

THE ROLE OF FIBER

Healthy Eating Tip of the Month

Fiber: the Basics

Fiber is a class of nondigestible carbohydrates and lignin which is associated with numerous health benefits. Dietary fibers are those which are native to plants while functional fibers are those which are added to foods. Both dietary and functional fibers can have positive effects on health. Sources of dietary fiber include grains, fruits, vegetables, and legumes such as beans and peas.

An important role of many types of fiber is their ability to act as prebiotics—substances that alters the types and activities of the bacteria, or microflora, that live inside the human gut. While the human microflora remains an active area of scientific research, its relationship with inflammation, immune function, and the health of the colon are promising areas for understanding how fiber may offer protective effects against a variety of diseases.



Legumes are a great source of fiber!



Soluble & Insoluble Fiber...

Fiber can be classified several different ways, but commonly fibers are categorized as being soluble or insoluble. Fruits, legumes, and oats are rich sources of soluble fibers. Soluble fibers are recognized for their ability to lower LDL ("bad") cholesterol and may help control blood sugar. Insoluble fibers, like those found in wheat, bran, vegetables, and fruits have been linked to health benefits such as appetite control, reduced incidence of developing type 2 diabetes, and the prevention of constipation.



Live longer and stronger with fiber

Why Eat Fiber?

Several health benefits have been attributed to fiber consumption, including:

- Iower cholesterol and decreased risk of developing cardiovascular disease
- decreased mortality risk from circulatory, digestive, and inflammatory diseases
- reduced risk of developing some forms of cancer
- improved insulin sensitivity and glycemic control
- weight and appetite control
- prevention and relief from constipation
- decreased inflammation



Foods which are naturally high in fiber also contain many other nutrients that are beneficial to health. Vitamins, minerals, trace elements, polyphenols, alkylresorcinols, and carotenoids found in fiber-rich foods such as wholegrain wheat and rye have been shown to decrease risk for developing type 2 diabetes, cardiovascular disease, and overweight.

About Fiber Supplements...

Because of the variety of other vitamins, minerals, and active compounds found in fiber-rich foods, getting fiber from a wide variety of fruits, grains, legumes, and vegetables is usually the best way to consume adequate amounts of fiber. Talk to your doctor or registered dietitian before starting any type of supplementation.



Variety matters!

GET MORE FIBER IN YOUR DIET

Meeting Your Fiber Needs

According to the USDA, typical daily intakes of dietary fiber in the United States are less than 18 grams for men and 14 grams for women–only about half of the recommended amount.

So, how can you increase your intake? Eat a variety of high fiber foods every day, and use food labels to select foods that are higher in fiber. Whole grains, vegetables, fruits, and legumes are the best sources of fiber.



Daily Fiber Needs by Age and Gender

The amount of fiber you need depends on your age and gender. Follow the USDA recommendations below for adequate fiber intake:

Adults		Children	
Men		1–3 years	
19-50 years	38 grams	(boys and girls)	19 grams
50+ years	30 grams	4-8 years	
Women		(boys and girls)	25 grams
19-50 years	25 grams	9-13 years	
50+ years	21 grams	Boys	31 grams
Pregnant Women		Girls	26 grams
14-50 years	28 grams	14-18 years	
Lactating Women		Boys	38 grams
14-50 years	29 grams	Girls	26 grams

Reading Food Labels

Look for foods containing the word "**whole**" in the first ingredient



Nutrition Facts Serving Size 2 Waffles (72g)



Choose foods with at least **3g of fiber** per serving

Look for the **WHOLE GRAIN** stamp on grain products like brea



products like breads and cereals

Quick tips!

- ✓ Make half your grains whole grains
- Eat more whole fruits and vegetables, including the skin
- Avoid stomach upset and constipation while increasing your fiber intake by:
 - increasing fiber intake gradually, and
 - drinking plenty of fluids

Good Sources of Fiber

Getting more fiber in your diet is easy. By having just a few extra servings of the delicious fiber-packed foods below, you'll be on your way to a healthier you!



What is a Whole Grain?

A whole grain is an unrefined grain that contains three layers: the bran, germ, and endosperm. The bran is rich in fiber and B vitamins. The germ is loaded with antioxidants. The endosperm is mostly

starch. Unlike whole grains, refined grains have had the bran and



germ layers removed, leaving mostly just the starchy endosperm.

Whole Grains

- Hulled Barley
- Brown Rice
- Colored Rice
- Buckwheat
- Whole corn
- Oats
- Whole Rye
- Whole Wheat
- Wild Rice
- Amaranth
- Millet
- Sorghum
- Teff
- Triticale
- Quinoa

Whole Grains for Health

Data from the USDA indicates that Americans who eat more whole grains are more likely to meet their fiber needs. In addition to fiber, whole grains are filled with antioxidants, vitamins, and minerals that are essential to good health. Adding even one serving of whole grains to your diet helps with weight control and can reduce your risk for developing several chronic diseases:

- Stroke
- Diabetes
- Heart disease
- Inflammatory diseases
- Some cancers
- High blood pressure



Make half of your grains whole grains, and have at least 3 servings a day!

