

# Metabolic syndrome with heavy alcohol use contributes to recent surge in alcoholic liver disease-related mortality

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A brief research report evaluating the relationship between metabolic syndrome (MetS) and a recent increase in alcohol-associated liver

disease (ALD) deaths has found that heavy alcohol use and the presence of MetS was associated with a higher risk for advanced liver disease. This association may provide some explanation for the recent surge in alcoholic liver-disease related mortality. The report is published in *Annals of Internal Medicine*.

Mortality from ALD surged from 2009 to 2018 for unclear reasons and despite stable or declining prevalence of alcohol use during that timeframe.

Researchers from University of Southern California Keck School of Medicine and Keck Medicine of USC used NHANES (National Health and Nutrition Examination Survey), a continuous cross-sectional survey, to produce weighted study samples that were representative of the noninstitutionalized U.S. [adult population](#) between 1999 and 2018 to examine whether [metabolic syndrome](#) (MetS) could be an important contributor to the recent mortality surge from ALD. Participants were divided into 6 subgroups based on alcohol use and MetS: no alcohol use without MetS (n = 7,204); nonheavy alcohol use without MetS (n = 17,475); heavy alcohol use without MetS (n = 805); no alcohol use with MetS (n = 6,818); nonheavy alcohol use with MetS (n = 9,516); and heavy alcohol use with MetS (n = 406). Using [logistic regression](#), the authors estimated marginally adjusted probabilities of advanced liver disease for each subgroup, adjusted for age, sex, and active smoking at 4-year intervals throughout the study period.

The model showed that increasing prevalence of heavy alcohol use with or without MetS did not explain increases in ALD. However, the data did show increases in advanced liver disease with heavy alcohol use with or without MetS, with the greatest increase in advanced liver disease among those with both heavy alcohol use and MetS. A high fibrosis-4 (FIB-4) score (a surrogate for advanced liver disease) was previously associated with 25-fold higher risk for liver-related mortality compared

with low FIB-4 score. According to the authors, these findings suggest an increasing interaction effect with MetS and heavy [alcohol use](#) that may be contributing to the recent surge in ALD-related mortality, but the reasons are not entirely clear.

**More information:** National Trends in Alcohol Use, Metabolic Syndrome, and Liver Disease From 1999 to 2018, *Annals of Internal Medicine* (2023). [DOI: 10.7326/M23-0518](https://doi.org/10.7326/M23-0518)

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