

LDL cholesterol is a poor marker of heart health in patients with kidney disease

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LDL cholesterol is not a useful marker of heart disease risk in patients with kidney disease, according to a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology* (JASN). The finding suggests that other measurements should be used to assess kidney disease patients' cardiovascular health.

High LDL cholesterol is a strong marker of [heart disease risk](#) in the general population, but its use in people with chronic kidney disease (CKD) is unclear. To investigate, Marcello Tonelli, MD, FRCPC (University of Alberta, in Edmonton, Canada) and his colleagues studied 836,060 adults with CKD from the Alberta Kidney Disease Network between 2002 and 2009.

During an average follow-up of four years, 7762 patients were hospitalized for heart attacks, most of whom had the lowest levels of kidney function at the start of the study. Despite their higher overall risk of having a heart attack, the link between higher LDL cholesterol and [heart attack risk](#) was weaker for these patients than for patients with higher kidney function.

"This indicates that, although people with impaired [kidney function](#) are at high risk of cardiovascular events, LDL cholesterol is less useful as a marker of risk in this population," said Dr. Tonelli. "This in turn suggests that, unlike in the general population, criteria for cardioprotective treatments such as statins should not be based on [LDL cholesterol levels](#) in people with [chronic kidney disease](#), and it argues instead for an approach that is based on absolute cardiovascular risk."

In an accompanying editorial, Julie Lin, MD (Genzyme Corporation and Brigham and Women's Hospital) noted that further study of [kidney dysfunction](#) and cardiovascular risk represents an important area of healthcare research. "The very large total at-risk population of CKD and end stage renal disease patients who will experience

morbidity and mortality from cardiovascular disease is calling out for more research to lead directly to improved management and outcomes as soon as possible."

More information: The article, entitled "Association between LDL-C and Risk of Myocardial Infarction in CKD," will appear online at jasn.asnjournals.org/ on May 16, 2013, [doi: 10.1681/ASN.2012080870](https://doi.org/10.1681/ASN.2012080870).

The editorial, entitled "A Piece of the Puzzle in the Cardiorenal Conundrum," will appear online at jasn.asnjournals.org/ on May 16, 2013, [doi: 10.1681/ASN.2013040420](https://doi.org/10.1681/ASN.2013040420).

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