

# Sizing Up Soluble Fiber

## What is Fiber?

Fiber is made up of complex carbohydrates found only in plants such as fruits, vegetables, whole grains, beans, nuts, and seeds. Our bodies cannot digest or absorb fiber because fiber is resistant to the body's digestive enzymes. However, even though fiber contributes minimal calories and few nutrients, it does provide numerous health benefits such as preventing constipation and reducing your risk of heart disease and diabetes through glucose and cholesterol regulation.

There are two different types of fiber, **soluble** and **insoluble**. Both types are indigestible, but each reacts differently when combined with liquid. Most plant foods contain both forms of fiber and each type contributes unique health benefits.

### Soluble Fiber

- **Functions:** dissolves in water, forming a gel-like material. It binds with fatty acids and slows digestion by prolonging the time it takes to empty the stomach, slowing blood sugar release and absorption and increasing feelings of fullness.
- **Benefits:** lowers total and LDL ("bad") cholesterol, regulates blood sugar levels, reduces risk of heart disease, supports weight control
- **Food Sources:** oats/oat bran, dried beans and peas, barley, flax seed, citrus fruits, carrots, psyllium

### Insoluble Fiber

- **Functions:** does not dissolve in water. It's considered "gut healthy" because it speeds up the time it takes for food and waste to move through the body.
- **Benefits:** promotes regular bowel movements, prevents constipation, may reduce risk of colon cancer through faster waste removal
- **Food Sources:** vegetables (especially dark green leafy), fruit and root vegetable edible skins, beans, nuts and seeds, whole wheat products, popcorn

## Cholesterol & Soluble Fiber

Soluble fiber has been proven to reduce blood cholesterol levels which may help reduce the risk of heart disease. Research has shown that following a heart-healthy meal plan (such as Therapeutic Lifestyle Changes) that limits saturated fats, trans fats, and cholesterol and promotes increased amounts of soluble fiber can greatly improve cholesterol levels. These findings report that an additional 5-10 grams of soluble fiber per day can lead to a 3-5% reduction in LDL ("bad") cholesterol.\*

So how does soluble fiber do it? Since soluble fiber does not dissolve in water, the gel-like material it forms binds to cholesterol in the intestinal tract and helps eliminate it from the body. Think of soluble fiber like a sponge, "soaking up" cholesterol and preventing it from being absorbed. By doing this, soluble fiber helps to reduce the amount of cholesterol in the blood, which, in turn, reduces cholesterol deposits on artery walls and plaque build-up that can lead to heart disease.



## How Much Fiber Do I Need?

Type of Fiber	Daily Intake Recommendation
<b>Total Fiber</b>	<b>20-35 grams</b> * This equates to about 6-8 grams per meal and 3-4 grams per snack.
<b>Soluble Fiber</b>	<b>≥ 5-10 grams with 10-25 grams, preferred *</b>

High fiber foods are good for your health but too much too soon can result in intestinal gas, bloating, and cramping. Gradually increase your fiber intake over a few weeks, giving your body time to adjust. Also, drink **PLENTRY** of water with these foods. Fiber works best with water, making your stool soft and bulky. Without added water, constipation can occur.

## Where Do I Find Soluble Fiber?

Soluble fiber is rarely listed on the Nutrition Facts label so you will need to read the ingredients list, searching for soluble fiber terms such as:

- Oats
- Rolled oats
- Oat bran
- Oat flour
- Oatrium
- Whole grain barley
- Dry milled barley
- Barley bran
- Barley flakes
- Barley grits
- Pearl barley
- Barley flour
- Barley meal
- Sieved barley meal
- Barley betafiber
- Psyllium husk or seed (Metamucil®)
- Wheat bran or fiber
- Flax or flaxseeds
- Beta glucans

Below is a list of foods and their soluble fiber content that can help you when shopping for soluble fiber.

