

# Probiotics and Prebiotics

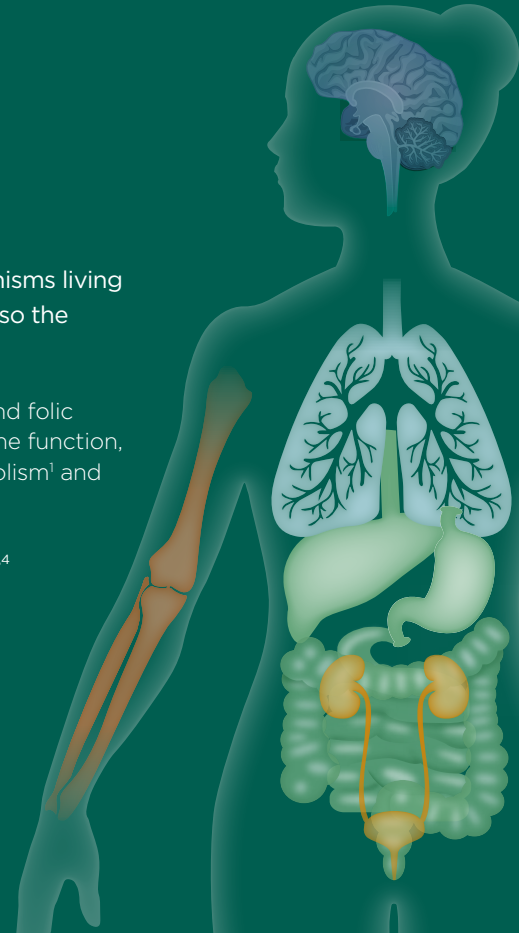
The **gut microbiome** is a complex and vast community of bacteria and microorganisms living in the intestinal tract. Its health is key to not only a healthy digestive system, but also the health of many other systems in the body.<sup>1</sup>

A balanced microbiota assists with digestion, produces nutrients such as vitamin K and folic acid and assists in the absorption of minerals such as calcium.<sup>1</sup> It also improves immune function, protects from harmful bacteria and parasites, reduces inflammation, supports metabolism<sup>1</sup> and assists mood and brain function.<sup>2</sup>

There are factors that can have a negative impact on the gut microbiome including:<sup>3,4</sup>

- Antibiotic use
- Stress
- Poor diet
- Lack of exercise
- Infection
- Toxins (e.g. pollution)
- Smoking

These factors can create the conditions for overgrowth of bad bacteria.<sup>3</sup> As such it is important to consume a diet that feeds a healthy microbiome and take supplements for restoration when required and directed by your healthcare practitioner.



## Probiotics vs Prebiotics?

### Probiotics

Are live beneficial bacteria or yeast which help to keep your digestive system healthy and as an extension, the rest of your body.<sup>5</sup> Probiotics need to be consumed regularly to maintain good microbe levels in the gut.<sup>6</sup> This can be achieved either through a supplement or food, depending on your circumstances.

### Prebiotics

Are specific herb and plant fibers that feed beneficial gut bacteria. Through promoting their growth and multiplication, the beneficial bacteria can colonise the gut and create an optimal balance of bacteria.<sup>7</sup> Probiotics break down prebiotics in the colon and produce short-chain fatty acids which support the health of your intestinal wall barrier and protect against inflammation.<sup>8</sup>

Consuming a combination of probiotics and prebiotics ensures the probiotics have the nutrient rich fuel they need to do their job and promote a healthy functioning body.

Probiotic Foods		Prebiotic Foods	
<ul style="list-style-type: none"> <li>• Fermented vegetables e.g. sauerkraut/kimchi</li> <li>• Yoghurt (plain with live cultures)</li> <li>• Kefir (dairy/water/coconut)</li> <li>• Kombucha</li> </ul>	<ul style="list-style-type: none"> <li>• Miso</li> <li>• Natto</li> <li>• Tempeh</li> <li>• Tamari</li> <li>• Apple Cider Vinegar (with the “mother”)</li> </ul>	<ul style="list-style-type: none"> <li>• Asparagus</li> <li>• Avocado</li> <li>• Banana</li> <li>• Beetroot</li> <li>• Burdock root</li> <li>• Cocoa</li> <li>• Dandelion greens</li> <li>• Dragon fruit (red and white)</li> <li>• Garlic/leeks/onions</li> <li>• Honey</li> </ul>	<ul style="list-style-type: none"> <li>• Inulin containing foods e.g. globe artichoke</li> <li>• Legumes</li> <li>• Pectin containing foods e.g. citrus/apple</li> <li>• Slippery elm</li> <li>• Tomato</li> <li>• Whole grains e.g. barley, rye, wheat bran, oats, amaranth</li> </ul>

# Benefits of Probiotics and Prebiotics

## Probiotics<sup>9,10,11</sup>

*Introduce high numbers of beneficial bacteria to the gut*

### Digestive System

Improves symptoms of Irritable Bowel Syndrome (IBS)

Reduces risk of/supportive during gastrointestinal infections

Reduces diarrhoea, including antibiotic-associated diarrhoea

Supportive treatment for IBD

Supports beneficial bacteria following antibiotic use

Generation of nutrients e.g. Vitamin K, B1, B12, folate and biotin

Assists with lactose intolerance

### Immune System

Protective against allergies

Supports immune function

### Integumentary System

Supportive for eczema in children

### Female Reproductive System

Reduces risk of/supportive for vaginal infections

### Urinary System

Reduces risk of/supportive for urinary tract infections

## Prebiotics<sup>4,7,12</sup>

*Balances the gut microbiome through providing food for beneficial bacteria and producing short chain fatty acids*

### Digestive System

Reduces risk of developing IBD

Increase calcium and magnesium absorption

Reduces constipation

### Immune System

Supports immune function, reduces infection incidence

### Integumentary System

Reduce risk of dermatitis

### Endocrine System

Supports healthy weight and appetite (promotes satiety)

Supports healthy blood sugar balance

### Cardiovascular System

Supports healthy cholesterol levels

Reduces the risk of cardiovascular disease

### Nervous System

Supports healthy mood

Supports learning, memory and recall

### Whole Body

Reduces inflammation

