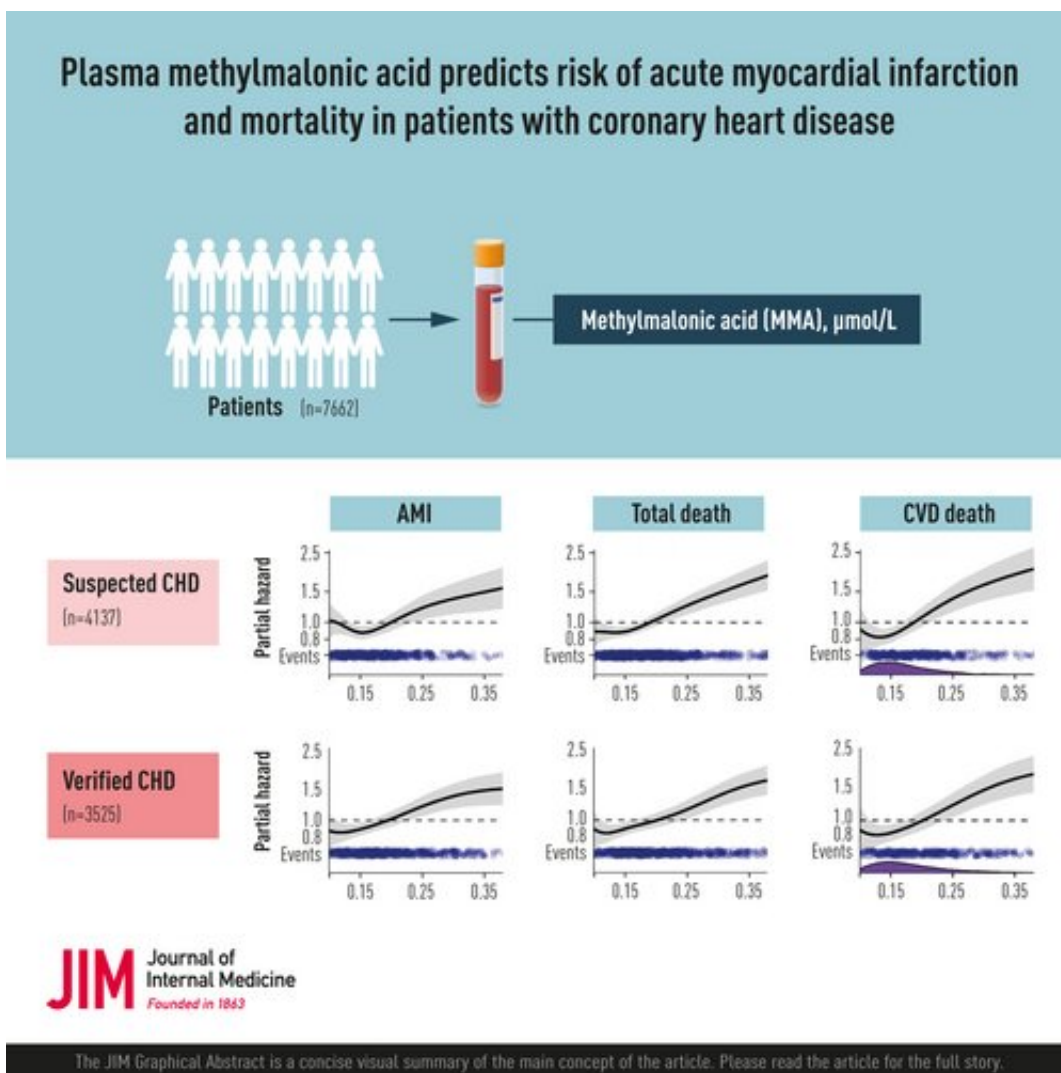


Elevated plasma methylmalonic acid is related to increased cardiovascular events: Study

February 3 2023



Graphical abstract. Credit: *Journal of Internal Medicine* (2023). DOI: 10.1111/joim.13610

A recent study from UiB shows that elevated plasma methylmalonic acid predicts increased risk of acute myocardial infarction and mortality in patients with suspected or verified coronary heart disease.

Methylmalonic acid (MMA) is a substance produced from the breakdown of amino acids, odd-chain [fatty acids](#) and cholesterol in the body. MMA concentration in blood is reported to be elevated in patients with heart diseases and kidney impairment, and higher plasma MMA is considered a marker of vitamin B₁₂ deficiency.

"In our study, we analyzed the association of plasma MMA with the risk of acute myocardial infarction and death in 7,662 participants of two large, independent cohorts of patients evaluated for either suspected [coronary heart disease](#) or verified coronary heart disease," says lead author, Indu Dhar at the University of Bergen.

They found that across both cohorts higher MMA in plasma was associated with reduced renal function and low B₁₂ status at baseline. However, higher plasma MMA predicted increased long-term risk of acute myocardial infarction and total and cardiovascular deaths independent of renal function and B₁₂ status.

"This may suggest that risk relationship between MMA and outcomes is not explained by vitamin B₁₂ status or [kidney function](#) alone," says Dhar.

Another important finding from this research was the [positive association](#) between plasma MMA and risk of dying due to non-cardiovascular causes primarily in patients evaluated for suspected coronary heart disease, thus warranting further research to explore MMA in a wider perspective beyond cardiovascular diseases.

"Future studies should also investigate the potential role of MMA as an important regulator of energy and [lipid metabolism](#)," Dhar concludes.

More information: Indu Dhar et al, Plasma methylmalonic acid predicts risk of acute myocardial infarction and mortality in patients with coronary heart disease: A prospective 2-cohort study, *Journal of Internal Medicine* (2023). [DOI: 10.1111/joim.13610](https://doi.org/10.1111/joim.13610)

Provided by University of Bergen

Citation: Elevated plasma methylmalonic acid is related to increased cardiovascular events: Study (2023, February 3) retrieved 2 May 2024 from <https://medicalxpress.com/news/2023-02-elevated-plasma-methylmalonic-acid-cardiovascular.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.