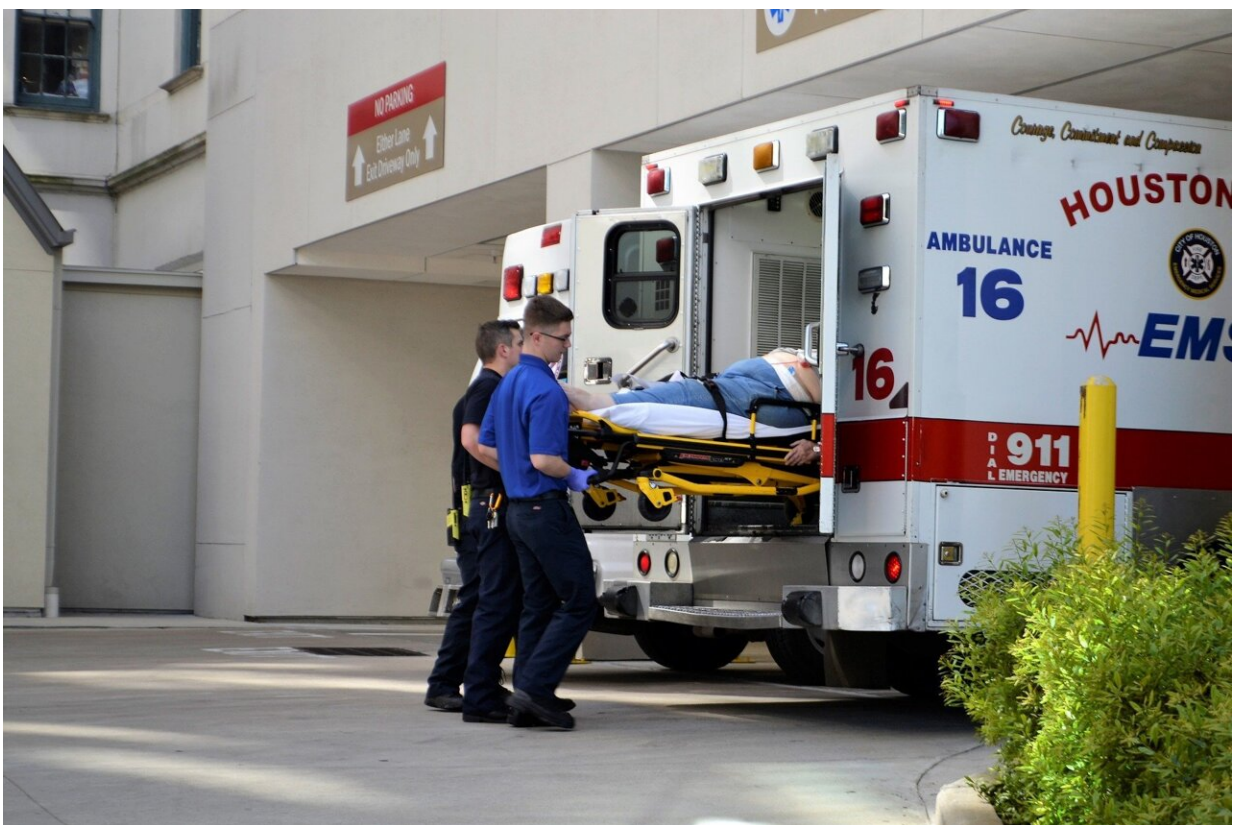


Prevalence of 'meth' heart failure now seen in a wide range of socioeconomic and racial groups

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Rates of heart failure associated with the growing illicit use of the stimulant drug methamphetamine, or meth for short, are rising

worldwide and now affect a wide range of socio-economic and racial groups, finds a review of the available evidence, published online in the journal *Heart*.

Meth heart failure is also more severe than that experienced by those who don't use the drug, and warrants increased public awareness and availability of treatment for [meth](#) addiction to stem the rising tide of those affected, urge the researchers.

Previously published research shows that use of the drug, also popularly known as "crystal meth," "ice" and "speed," is associated with serious health problems, including high blood pressure, [heart attack](#), stroke, and even sudden death. But there are no comprehensive systematic reviews of published research on meth use and heart failure, and this prompted a team of U.S. and Canadian researchers to try to bridge this knowledge gap.

They reviewed the findings of 21 relevant observational studies carried out in different countries (although most were U.S.-based) between 1997 and 2020. The studies collectively involved several thousand people, ranging in age from 35 to 60, on average.

Meth use included inhalation, injection, swallowing, smoking, and snorting, with reported frequency ranging from daily to every other week, and total monthly dose ranging from 0.35-24.5 g.

The review shows that the prevalence of meth heart failure is on the rise worldwide, particularly over the past decade, and affects a wide range of racial/ethnic and socioeconomic groups, but more men than women.

The average duration of meth use before a heart failure diagnosis is 5 years, but in almost 1 in 5 (18%) of those who go on to develop heart failure, this happens within 12 months. In some cases, heart failure was

diagnosed after a single use.

Meth heart failure is also associated with more [severe disease](#) than that seen in people who don't use meth, as well as longer inpatient stays and more hospital readmissions.

Among meth users, those who develop meth heart failure tend to be older, but among patients with heart failure, those with meth heart failure tend to be younger. Meth heart failure is also associated with a greater likelihood of other substance abuse, post traumatic stress disorder, depression, other heart and kidney disease.

Being a woman, cutting out the drug completely, and heart failure treatment based on clinical guidelines were all associated with improved outcomes, the review shows.

Treating meth heart failure is also expensive: Inpatient data for California indicate that annual charges rose by 840% from \$41.5 million in 2008 to \$390.2 million in 2018. This compares with an equivalent rise of 82% (from \$3.5 billion to \$6.8 billion) for all heart failure cases.

The researchers acknowledge several limitations to their findings, including that most of the 21 studies were small, retrospective, and observational, added to which they differed substantially in design, statistical methods, eligibility criteria, and outcomes, potentially undermining the generalizability of the review findings.

There's an urgent need for well-designed prospective studies of meth users to build an accurate evidence base for the effective prevention and treatment of meth heart failure, they say, concluding, "The increasing prevalence of meth [heart failure] across racial/ethnic and sociodemographic groups in the setting of rising [meth use] worldwide calls for increased awareness and availability of treatment for

methamphetamine addiction. General healthcare's successful experience with management of the opioid epidemic needs to be translated and expanded to treatment of [[meth use](#) disease]."

In a linked editorial, Dr. Jonathan Davis, of the University of California San Francisco, U.S., says that the review shows that meth heart failure isn't straightforward to study or treat: "[The researchers] clearly demonstrate that with improved understanding of patients' relationships with methamphetamine and the other factors impacting their care, we will better characterize the pathophysiology of methamphetamine associated [heart failure](#) and better investigate evidence based best practices and treatment strategies. A multidisciplinary team designed to meet this population's unique needs and deliver non-stigmatizing, patient-centered care is mandatory."

More information: Methamphetamine-associated heart failure: a systematic review of observational studies, *Heart* (2022). [DOI: 10.1136/heartjnl-2022-321610](#)

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