

UNDERSTANDING CHOLESTEROL

Cholesterol is a waxy, fat-like substance in your blood. Your body needs some cholesterol to function, but the wrong amounts of cholesterol may be unhealthy.

If you're like most people, you may already know about "bad" cholesterol, or LDL. But there are two other main parts of cholesterol, "good" cholesterol, or HDL and Triglycerides.

The 3 Main Parts of Cholesterol

Cholesterol is carried in the blood by special carriers called lipoproteins.¹ It may surprise you that not all cholesterol is bad.

- **High-Density Lipoprotein (HDL)** is known as "good" cholesterol. They get their good name because they are thought to carry cholesterol away from the arteries to the liver, where the body can eliminate it.¹ So it's better for your HDL to be higher.
- **Low-Density Lipoprotein (LDL)** is known as "bad" cholesterol. You don't want too many low-density lipoproteins or LDL to build up in your arteries. Together with other substances, LDL forms plaque, which can restrict blood flow to your heart or brain.¹ That's why you want your LDL to be lower.
- **Triglycerides (trigs)** are a type of fat in the blood. They're produced in the liver and also come from foods that you eat. High levels of trigs can contribute to the hardening and narrowing of arteries, making it harder for blood to flow.² That's one reason why you want your trigs to be lower. Also, a high triglyceride level often goes hand in hand with a high LDL level and lower HDL level.¹

Know Your Cholesterol Numbers

The recommended cholesterol test that looks at the main parts of cholesterol is called a lipoprotein (or lipid) profile. It's taken using a small sample of blood from the finger or arm following a 9- to 12-hour period without food, liquid, or oral medications.³

Cholesterol levels are measured as milligrams of cholesterol per deciliter of blood, or mg/dL. Doctors compare test results to the following set of guidelines established by the National Cholesterol Education Program (NCEP):⁴

Total Cholesterol Level	Cholesterol Category
Less than 200 mg/dL	Desirable
200-239 mg/dL	Borderline high
240 mg/dL and above	High
Bad Cholesterol Level (LDL)	Bad Cholesterol Category
Less than 100 mg/dL	Optimal
100-129 mg/dL	Near optimal/above optimal
130-159 mg/dL	Borderline high
160-189 mg/dL	High
190 mg/dL and above	Very high
Good Cholesterol Level (HDL)	Good Cholesterol Category
Less than 40 mg/dL	Low
60 mg/dL and above	High
Triglyceride Level	Triglyceride Category
Less than 150 mg/dL	Normal
150-199 mg/dL	Borderline high
200-499 mg/dL	High
500 mg/dL and above	Very high

Understanding the 3 main parts of cholesterol is the first step to working with your doctor to manage your cholesterol. If you don't know your numbers, talk to your doctor. If you're only focusing on bad cholesterol, you may not be doing enough.

10 Ways to lower your cholesterol:

1. Oatmeal
2. Almonds
3. Flaxseeds
4. Garlic
5. Phytosterol-containing Foods (fruits, nuts, vegetable oils, chocolate, margarine, cheese)
6. Apples

7. Beans
8. Soy Protein
9. Take Metamucil
10. Exercise

1. Oatmeal

Oats are rich in beta-glucan, a soluble fiber that acts like a sponge to soak up cholesterol.

How to sneak it in: Add cinnamon or dried cranberries to your morning [oatmeal](#) for a flavor boost. Oat-bran is a highly concentrated source of beta-glucan and it's easy to mix into [homemade](#) bread, muffin and pancake batter.

Check out these [Oatmeal Chocolate Chip Cookies](#).

Brill's daily Rx: 3 grams of beta-glucan, found in a half cup of dry oatmeal or oat bran.

2. Almonds

Almonds contain two powerful antioxidants – vitamin E and flavonoids – which prevent the oxidation of LDL, a precursor to plaque buildup.

How to sneak it in: Eat almonds with their skins, which pack a hefty dose of flavonoids. Stir a handful into [yogurt](#) or spread two tablespoons of almond butter on whole-wheat bread.

Make these [Spiced Spanish Almonds](#) for a snack.

Use whole flaxseed in these [Blueberry-Maple Muffins](#).

Brill's daily Rx: 2 tablespoons of ground flaxseeds.

4. Garlic

Garlic impedes the liver's ability to make cholesterol.

How to sneak it in: Chop garlic into small pieces to release its flavor. Sauté it with steamed spinach, add it to sauces and [soups](#) or purée roasted garlic with cooked potatoes and olive oil for a heart-healthy version of everybody's favorite: mashed potatoes.

Or try this [Creamy Cauliflower Puree](#).

Brill's daily Rx: One clove and one Kyolic One Per Day Cardiovascular aged garlic extract [supplement](#).

