



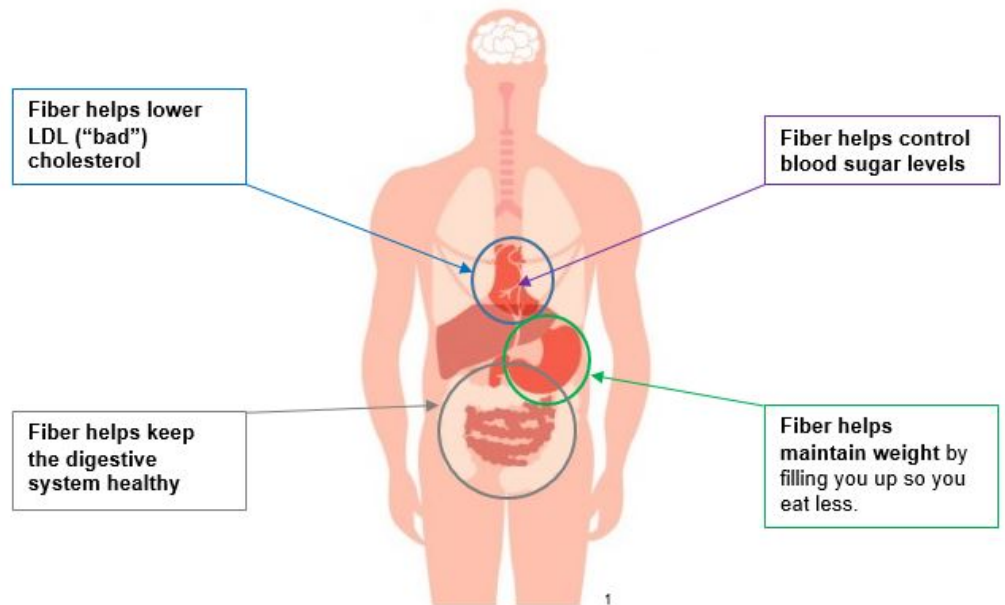
Diabetes Life Lines

The Many Roles of Fiber for Diabetes

Chances are you have heard people talk about how important fiber is for your digestive system. Did you know that fiber has many other roles in the body too? Fiber is especially helpful for people with diabetes. Let's see why!

Inside this issue:

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Fiber helps control blood sugar. Carbohydrates (or “carbs”) are the nutrient that raises blood sugar levels the most. There are different types of carbohydrates, and blood sugar levels respond differently to each type.

Simple sugars are the major type of carbohydrate in sweets, juices, and sugary drinks. Simple sugars are easy for the body to break down, so they get into the blood very quickly. This means that simple sugars cause a large and fast rise in blood sugar levels. The other type of carbohydrate is complex carbohydrates found in grains, starchy vegetables such as potatoes, beans and peas, and fruits. Complex carbohydrates take the body longer to break down, so they get into the blood slower than simple sugars. This means complex carbohydrates cause a slower rise in blood sugar. Fiber is a type of complex carbohydrate and the hardest for the body to break down. When you eat a

food with fiber, your blood sugar rises even slower and does not get as high as when you eat other carbohydrates. For people with diabetes, fiber is very helpful in managing blood sugar. This role of fiber in keeping blood sugar levels low is important for people with diabetes since their bodies have trouble keeping blood sugar levels from getting too high.

Fiber helps maintain weight. Fiber helps you stay a healthy weight by filling you up faster and keeping you fuller longer. Have you ever noticed that you feel fuller and stay full longer when you eat a bowl of oatmeal instead of a donut? At least part of the reason for this is that oatmeal contains more fiber than a donut does.

By keeping you fuller longer, fiber may help you eat a little less, which can help you maintain a healthy weight or lose extra pounds. Weight can have an effect on blood sugar levels and the body's response to insulin (which helps control blood sugar levels). This is why it is important for people with diabetes to maintain a healthy weight. Losing even just 3% of your body weight (5 - 9 pounds) can help reduce blood sugar.²

Fiber helps lower LDL (“bad”) cholesterol. LDL cholesterol is often called “bad” cholesterol because it can clump up in blood vessels and cause heart disease. To learn more about cholesterol, check out the last issue of the Diabetes Life Lines Newsletter: http://www.fcs.uga.edu/docs/Vol_31_No_4_DBL.pdf

Fiber protects your heart from LDL cholesterol like a security guard. Fiber takes the bad guys (LDL cholesterol) and leads them out of the body through waste. People with diabetes are more likely to get heart disease, so this role of fiber in heart health is extremely important for people with diabetes.