Vegetables (cooked)	Serving Size	Soluble Fiber (g)
Okra	1/2 cup	3.1
Brussels sprouts	1/2 cup	2.0
Sweet potato	1/2 cup	1.8
Asparagus	1/2 cup	1.7
Turnip	1/2 cup	1.7
Peas, green	1/2 cup	1.3
Carrots	1/2 cup	1.1



Beans (cooked)	Serving Size	Soluble Fiber (g)
Black beans	1/2 cup	2.4
Navy beans	1/2 cup	2.2
Kidney beans	1/2 cup	2.0
Pinto beans	1/2 cup	1.4
Chick peas	1/2 cup	1.3
Lentils	1/2 cup	1.0

Fruit	Serving Size	Soluble Fiber (g)
Blackberries	1/2 cup	3.1
Figs	3 small	2.3
Grapefruit	1 medium	2.0
Orange	1 medium	1.8
Apple, with skin	1 medium	1.0
Peach	1 medium	1.0

Grains	Serving Size	Soluble Fiber (g)
Kashi GoLean Crisp	3/4 cup	5.0
Oat bran, cooked	3/4 cup	2.2
Steel cut oats, dry	1/2 cup	2.0
Quinoa, cooked	1/2 cup	1.7
Flaxseed	1 tbsp	1.1
All Bran	1/3 cup	1.4
Pumpernickel bread	1 slice	1.2
Instant oatmeal	1 packet	1.0
Cheerios	1 cup	1.0
Wheat bran	1/2 cup	1.0
Barley, pearled	1/2 cup	0.8
Spaghetti, whole wheat, cooked	1/2 cup	0.6
Whole-wheat bread	1 slice	0.5



### Tips for Adding Up Daily Soluble Fiber Intake:

- **Roll with the Oats:** Look for words containing oats, barley, psyllium, and flax on the ingredients list of food products. These terms tell you that the product has soluble fiber and will help you reach your daily goals!
- **Screen for Beans:** Replace your typical side dishes with high-fiber dried beans and peas such as kidney, black, pinto, and navy beans. 1/2 cup of cooked black beans has 2.4 grams of soluble fiber, that adds up quickly!
- **Vary Your Veggies (& Fruits!):** Eat lots of fruits and vegetables daily! They pack a nutritional punch, loaded with fiber and tons of other great vitamins and minerals. Try incorporating a fruit and/or vegetable into each meal and snack.

## What About Soluble Fiber Supplements?

It's best to get soluble fiber naturally from foods. However, if you're having difficulty getting the recommended 10-25 grams of soluble fiber a day from food alone, there are some supplements that can help fill the gap. There are numerous fiber supplements currently on the market, but bulk-forming fiber supplements are generally considered the safest and are the most effective for helping to lower cholesterol, with psyllium-based products the most commonly prescribed.

## What is Psyllium?

Psyllium comes from the outer coating, or husk, of the psyllium plant's seeds. It is gluten free and a naturally occurring source of soluble fiber, similar to the fiber found in oats and barley. There are approximately 50 grams of soluble fiber per 100 grams of psyllium. According to the Food and Drug Administration (FDA), a "diet low in saturated fat and cholesterol that includes 7 grams of soluble fiber per day from psyllium may reduce the risk of heart disease by lowering cholesterol."

## Psyllium-Based Fiber Supplements

When adding any fiber supplement to your diet, be sure to start with a small dose, gradually increasing the amount. Check with your healthcare provider before starting any supplement for appropriate dosing recommendations.

It is very important to drink plenty of water with fiber supplements. Always take psyllium with a full 8 ounce cup of water and drink at least 6-8 cups of water throughout the day to help prevent constipation.

### For an adult:

- Add ½ - 2 tsp of psyllium to 1 cup (8 ounces) of warm water.
- Mix well and drink immediately before it becomes too thick (psyllium thickens quickly when added to water).
- If you are not used to taking psyllium, begin with a low dose (½ tsp in an 8 ounce glass of water once a day), then increase to 2 tsp in an 8 ounce glass of water per day twice a day, as needed.

### Possible Interactions:

- Psyllium supplements may reduce or delay the absorption of certain medications.
- Take psyllium at least 1 hour before or 2 - 4 hours after taking other medications.

You can easily find psyllium-based fiber supplements in most retail stores or online. Two common supplements on the market include:

### Metamucil®

- Made with 100% natural psyllium fiber
- Contains 2-3 grams of soluble fiber and 3.4 grams of psyllium per tablespoon
- Gluten-free and Sugar-free options available (some products contain sugar and/or sugar substitutes)

### Konsyl Original Formula Psyllium Fiber®

- Made with 100% natural psyllium fiber
- Contains 3 grams of soluble fiber and 6 grams of psyllium per teaspoon
- Gluten-free and Sugar/Sugar Substitute-free

Sources: University of Maryland Medical Center, [www.metamucil.com](http://www.metamucil.com), [www.konsyl.com](http://www.konsyl.com)

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