number and activity of beneficial bacteria, which can result in **health benefits**.[1,2]



To be considered a prebiotic, a substrate must lead to positive changes in the gut microbiota with documented health benefits.[1]

Types of prebiotics

Prebiotics are often soluble fibres that the human body cannot digest, however, not all prebiotics are fibres, and not all fibres are prebiotics. Prebiotics are found naturally in certain foods such as oats, bananas, onions, garlic, chicory root, Jerusalem artichoke, and wheat.[3]

Fructans (fructooligosaccharides (FOS) and inulin) and galactans (galactooligosaccharides or (GOS)) are two of the most widely known and extensively studied types of prebiotic fibres.[1] Both are known to nourish the beneficial microbes, Lactobacillus and Bifidobacterium species that live in your gut.[1]

Oats | Bananas | Onions | Garlic | Chicory Root | Jerusalem Artichoke | Wheat

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Inulin: A well-researched prebiotic

WHAT IS IT?

Inulin is a prebiotic soluble fibre found in many plants. Your body can not digest it or use it for energy, but it is easily fermented by the microbiota in your colon.

WHERE DOES IT COME FROM?

Inulin is found naturally in a variety of food sources, including chicory root, onions, garlic, Jerusalem artichoke, and wheat and can be extracted and added to foods or supplements.[4]

WHY IS IT ADDED TO FOODS?

Inulin increases fibre content and has numerous potential health benefits resulting from the growth of beneficial bacteria.[5-7]

Why do prebiotics affect people differently?

Only the helpful gut microbes that are already present in the gut can use prebiotics. An individual's microbiome is dependent on genetics and environmental factors such as mode of delivery and early infant feeding, antibiotic use, disease status, and diet.[8-12]

- Mode of delivery
- Early infant feeding
- Antibiotic use
- Disease status
- Diet

How much do I need?

- There is no Adequate Intake level or Daily Value set for prebiotics. Amounts required to confer a health benefit are varied.[3]
- Consuming whole grains, fruits, veggies, and prebiotic-enriched foods can help incorporate prebiotics into the diet.
- Increase prebiotics in the diet slowly to avoid digestive discomfort.

Prebiotic effects of oat beta-glucan

As part of a healthy, balanced and varied diet, the soluble fibre beta-glucan in oats can help to lower blood cholesterol. High cholesterol is a risk factor in the development of coronary heart disease. Daily consumption of 3g oat beta-glucan has been shown to significantly lower blood cholesterol concentrations.[13]

Research suggests there is more than one mechanism by which oats help lower blood cholesterol. Research also suggests this effect is partly due to the ability of beta-glucan to increase beneficial bacteria in the gut, which may influence cholesterol metabolism.

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