

Cannabis Hard on the Heart and Doubles Risk for CVD Death, Major Study Shows

Megan Brooks

June 18, 2025

Cannabis use was associated with a significant twofold increased risk for major adverse cardiovascular events (MACEs), including a doubling in the likelihood of death from these events, in a meta-analysis of 24 relevant studies.

The analysis is one of the largest and most detailed to date examining cannabis use and MACEs in real-world settings. Based on their findings, the authors call for “systematic investigation” of cannabis use in all patients presenting with serious cardiovascular disorders.

The study, with first author Wilhelm Storck, PhD, with the University of Toulouse, Toulouse, France, was [published online](#) on June 17 in the journal *Heart*.

Changing Attitudes

The findings come at a time of increasing cannabis use, driven in part by legalization and the expanding use of cannabis for medical purposes — shifts that may have contributed to more permissive public attitudes toward the drug despite accumulating evidence of potential risk to heart health.

Previous studies have described potential cannabis-related [cardiovascular risk](#). But knowledge gaps remained on the magnitude of the associated risk for cannabis users, particularly in recent years marked by the availability of more

potent and increasingly diverse forms of cannabis, from high-strength inhaled concentrates to edibles and synthetic cannabinoids.

Storck and colleagues sought to quantify the actual cardiovascular risks of cannabis use amid these evolving trends.

They systematically reviewed 24 pharmacoepidemiologic studies (17 cross-sectional, six cohort, and one case-control study) published between January 2016 and January 2023. Together, the studies involved roughly 200 million individuals across multiple countries.

The final analysis focused on cannabis-related MACEs (ie, cardiovascular death; nonfatal [acute coronary syndrome](#) [ACS], including [myocardial infarction](#); or nonfatal [stroke](#)).

Their pooled results revealed positive associations between cannabis use and MACEs, with a 20% higher risk for stroke (risk ratio [RR], 1.20), a 29% higher risk for ACS (RR, 1.29), and more than double the risk for cardiovascular mortality (RR, 2.10) compared to nonusers.

The investigators noted that the single study on medical cannabis that was included in the meta-analysis also highlighted a positive association.

The findings held up in sensitivity analyses limited to cohort studies, suggesting a robust association despite some methodological limitations, the authors said.

In addition, they noted that four additional papers published outside of the time window of their study yielded comparable results.

Treat Cannabis Like Tobacco?

The authors noted that cannabis exposure was often poorly measured across the studies. Only four studies collected data on dose and assessed dose-response. There was also a moderate-to-high risk for bias in many of the studies. Most studies were cross-sectional, which are not designed to prove causality.

Despite these caveats, this “exhaustive analysis of published data on the potential association between cannabis use and the occurrence of MACE provides new insights from real-world data,” they said.

The authors of a linked editorial said the study raises “serious questions about the assumption that cannabis poses little cardiovascular risk.”

“Cannabis needs to be incorporated into the framework for prevention of clinical cardiovascular disease. So too must cardiovascular disease prevention be incorporated into the regulation of cannabis markets,” wrote Stanton Glantz, PhD, and Lynn Silver, MD, MPH, with University of California San Francisco.

As the evidence base grows, Glantz and Silver said cardiovascular and other health risks must be considered in the regulation of allowable product and marketing design.

“Today that regulation is focused on establishing the legal market with woeful neglect of minimizing health risks. Specifically, cannabis should be treated like tobacco: Not criminalized but discouraged, with protection of bystanders from secondhand exposure,” they concluded.

The study had no specific funding. The authors and editorial writers declared having no conflicts of interest.

Credits

Lead image: Pmvnr/Dreamstime

Medscape Medical News © 2025 WebMD, LLC

Send comments and news tips to news@medscape.net.

*Cite this: Cannabis Hard on the Heart and Doubles Risk for CVD Death, Major Study Shows - Medscape
- June 18, 2025.*