



Even LDLs aren't all bad

I know there is "good" and "bad" cholesterol, but how do they actually work?

You're absolutely right -- we call two different kinds of cholesterol "good" and "bad." But this isn't like a '50s Western. Even the cholesterol wearing the black hat isn't all bad.

First, you need to know a few things about cholesterol in general. It's a fatty, waxy substance, and, on average, your liver produces about 75 percent of the cholesterol in your body. That's a good thing, because cholesterol is a vital component of cell membranes and is also essential for the synthesis of some hormones and the production of vitamin D.

To get to where it's needed, cholesterol in the liver gets attached to proteins. Once combined, they're called lipoproteins. There are several kinds of lipoproteins -- most notably, low-density lipoproteins (LDLs, the "bad" ones) and high-density lipoproteins (HDLs, the "good" ones).

Like I said, LDLs really aren't all bad. They're the ones that carry cholesterol from the liver to the rest of the body. That's a good thing. But too many LDLs in your bloodstream may indicate trouble. The waxy substance can build up in your arteries, particularly the arteries around your heart. The deposits are called plaques, and they can eventually narrow an artery enough to block blood flow. And that's definitely not a good thing.

HDLs have a very different job.

They carry cholesterol from your bloodstream back to the liver ensuring that this waxy substance does not accumulate in your arteries.

Generally, you want an LDL level under 100 milligrams per deciliter of blood (mg/dl) and an HDL level above 40. According to the National Institutes of Health, the average HDL level for men is about 45, and for women, it's 55.

In recent years, some scientists have examined the size of lipoprotein particles. Some studies indicate that larger lipoproteins are better -- larger HDLs do a better job at cleaning out cholesterol, and larger LDLs tend not to form deposits. While interesting, these findings are preliminary. Blood cholesterol isn't commonly tested for particle size.

High levels of LDLs could be caused by a number of factors: heredity, a diet high in saturated fat, excess weight, a sedentary lifestyle, and age (blood cholesterol tends to rise until you're 60 to 65 years old). Helpful is a healthful diet that includes substantial amounts of soluble fiber (found in oatmeal, kidney beans, apples, pears, barley, brussels sprouts, psyllium and prunes), and polyunsaturated and omega-3 fatty acids (in walnuts, almonds, and fatty fish, including mackerel, lake trout, herring, sardines, albacore tuna and salmon).

Chow Line is a service of Ohio State University Extension and the Ohio Agricultural Research and Development Center. Send questions to Chow Line, c/o Martha Filipic, 2021 Coffey Road, Columbus, OH, 43210-1044, or filipic.3@cfaes.osu.edu.



THE OHIO STATE UNIVERSITY
OHIO STATE UNIVERSITY
EXTENSION

OHIO AGRICULTURAL RESEARCH
AND DEVELOPMENT CENTER

For the week of
Feb. 25, 2007

By Martha Filipic
(614) 292-9833
filipic.3@cfaes.osu.edu

Editor:

This column was reviewed by Josh Bomser, assistant professor of human nutrition in the College of Education and Human Ecology and researcher with the Ohio Agricultural Research and Development Center.

To receive Chow Line electronically, send an e-mail to filipic.3@cfaes.osu.edu or sign up to our news subscription service at <http://www.ag.ohio-state.edu/~news/subscribe.php>.

**Section of Communications
and Technology
News and Media Relations**
2021 Coffey Road
Columbus, OH 43210-1044
(614) 292-2011

208 Research Services
Building
1680 Madison Ave.
Wooster, OH 44691-4096
(330) 263-3780

OSU Extension embraces human diversity and is committed to ensuring that all educational programs conducted by Ohio State University Extension are available to clientele on a nondiscriminatory basis without regard to race, color, age, gender identity or expression, disability, religion, sexual orientation, national origin, or veteran status.