

Measuring HDL particles as opposed to HDL cholesterol is a a better indicator of coronary heart disease

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A team of researchers at Brigham and Women's Hospital, the University of Pittsburgh Graduate School of Public Health and other institutions, have discovered that measuring HDL particles as opposed to HDL cholesterol is a much better indicator of coronary heart disease.

Until recently, it seemed well-established that high-density lipoprotein (HDL) is the "[good cholesterol](#)". However there are many unanswered questions on whether raising someone's HDL can prevent [coronary heart disease](#), and on whether or not HDL still matters. A team of researchers at Brigham and Women's Hospital (BWH), the University of Pittsburgh Graduate School of Public Health (GSPH) and other institutions, have discovered that measuring HDL particles (HDL-P) as opposed to HDL cholesterol (HDL-C) is a much better indicator of coronary heart disease (CHD), and that HDL does indeed, still matter.

This study will be electronically published July 11, 2012 and will be published in the August 7th print issue of the *Journal of American College of Cardiology*.

"Several recent failures of HDL-raising drugs and a genetic study have generated doubt that circulating levels of HDL in the blood are causally related to [heart disease](#), and that raising HDL is a promising [therapeutic approach](#)," said Rachel Mackey, PhD, principal investigator of the study and assistant professor of epidemiology at GSPH.

Most previous studies of HDL have looked at the cholesterol to assess CHD risk, not many have examined the particle count. The research team analyzed data from the Multi-[Ethnic Study](#) of [Atherosclerosis](#) (MESA), an NIH funded multiethnic study. The researchers focused on a subset of data of 5,500 middle-aged men and women, over the age of 45. They looked at the quantity of HDL particles (HDL-P) in addition to the quantity of cholesterol carried by the particles (HDL-C), which has historically been used to measure HDL.

"HDL cholesterol is only one property of HDL particles -- it's like cargo on a ship, one can look at HDL cholesterol, which is one type of the cargo that is carried on the ship, or one can look at the number of ships. In our study, we found that the number of HDL particles had stronger cardio-protection than HDL cholesterol," explained Samia Mora, MD, a physician in the Cardiovascular and Preventive Divisions at BWH and senior author on the study.

The study suggests that it's important to not only measure HDL cholesterol, but to experiment with other ways of measurement, such as HDL particles. "Before we lose confidence in the potential of raising HDL to benefit patients, there needs to be more research extending beyond [HDL cholesterol](#) measurement," Explained Dr. Mackey.

Provided by Brigham and Women's Hospital

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