

Special Topic: A Primer on Prebiotics for Healthy Digestion

Billions of bacteria live naturally in everyone's digestive system. Some of these bacteria can be beneficial to health while others can be potentially harmful. The health of your digestive system depends on the presence and balance of "good" and "bad" bacteria. Certain foods containing substances known as *prebiotics* can support the growth and activity of "good" bacteria in the gastrointestinal (GI) tract.

Digestive Health

There is growing interest in foods that promote healthy digestion. *Prebiotics* are substances that help naturally regulate your digestive system by encouraging "good" bacteria to thrive in your intestines. Simply put, *specific* prebiotics are the food to feed *specific* good bacteria in the gut for a *specific* health benefit. Research suggests that a positive balance of good bacteria helps your digestive system maintain its normal health because potentially harmful bacteria are less abundant or less able to cause problems. Many prebiotics are classified as dietary fiber and are not fully digested as they pass through the GI system, so they work in the body like fiber.

Probiotics, another term related to digestive health, are live, beneficial ("good") bacteria in or added to certain foods in amounts needed to achieve a health benefit. While both prebiotics and probiotics work to promote health by fostering a favorable balance in intestinal bacteria, each works differently.

The combination of *prebiotics* and *probiotics* in the same product is known as a *synbiotic*. Synbiotics may help support probiotic bacteria, stimulating their growth and activity in the intestinal tract and improving the balance of "good" bacteria.

Where to Find Prebiotics

Some plant foods naturally contain prebiotics. Wheat, chicory, onions, bananas, asparagus, Jerusalem artichokes and leeks naturally contain a particular prebiotic called inulin, although the amount in these foods varies. Prebiotics may also be extracted from certain plants, such as chicory root, or created from other ingredients and added to foods. Foods with added prebiotics may include certain cottage cheese products, yogurts or yogurt drinks, cereals and bars. [Remember that foods with prebiotics are different from foods that contain probiotics (live, "good" bacteria), such as certain cheese, yogurt or kefir

products.] While this fact sheet focuses on prebiotics in foods, prebiotics also are available in or as dietary supplements, either in tablet form or as powders for mixing with water or other beverages.

Finding Products with Prebiotics

The best way to determine if a food product contains prebiotics is to check the ingredient list. The most common prebiotic ingredients are inulin and oligofructose. Other established and emerging ingredients may include fructooligosaccharides (FOS), galactooligosaccharides (GOS), xylooligosaccharides (XOS), lactosucrose or lactulose. Some products may carry a statement on the label referring to prebiotic or "bifidogenic" benefits for digestive health.

How Much?

A recommended daily amount of prebiotics for digestive health has not been established. However, experts suggest that an effective amount is probably in the range of 5 to 15 grams per day. In the US, average intake of inulin from plant foods is about 1 to 4 grams per day. Most foods with added prebiotics from inulin or oligofructose supply about 2 to 4 grams per serving, although some products may contain more. Some of these products may also supply dietary fiber, which can help you reach your daily fiber goal (25 grams of dietary fiber is the Daily Value for adults). Check the Nutrition Facts on a food product to see how much dietary fiber is in one label serving.

If you want to increase the amount of prebiotic foods in your diet, it's a good idea to do so gradually to prevent possible temporary discomforts, such as gas, bloating or cramps, which may occur for some people with intake of more than 10 grams per day. Remember that many prebiotics supply fiber, and fiber intake should be increased slowly, along with taking in adequate amounts of fluid. The type of food and prebiotic ingredient may influence whether you experience side effects. For example, solid foods with prebiotics are often better tolerated than liquids, and foods with inulin may be better tolerated because the prebiotic acts more slowly in the intestines. If you have questions, consult a healthcare professional, such as a registered dietitian, for individual advice about how prebiotics can fit into your healthy lifestyle.

Key Points to Remember About Prebiotics

- *Prebiotics* support the growth and activity of “good” bacteria that live naturally in the intestine or are naturally present in or added to foods (*probiotics*). Both *prebiotics* and *probiotics* help maintain normal digestive health—but work in a different way.
- Prebiotics are found naturally in varying amounts in some plant foods such as onions, bananas and wheat, and they can be added to foods such as cottage cheese. Look for prebiotics—for example, inulin or oligofructose—in the ingredient list of food products; also look for on-pack messages or claims for more information.
- Some prebiotics supply dietary fiber, which can count toward daily dietary fiber recommendations. Check the Nutrition Facts on food labels to determine how much dietary fiber is contained in one label serving of a product.
- As the science about prebiotics continues to evolve, you may want to consider including foods with prebiotics as part of your overall strategy to eat a healthful diet with plenty of fiber and fluids, achieve or maintain a healthy body weight and be physically active.
- If you have specific questions about how prebiotics might fit into your healthful lifestyle, ask a healthcare professional, such as a registered dietitian, for advice.