Fiber helps keep the digestive system healthy. You are probably most familiar with the role of fiber in maintaining regular bowel movements. This makes us feel better and is important for cleaning out the digestive tract. In this way, fiber helps protect the body from certain types of cancer, particularly colon cancer. Fiber can also help prevent or manage diverticulitis and other bowel diseases.

So how much fiber should you eat each day? The table below gives fiber recommendations for males and females of different age groups³

Daily Fiber Recommendations (grams needed per day)		
Age	Males	Females
9-13 years	31	26
14-18 years	38	26
19-50 years	38	25
> 50 years	30	21

The amount of fiber in packaged foods can be found at the bottom of the Nutrition Facts label on the package. Average amounts of fiber in some common fruits and vegetables are listed in the table below⁴:

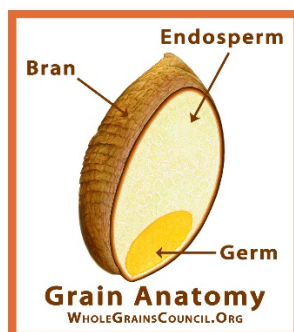
Fiber Content of Selected Foods		
Food	Portion Size	Fiber (grams)
Apple	1 medium (with skin)	4 grams
Banana	1 medium	3 grams
Blueberries	½ cup	2 grams
Raisins	¼ cup	1 gram
Black beans	½ cup (canned)	8 grams
Sweet potato	1 medium (baked, without skin)	4 grams
Broccoli	1 cup florets (raw)	2 grams
Bell peppers	½ cup (sliced)	1 gram
Spinach	1 ½ cups (raw)	1 gram

Reference:

1. Graphic Resources S. L. 2017. Human body [Image]. Available from the freepik website: https://www.freepik.com/free-vector/human-body_836937.htm#term=body&page=2&position=36
2. Jensen MD, et al. 2013. 2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adults. Available from: <http://circ.ahajournals.org/content/early/2013/11/11/01.cir.0000437739.71477.ee>
3. National Academy of Sciences. 2002. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. National Academies Publications webpage: http://www.nationalacademies.org/hmd/~media/Files/Activity%20Files/Nutrition/DRI-Tables/8_Macronutrient%20Summary.pdf
4. USDA Agricultural Research Service. 2016. National Nutrient Database for Standard Reference Release 28. Available from: https://ndb.nal.usda.gov/ndb/search/list?SYNCHRONIZER_TOKEN=b66b2a52-bef9-4c8b-8680-3cdf88199ae6&SYNCHRONIZER_URI=%2Fndb%2Fsearch%2Flist&qt=&ds=Standard+Reference&qlookup=&fgcd=&manu=

Whole Grains: A Best Friend for Anyone with Diabetes

Choosing whole grains over refined grains is one of the easiest ways to get more fiber each day! Whole grains include whole wheat, oats, whole grain corn, brown rice, and many others. Refined grains are found in foods such as white bread and white rice. So what makes whole grains different from refined grains? Check out the picture below of a whole grain to find out.¹



Whole grains have three parts: the bran, the germ, and the endosperm. The bran and the germ have the most fiber and other healthy nutrients. Refined grains have had the bran and the germ, removed, leaving only the starchy endosperm. So, refined grains have much less fiber, vitamins, and minerals than whole grains. This is why swapping whole grains for refined grains is a great way to get more fiber each day!

When shopping for whole grain products, look at the ingredients list to make the best choice. Some products say “whole wheat” or “whole grain” on the package but contain only small amounts of whole grains. Look for the words *whole wheat* or *whole grain* as the first ingredient listed (or second after water) to make sure that you are choosing a real whole grain food. The table below lists the fiber contents of some common whole grains and whole grain products.²

Fiber in Whole Grains		
Whole Grain	Serving Size	Fiber (grams)
100% whole wheat bread	1 slice	~2 grams
Old-fashioned rolled oats	½ cup, cooked	~2 grams
Brown rice	½ cup, cooked	~2 grams
Whole grain corn tortilla	1 tortilla	~1 gram
Popcorn	3 cups, popped	~4 grams

Replacing white bread with 100% whole wheat bread is an easy way to get more fiber. Eating oatmeal instead of a donut for breakfast, using brown rice instead of white rice in recipes and as a side dish, and using whole grain corn or whole wheat tortillas in place of white bread or flour tortillas are all simple changes that give you more fiber and other nutrients that whole grains offer! Did you know that popcorn is a whole grain? Popcorn, prepared with little or no added fat or salt, is a crunchy, whole grain snack that you can have in place of potato chips, for example!

