



"Harvard Medical School"

The Nutrition Source

Fiber

Fiber is a type of carbohydrate that the body can't digest. Though most carbohydrates are broken down into sugar molecules, fiber cannot be broken down into sugar molecules, and instead it passes through the body undigested. Fiber helps regulate the body's use of sugars, helping to keep hunger and blood sugar in check.

Children and adults need at least 20 to 30 grams of fiber per day for good health, but most Americans get only about 15 grams a day. Great sources are whole fruits and vegetables, whole grains, and beans.

[Vegetariantimes.com]

↳ "4 to 5 Servings of Fiber rich food / Day"

Fiber comes in two varieties, both beneficial to health:

- Soluble fiber, which dissolves in water, can help lower glucose levels as well as help lower blood cholesterol. Foods with soluble fiber include oatmeal, nuts, beans, lentils, apples and blueberries.
- Insoluble fiber, which does not dissolve in water, can help food move through your digestive system, promoting regularity and helping prevent constipation. Foods with insoluble fibers include wheat, whole wheat bread, whole grain couscous, brown rice, legumes, carrots, cucumbers and tomatoes.

The best sources of fiber are whole grain foods, fresh fruits and vegetables, legumes, and nuts.

Some tips for increasing fiber intake:

- Eat whole fruits instead of drinking fruit juices.
- Replace white rice, bread, and pasta with brown rice and whole grain products.
- For breakfast, choose cereals that have a whole grain as their first ingredient.
- Snack on raw vegetables instead of chips, crackers, or chocolate bars.
- Substitute beans or legumes for meat two to three times per week in chili and soups.

Fiber and disease

Fiber appears to reduce the risk of developing various conditions, including heart disease, diabetes, diverticular disease, and constipation. Despite these benefits, fiber probably has little, if any, effect on colon cancer risk.

Heart disease

High intake of dietary fiber has been linked to a lower risk of heart disease in a number of large studies that followed people for many years. (16) In a Harvard study of over 40,000 male health professionals, researchers found that a high total dietary fiber intake was linked to a 40 percent lower risk of coronary heart disease. (17) A related Harvard study of female nurses produced quite similar findings. (18)

Higher fiber intake has also been linked to a lower risk of metabolic syndrome, a combination of factors that increases the risk of developing heart disease and diabetes. These factors include high blood pressure, high insulin levels, excess weight (especially around the abdomen), high levels of triglycerides, and low levels of HDL (good) cholesterol. Several studies suggest that higher intake of fiber may offer protective benefits from this syndrome. (19,20)

Type 2 diabetes

Diets low in fiber and high in foods that cause sudden increases in blood sugar may increase the risk of developing Type 2 Diabetes. Both Harvard studies—of female nurses and of male health professionals—found that this type of diet more than doubled the risk of type 2 diabetes when compared to a diet high in cereal fiber and low in high-glycemic-index foods. (21-23) A diet high in cereal fiber was linked to a lower risk of

type 2 diabetes.

Other studies, such as the Black Women's Health Study (24) and the European Prospective Investigation Into Cancer and Nutrition–Potsdam, have shown similar results.

Read about what you can do to help prevent Type 2 diabetes.

Diverticular disease

Diverticulitis, an inflammation of the intestine, is one of the most common age-related disorders of the colon in Western society. Among male health professionals in a long-term follow-up study, eating dietary fiber, particularly insoluble fiber, was associated with about a 40 percent lower risk of diverticular disease. (25)

Fiber and constipation

Constipation is the most common gastrointestinal complaint in the United States, and consumption of fiber seems to relieve and prevent constipation.

The fiber in wheat bran and oat bran is considered more effective than fiber from fruits and vegetables. Experts recommend increasing fiber intake gradually rather than suddenly, and because fiber absorbs water, beverage intake should be increased as fiber intake increases.

Colon cancer

Studies have largely failed to show a link between fiber and colon cancer. One of these—a Harvard study that followed over 80,000 female nurses for 16 years—found that dietary fiber was not strongly associated with a reduced risk for either colon cancer or polyps (a precursor to colon cancer). (26)

References

16. Pereira MA, O'Reilly E, Augustsson K, et al. Dietary fiber and risk of coronary heart disease: a pooled analysis of cohort studies. *Arch Intern Med.* 2004;164:370-6.

17. Rimm EB, Ascherio A, Giovannucci E, Spiegelman D, Stampfer MJ, Willett WC. Vegetable, fruit, and cereal fiber intake and risk of coronary heart disease among men. *JAMA.* 1996;275:447-51.