5. Phytosterol-Containing Foods

Phytosterols are a fat found in plant [foods](#) such as fruits, nuts, seeds and vegetable oils. They interfere with cholesterol absorption by blocking it from your intestinal cells.

How to sneak it in: Even a vegetarian [diet](#) provides no more than 300-400 mg of plant sterols a day, well below Brill's recommendation.

So [supplement](#) this with [foods](#) containing added phytosterols – chocolate bars, margarine, cheese, granola bars and cookies, to name a few – but keep an eye on saturated fat and trans-fat content.

Check out this [Cranberry-Almond Granola](#).

Brill's daily Rx: 2-3 grams of phytosterols a day spread over two [meals](#).

Brill's daily Rx: One ounce of dry-roasted, unsalted almonds.

3. Flaxseeds

Flaxseeds contain lignan and soluble [fiber](#), which block the production of LDL and increase your body's ability to get rid of cholesterol.

How to sneak it in: Eat ground flaxseeds rather than whole ones, because your body can better absorb its [nutrients](#). Brill likes to sprinkle them into her morning oatmeal. New studies also show that [whole flaxseeds are better than flaxseed oil for lowering cholesterol](#).

6. Apples

Apples, particularly the skin and outer flesh, are rich in polyphenols, powerful antioxidants that help prevent plaque buildup.

How to sneak it in: Chop, slice or dice 'em, but leave the peel on for maximum [health benefits](#).

Try this [Jicama-Apple Slaw](#) recipe.

Brill's daily Rx: One apple – to keep the doctor away, of course.

7. Beans

Beans contain a special soluble fiber that's fermented in the colon. Healthy bacteria eat the [fiber](#) and bean sugars to form short-chain fatty acids, which travel to the liver and inhibit LDL cholesterol production.

How to sneak it in: Brill loves Adzuki beans, which are used in Japan to make sweet red bean paste.

She also recommends cannelloni beans (try them in Tuscan soups, an Italian bean-based soup) and kidney beans, [perfect](#) in Southwestern chili.

Make this [Pasta Bean Soup](#).

Brill's daily Rx: 1/2 cup of legumes (beans, peas or lentils).

8. Soy Protein

Soy protein contains phytoestrogens – compounds that increase the number and effectiveness of LDL cholesterol receptors, improving the liver's ability to get rid of cholesterol in your bloodstream.

How to sneak it in: Order a soy latte at your favorite coffeehouse, throw tofu into a [fruit smoothie](#), use soy flour when baking, or mix a handful of roasted soy nuts with dried fruit for an energy-boosting trail mix.

Try this [TLT](#) (Tofu, Lettuce & Tomato [Sandwich](#)) for lunch.

Brill's daily Rx: 20–25 grams.

Two More Tips

A healthy diet isn't your only defense against cholesterol.

“Every step works to lower cholesterol in a specific way,” Brill says. “By combining them all, you get an extremely powerful LDL-lowering approach.”

Here are two of her favorite non-food-related tips:

9. Take Metamucil (Psyllium Husk)

Metamucil contains psyllium husk, a [fiber](#) that prevents cholesterol from entering intestinal cells. This fiber soaks up cholesterol so you excrete it rather than absorb it into [your body](#).

It's “the most powerful LDL-lowering viscous soluble fiber in existence,” Brill says.

How to sneak it in: Adults should consume 10-25 grams of [soluble fiber](#) a day, advises the National Cholesterol Education Program, but most get only 3-4 grams.

Brill says you should get half your fiber from a supplement and the rest from [food](#).

Take half your daily dose of Metamucil before breakfast and half after dinner to avoid overloading your body on fiber, which can cause gas, constipation or diarrhea.

Brill's daily Rx: Work up to 12 capsules a day, for a total of 6 grams of psyllium husk.

Or use the powdered version, which you can mix into [water](#). It varies by product, but most Metamucil powders contain 3.4 grams of psyllium husk per serving.

10. Work Up a Sweat

Brisk [exercise](#) speeds blood flow in your arteries, reducing your chances of inflammation and clogging (two precursors to hardening of your arteries).

How to sneak it in: You don't have to hit the gym to get some exercise. Clip on a pedometer while you run errands and aim for 10,000 steps a day.

Brill's daily Rx: 30 minutes of exercise.

Start incorporating these [foods](#) and tips into your lifestyle today.

For more on their benefits and for delicious recipes and meal plans (you'll love the walnut-crusting salmon), get a copy of [Cholesterol Down](#) and check out [CholesterolDownBook.com](#).

For more information on cholesterol, visit our [Heart Disease Health Center](#).

How Much Do You Know About Heart Health?

Sure, you know that your heart is the vital organ that pumps blood throughout the body. But can you separate fact from fiction when it comes to heart-smart living? Find out with this [heart-health quiz](#).

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