

Lead, mercury exposure raises cholesterol levels

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Space-filling model of the Cholesterol molecule. Credit: RedAndr/Wikipedia

Higher levels of lead and other heavy metals detected in the blood was associated with increased levels of lower density lipoprotein (LDL—bad cholesterol) and total cholesterol, according to preliminary research to be

presented in Chicago at the American Heart Association's Scientific Sessions 2018.

Researchers reviewed information from NHANES 2009-2012, a national representative database which includes [cholesterol levels](#) and blood levels of [heavy metals](#) among U.S. adults. They found a notable difference between those with the least blood levels of heavy metal and those with the most, with LDL becoming progressively higher as lead levels increased.

Compared with those who had the lowest levels of a metal, those with the highest:

- had 56 percent greater odds of having higher total cholesterol if they have the highest level of lead;
- were 73 percent more likely to have higher total cholesterol if they had the highest levels of mercury in their blood;
- had 41 percent higher risk of elevated total cholesterol if their cadmium levels were in the highest levels; and
- were 22 percent more likely to have higher bad cholesterol if they were in the highest lead levels.

In addition, mercury levels increased the odds for higher LDL by 23 percent among those who fell in the middle for their heavy metal levels, compared to those with the lowest level. The rise in cholesterol seen with increasing heavy metal levels in the blood might have cardiovascular consequences in people exposed to heavy metals, such as in areas with disaster water crises. This suggests the need for screening for heavy metals as a risk for [high cholesterol](#) and cardiovascular disease, the authors noted.

Provided by American Heart Association

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