Every Plate, All Day

Cooking with whole grains is simple and usually takes only 10 -15 minutes. Cooking whole grains into soups, entrées, and snacks is both wholesome and delicious. Try preparing:

- Kearty Chicken Rice Soup
- Quinoa Stuffed Peppers
- « Coconut Almond Granola



« Baked Blueberry & Peach Oatmeal

Visit WholeGrainsCouncil.org for more tasty recipes and details on the latest research on whole grains.

Whole Grains at Every Meal

Breakfast

Start the day right with whole grain breads, cereals, waffles, pancakes, or a bowl of hot oatmeal.





Lunch

Make sandwiches with whole grain breads and add brown rice or bulgur wheat to soups and salads.

Dinner

Wild rice or quinoa make great side dishes for your favorite meals and will give you the added benefits of fiber and antioxidants.





Snacks & Sweets

Popcorn and whole grain granola bars and crackers will combat your midday hunger pangs or sweet tooth and help keep you satisfied.

Gluten Free Doesn't Mean Whole Grain Free

Most people can eat a variety of whole grains, but some people are allergic to gluten—a protein found in wheat, rye, and barley. The benefits of a diet rich in whole grains can still be enjoyed even with a gluten allergy by including grains that don't contain gluten:

- Corn
- Rice
- Oats*
- Wild rice
- Amaranth
- Buckwheat
- Quinoa
- Millet
- Sorghum
- Teff

*Oats do not contain gluten naturally but may be contaminated during processing. Look for certified gluten-free oats.

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MORE FIBER FOR YOUR CHILDREN

Yes! Here's Why and How...

Kids Need Fiber Too!

Like adults, most children aren't getting enough fiber. Fiber helps move food though the digestive tract, preventing constipation and abdominal pain.



Fiber also helps us feel fuller longer, and hunger can be a distraction during the school day. As parents, you work hard to feed your family nutritious, wholesome meals, but sometimes children need to try new foods several times before they like the taste. The key is to keep trying! Even if your child never learns to like kidney beans, there are plenty of other choices!

Start with Breakfast

Research shows that concentration and the ability to stay alert during the early school hours is affected by whether a

child eats breakfast. Feeding your children breakfast will help them have the energy they need to get through their active mornings. Help them start their day right by:



- Providing whole grain cereals with at least 3 grams of fiber and less than 12 grams of sugar per serving
- Adding fruit to hot or cold cereals
- Making a vegetable wrap on a whole grain tortilla

Did you know?

Constipation is caused by hard, dry stools (poop) and can cause painful stomachaches, cramping, and nausea. It is a common problem for children.



Like adults, bowel patterns vary between children. What is normal for your child may not be for someone else's. Your child's doctor can help if you have concerns about constipation.

Do I Need to Count How Many Grams of Fiber My Child Eats?

As long as they are getting at least 5 servings of fruits and vegetables a day and a variety of other foods that contain fiber, there is no need to count how many grams of fiber your children are eating.

References

- 1. Fiber and Prebiotics: Mechanisms and Health Benefits. Nutrients 2013; 5: 1417-1435.
- 2. Fiber intake and total and cause-specific mortality in the European Prospective Investigation into Cancer and Nutrition cohort. Am J Clin Nutr. 2012; 96(1):164-74.
- 3. Whole-grain wheat consumption reduces inflammation in a randomized controlled trial on overweight and obese subjects with unhealthy dietary and lifestyle behaviors: role of polyphenols bound to cereal dietary fiber. Am J Clin Nutr. 2015; 101(2):251-61.
- 4. Total dietary fiber intakes in the US population are related to whole grain consumption: results from the National Health and Nutrition Examination Survey 2009 to 2010. Nutrition Research. 2014; 3:226-34.
- 5. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids (Macronutrients). NAS. IOM. Food and Nutrition Board. 2005.
- U.S. Department of Agriculture. ChooseMyPlate.gov Website. Washington, DC. http://www.choosemyplate.gov/. Accessed February 28, 2016.
- 7. Welcome to Whole Grains Healthy, Convenient, Delicious. Oldways Preservation Trust. 2011.
- 8. More Fiber For Your Children? Yes! Here's Why and How. American Academy of Pediatrics. 2013.

Images

http://www.healthination.com/diet-tips/know-your-ingredients/tip-fiber-up/

http://mom.girlstalkinsmack.com/image/012013/11/11235856.jpg

http://www.niddk.nih.gov/health-information/health-topics/digestive-diseases/constipation-in-children/Pages/eating-diet-nutrition.aspx

http://www.socalmommy.com/calorie-target-for-weight-loss/

http://www.oakwayhealthcenter.com/store/health_article_dietary-Fiber-Diabetes-Heart.html

http://www.bjcschooloutreach.org/Nutrition/Mythbusters

- http://wholegrainscouncil.org/whole-grain-stamp
- http://www.bakingmatters.co.uk/resources/Wheat-Diagram368x324.jpg

http://imgaws.ehowcdn.com/640/cme/cme_public_images/www_ehow_com/photos.demandstudios.com/getty/article/235/150/529517239_XS.jpg

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