

FACTS ON FIBER

Fiber Facts

The health benefits of dietary fiber are widely recognized by experts in the scientific community and by government authorities. It's important to consume a variety of fibers every day for good health.

Three major mechanisms are responsible for the benefits of dietary fiber: (1) bulking, (2) viscosity, and (3) fermentation. Fibers that provide bulk (generally insoluble fibers) increase the mass of the stool and assist in reducing constipation and improving regularity. Viscous soluble fibers provide viscosity in the gastrointestinal tract and help lower blood cholesterol and maintain normal blood glucose levels. Prebiotic fibers are fermented in the colon and stimulate the growth of good bacteria in the intestine. Although many dietary fibers provide more than one benefit, no one fiber provides all of them. Consequently, it is important to eat a variety of dietary fibers to maximize health benefits.

According to the Dietary Guidelines for Americans, most Americans consume only half the amount of dietary fiber they need on a daily basis.

While the Daily Value for fiber shown on nutrition fact panels is currently 25 grams, the Institute of Medicine recommends consuming 14 grams of fiber daily for every 1,000 calories consumed. For an average 2,000 calorie daily diet, one should consume approximately 28 grams of fiber (most adult women should consume at least 25 grams of fiber per day; men should consume at least 38 grams per day).

Fiber Benefits

The health benefits of fibers are determined by their physiological effects. Although most fibers will produce more than one beneficial effect, no one fiber produces all effects.

The health benefits of dietary fiber include:

- **Reduced constipation**
Fiber can help reduce constipation by adding bulk to the stool. Bulky feces move through the gut faster, resulting in an increased stool weight and improved regularity.
- **Improved health of digestive tract**
The short-chain fatty acids (SCFA) produced by the fermentation of dietary fibers are vital for health and well-being, as they help to regulate physiological intestinal mobility and contribute to the defense mechanisms of the intestinal barriers. Emerging evidence suggests that SCFAs may contribute anti-inflammation and anti-cancer benefits as well.
- **Lower blood cholesterol levels**
Certain types of viscous soluble fibers (i.e., beta-glucan, psyllium, guar gum) reduce the risk of heart disease by helping to lower blood cholesterol. Studies have linked a high fiber diet with improvements in serum lipids, total cholesterol, low-density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), and triglycerides.
- **Reduced glycemic response**
Viscous fibers and specific non-soluble fibers slow down the absorption of glucose and can lower the glycemic impact of foods (causing a lower rise in blood glucose levels).
- **Colonic fermentation**
The fermentation of fiber by bacteria in the colon helps maintain a healthy microflora, and triggers a cascade of additional benefits, including the production of beneficial short chain fatty acids, which are used as fuel for the gut microflora.
- **Increased mineral absorption**
Certain fermentable fibers help to promote the absorption of minerals, especially calcium.
- **Increased immune support**
Research indicates that specific fermentable fibers may provide support for healthy immune function by increasing levels of beneficial bacteria and reducing levels of bad bacteria present in the GI tract.
- **Increased insulin sensitivity**
Viscous soluble fibers and resistant starches have been shown to improve insulin sensitivity.
- **Increased satiety**
Emerging research indicates that the fermentation of some fibers may lead to the production of hormones that promote satiety (feeling full longer).
- **Weight management**
Specific dietary fibers contribute weight management benefits, while other types of dietary fibers may have less significant effects. Epidemiological studies have consistently shown that dietary fiber intake is inversely related to obesity.



Calorie Control Council



FINDING FIBER

In recent years, the food industry has begun adding fiber to commonly consumed foods and beverages in an effort to offer consumers a wider variety of fiber containing products. These fibers can be incorporated into a myriad of foods and beverages that people enjoy every day while offering health benefits similar to those of traditional fibers. Fiber ingredients can be used to increase the amount of fiber in foods and beverages containing inherent fiber (such as whole grain baked

goods, breads and cereals) as well as to supplement products that traditionally do not contain fiber (such as fruit juices and yogurt). Added fiber can now be found in many foods, including yogurt, cereals, breads, fruit juices, milk, tortillas, baked goods, ice cream, hard and chewy candies, and nutrition supplement bars and beverages. With a growing number of products and ingredients now on the market providing dietary fiber benefits, consumers can more easily meet their daily fiber needs.



Benefits of Various Fibers

Type of Fiber	Bulking	Viscous	Fermentable
Arabinoxylan		✓	✓
Beta-glucan		✓	✓
Carboxymethylcellulose	✓		slightly
Cellulose	✓		slightly
Fructo-oligosaccharides, polyfructans			✓
Galacto-oligosaccharides			✓
Guar gum		✓	✓
Hydroxypropyl methylcellulose	✓		slightly
Inulin			✓
Methylcellulose	✓		slightly
Oligofructose			✓
Pectin		✓	✓
Polydextrose			✓
Psyllium			✓
Resistant dextrins			✓
Resistant maltodextrins			✓
Resistant starches			✓

Find more information on fiber at www.fiberfacts.org