

Recreational drugs detected in more than 1 in 10 cardiac intensive care patients

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Recreational drug use may be a factor in a significant proportion of admissions to cardiac intensive care, with various substances detected in 1 in 10 such patients, suggest the findings of a multicentre French study

published online in the journal *Heart*.

Drug use was also associated with significantly poorer outcomes, with users nearly 9 times as likely to die or require emergency intervention as other [heart](#) patients while in hospital, and 12 times as likely to do so if they used more than one [drug](#).

Recreational [drug use](#) is a known risk factor for cardiovascular incidents, such as a heart attack or abnormal heart rhythm ([atrial fibrillation](#)), explain the researchers. An estimated 275 million people around the globe indulged in this activity in 2022, a 22% increase on the figure for 2010, they add.

But it's not clear how common recreational drug use is among patients admitted to hospital with [heart problems](#), or to what extent this affects the likely course of their condition.

To try and find out, the researchers analyzed the urine samples of all patients admitted to [cardiac intensive care](#) in 39 French hospitals during one fortnight in April 2021, with a view to detecting recreational drug use.

During this period, 1904 patients were admitted, 1499 of whom provided a urine sample—average age 63, 70% male. Of these, 161 (11%) tested positive for various recreational drugs, but only just over half (57%) of whom admitted to using.

Prevalence was even higher among the under 40s, 1 in 3 (33%) of whom tested positive for recreational drugs.

The most frequently detected substance was cannabis (9%), followed by opioids (2%), cocaine (just under 2%), amphetamines (nearly 1%), and MDMA or ecstasy (just over 0.5%).

Compared with other non-using [heart patients](#), users were more likely to die or to require emergency intervention for events such as [cardiac arrest](#) or acute circulatory failure (haemodynamic shock) while in hospital: 3% vs. 13%—especially if they had been admitted for heart failure or a particular type of [heart attack](#) (STEMI).

After adjusting for other underlying conditions, such as HIV, diabetes, and [high blood pressure](#), users were nearly 9 times as likely to die or require emergency treatment.

While cannabis, cocaine, and ecstasy were each independently associated with these incidents, and single drug use was detected in nearly 3 out of 4 patients (72%), several drugs were detected in more than 1 in 4 (28%) users: these patients were at even greater risk, being 12 times as likely to die or require emergency treatment.

This is an observational study, so can't establish that recreational drug use resulted in admission to cardiac intensive care. The researchers also acknowledge that the study was only conducted over 1 fortnight in April, so the findings might not be applicable to other months of the year or the longer term.

And they caution, "Although the strong association between the use of recreational drugs and the occurrence of [major adverse events] suggests an important prognostic role, the limited number of events requires caution in the clinical interpretation of these findings."

But recreational drugs can increase blood pressure, heart rate, temperature, and consequently the heart's need for oxygen, they explain.

And they conclude, "While the current guidelines recommend only a declarative survey to investigate recreational drug use, these findings suggest the potential value of urine screening in selected patients with

acute cardiovascular events to improve risk stratification in [cardiac intensive care]."

In a linked editorial, doctors from London's St Bartholomew's Hospital and Queen Mary's University of London reiterate that the study wasn't designed to uncover a causal relationship. Larger studies would be needed to try and establish that.

But the study findings prompt two obvious questions, they suggest, "(1) Should patients admitted to intensive cardiac care units be screened for recreational drug use: and (2) What, if any, interventions might be implemented following a positive patient test result?"

Knowing that a patient had used [recreational drugs](#) might shed light on the cause of their condition and inform how it's managed, they suggest. It might have other benefits too.

"A positive test result would provide an opportunity for counseling about the adverse medical, psychological, and social effects of drugs, and for the implementation of interventions aimed at the cessation of drug use," they write.

But quite apart from the cost, screening raises issues of patient confidentiality and the potential for discrimination in how targeted screening might be applied, they say.

And they conclude, "There is a considerable way to go, however, before screening for recreational drug use can be recommended."

More information: Prevalence and impact of recreational drug use in patients with acute cardiovascular events, *Heart* (2023). [DOI: 10.1136/heartjnl-2023-322520](https://doi.org/10.1136/heartjnl-2023-322520)

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