

Higher BMI variability linked to adverse cardiovascular disease events

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Higher body mass index (BMI) variability is associated with adverse cardiovascular disease (CVD) events, according to a study published online March 21 in *JAMA Network Open*.

Zakaria Almuwaqqat, M.D., M.P.H., from the Veterans Affairs Atlanta Healthcare System in Decatur, Georgia, and colleagues examined the association between BMI [variability](#) and incident CVD events in two cohorts (the Million Veteran Program [MVP] and the U.K. Biobank [UKB]).

There were 4,811 composite CVD events recorded from 2011 to 2018 among the 92,363 U.S. veterans in the MVP cohort. The researchers found that the coefficient of variation of BMI was associated with an increased risk for composite CVD across all groups (hazard ratio, 1.16). Among subgroups and after adjustment for the polygenic score of BMI, these associations were unchanged. There were 6,934 composite CVD events among the 65,047 individuals in the UKB cohort. The risk for [cardiovascular death](#) increased significantly for each one-standard deviation increase in BMI variability in the UKB cohort (hazard ratio, 1.08).

"These findings suggest that greater BMI changes could be related to a high-risk phenotype for CVD, with unique metabolic and genetic mechanisms," the authors write. "Future studies should focus on identifying molecular risk pathways mediating this association."

More information: Zakaria Almuwaqqat et al, Long-Term Body Mass Index Variability and Adverse Cardiovascular Outcomes, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2024.3062](https://doi.org/10.1001/jamanetworkopen.2024.3062)

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