If you haven't eaten many whole grains before, it may take a little time to get used to them. But the possibilities with whole grains are endless, and the health benefits are too!

References:

1. Whole Grains Council. n.d. What's a Whole Grain? A Refined Grain? Whole Grains Council website: <https://wholegrainscouncil.org/whole-grains-101/whats-whole-grain-refined-grain>
2. USDA ARS. 2017. Food Composition Databases. USDA Food Composition Databases website: <https://ndb.nal.usda.gov/>

Tips for Getting More Fiber When Eating Out

In the last two articles, you learned why fiber is important, how much fiber you should eat each day, and examples of foods that contain fiber. Choosing foods with fiber at the grocery store is not too hard, but what about at your favorite restaurant? It can be a little tricky, but here are some tips to include fiber when you eat out:

Choose whole grain options when available. Many restaurants now offer whole grain options on their menus.

When you order a sandwich, ask for whole wheat bread instead of the white bread. Many restaurants ask you, but if they do not, make the effort to ask if whole-wheat is available. When you order pasta, ask if whole wheat pasta is an option.

If white, yellow, or jasmine rice is on your menu, look for brown or wild rice (also called "wild rice pilaf") as an option instead. Both of these are higher in fiber.

Choose vegetable sides. Side dishes are a great place to include high fiber vegetables in your meal when you eat out. Choose sides such as a green salad, steamed broccoli, roasted cauliflower or Brussel sprouts, sautéed green beans, or a baked sweet potato for an easy and tasty way to increase the fiber in your meal.

When you choose sides, make sure you also pay attention to how the sides are cooked. Choose sides that are fresh, baked, steamed, roasted, sautéed, or broiled, but not fried, to make sure that you get all of the nutrients without extra fat.

Check out the nutrition facts ahead of time. Restaurants that have many different locations (such as Chick-fil-A®, Cracker Barrel®, etc.) have to make the nutrition facts of their menu items available to you¹. This is a wonderful tool that you can use to help make wise food choices and compare the fiber contents of dishes when you eat out!

This information is usually available online. If you have internet access, you can easily view this before you get to the restaurant or when you're sitting at the table. Some restaurants include some nutrition information on their menus or in brochures at the restaurant as well. Ask if you do not see it on the menu.

Choosing high fiber meals is especially important at restaurants to help maintain blood sugar levels and control the amount of food you eat. Most restaurants serve portion sizes that are much larger than needed. Choosing high fiber meals will fill you up faster and keep you from overeating.

Sometimes these choices cost more at restaurants. Think of this as an investment in your health. The cost of these changes is small compared to a lifetime of health care costs if you don't control your diabetes.

It may take a little extra effort, but doing your research ahead of time and making good choices will make sure that you can enjoy many more nights out eating with family and friends in the future!

Reference:

1. U.S. Food and Drug Administration. 2014. Food Labeling; Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments. U.S. Federal Register webpage: <https://www.federalregister.gov/documents/2014/12/01/2014-27833/food-labeling-nutrition-labeling-of-standard-menu-items-in-restaurants-and-similar-retail-food>

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Overnight Oats with Berries¹

Makes 1 serving

Overnight oats are a great way to plan ahead to get a whole grain and fiber filled breakfast. Just mix and refrigerate overnight for the next day.

Ingredients:

½ cup low fat milk	1/4 teaspoon cinnamon
¼ cup nonfat Greek yogurt	½ cup uncooked, rolled oats
1 teaspoon honey	¼ cup frozen raspberries or other berry of choice
¼ teaspoon vanilla extract	

Directions:

1. Combine milk, Greek yogurt, honey, vanilla extract, and cinnamon in a container or jar with a lid.
2. Add oats and mix well.
3. Gently fold in raspberries.
4. Cover and refrigerate 8 hours to overnight.
5. Enjoy cold or heat as desired.

Nutrition Information per serving:

Calories: 278	Fat: 4 g	Carbohydrate: 45 g	Fiber: 7 g
Protein: 15 g	Sat Fat: 1 g	Sodium: 88 mg	Cholesterol: 8 mg

References:

Adapted from: USDA Mixing Bowl. Overnight Oatmeal with Berries

<https://whatscooking.fns.usda.gov/recipes/myplate-cnpp/overnight-oatmeal-berries>

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Dear Friend,

Diabetes Life Lines is a bi-monthly publication sent to you by your local county Extension agent.

It is written by an Extension Nutrition and Health Specialist and other health professionals from the University of Georgia. This newsletter brings you the latest information on diabetes self-management, healthy recipes and news about important diabetes-related events.

If you would like more information, please contact your local county Extension Office.

Yours truly,

County Extension Agent

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