

'Bad' cholesterol not as bad as people think, study shows

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The so-called "bad cholesterol" – low-density lipoprotein commonly called LDL – may not be so bad after all, shows a Texas A&M University study that casts new light on the cholesterol debate, particularly among adults who exercise.

Steve Riechman, a researcher in the Department of Health and Kinesiology, says the study reveals that LDL is not the evil Darth Vader of health it has been made out to be in recent years and that new attitudes need to be adopted in regards to the substance. His work, with help from colleagues from the University of Pittsburgh, Kent State University, the Johns Hopkins Weight Management Center and the Northern Ontario School of Medicine, is published in the *Journal of Gerontology*.

Riechman and colleagues examined 52 adults from ages 60 to 69 who were in generally good health but not physically active, and none of them were participating in a training program. The study showed that after fairly vigorous workouts, participants who had gained the most [muscle mass](#) also had the highest levels of LDL (bad) [cholesterol](#), "a very unexpected result and one that surprised us.

"It shows that you do need a certain amount of LDL to gain more muscle mass. There's no doubt you need both – the LDL and the HDL -- and the truth is, it (cholesterol) is all good. You simply can't remove all the 'bad' cholesterol from your body without serious problems occurring.

Cholesterol is found in all humans and is a type of fat around the body. A person's total cholesterol level is comprised of LDL (low-density lipoprotein) and HDL (high-density lipoprotein) cholesterol.

LDL is almost always referred to as the "bad" cholesterol because it tends to build up in the walls of arteries, causing a slowing of the blood flow which often leads to heart disease and heart attacks.

HDL, usually called the "good cholesterol," often helps remove cholesterol from arteries.

"But here is where people tend to get things wrong," Riechman says.

"LDL serves a very useful purpose. It acts as a warning sign that something is wrong and it signals the body to these warning signs. It does its job the way it is supposed to.

"People often say, 'I want to get rid of all my bad (LDL) cholesterol,' but the fact is, if you did so, you would die," the Texas A&M professor adds. "Everyone needs a certain amount of both LDL and HDL in their bodies. We need to change this idea of LDL always being the evil thing – we all need it, and we need it to do its job."

According to the American Heart Association, about 36 million American adults have high cholesterol levels.

"Our tissues need cholesterol, and LDL delivers it," he notes. "HDL, the good cholesterol, cleans up after the repair is done. And the more LDL you have in your blood, the better you are able to build muscle during resistance training."

Riechman says the study could be helpful in looking at a condition called sarcopenia, which is muscle loss due to aging. Previous studies show

muscle is usually lost at a rate of 5 percent per decade after the age of 40, a huge concern since muscle mass is the major determinant of physical strength. After the age of 60, the prevalence of moderate to severe sarcopenia is found in about 65 percent of all men and about 30 percent of all women, and it accounts for more than \$18 billion of health care costs in the United States.

"The bottom line is that LDL – the [bad cholesterol](#) – serves as a reminder that something is wrong and we need to find out what it is," Riechman says.

"It gives us warning signs. Is smoking the problem, is it diet, is it lack of exercise that a person's cholesterol is too high? It plays a very useful role, does the job it was intended to do, and we need to back off by always calling it 'bad' cholesterol because it is not totally bad."

Provided by Texas A&M University

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