

# Nutrition and Health Info Sheet

## PREBIOTICS AND PROBIOTICS

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Microbes, or microorganisms, are tiny living things that are found on surfaces of our body that are in contact with the outside world. This includes our skin, intestines, and lungs. These microbes are essential to our health. Together they are called the microbiota or the microbiome. Foods that contain microbes that enhance our microbiome are called probiotics.<sup>1</sup> Sometimes, the food that we eat can also nourish the microbes in our bodies; these foods are called prebiotics.<sup>2</sup>



### What are prebiotics?

Prebiotics are a part of some foods that cannot be digested by humans. Instead, prebiotics provide fuel to microbes in our bodies. Dietary fiber is the most important example. Dietary fiber can be found in whole grains, fruits, and vegetables.



Fruits and vegetables that contain high amounts of prebiotic fiber include:<sup>3</sup>

- asparagus
- artichokes
- onions
- garlic
- citrus fruits
- berries

Excess fat and protein that we do not digest and absorb can also feed microbes, however these may potentially be harmful to our health.

## What are probiotics?

Probiotics are living microorganisms that may provide health benefits when consumed. Fermented foods are a source of probiotics.<sup>4</sup> These include foods such as:<sup>5</sup>

- dairy products (cheese, kefir, and yogurt)
- kimchi
- sauerkraut
- miso and tempeh
- cultured non-dairy yogurts



## What are the benefits of prebiotics and probiotics?

Feeding our microbes the right foods and consuming probiotics may support health.<sup>1</sup> Diets high in prebiotics may increase the number of helpful microbes and decrease harmful microbes in the gut.<sup>1</sup> A healthy microbiome may help prevent the growth of harmful microbes.<sup>5</sup> Studies have shown that healthier individuals tend to have more fiber-digesting microbes in their guts. These can help to fight diseases such as obesity, inflammatory bowel disease, and diabetes.<sup>1,6</sup>

## Who should consume prebiotics and probiotics?

Most people can eat prebiotics and probiotics without negative reactions.<sup>2</sup> However, more research is needed to confirm the benefits of a healthy microbiome on the human body. Eating too many probiotics may cause diarrhea, gas, and stomach pain.<sup>7</sup> Prebiotics and probiotics can be purchased from most grocery or health food stores. Talk to a doctor before adding additional prebiotics or probiotics into your diet.

## References

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