

Drinking, smoking, and drug use linked to premature heart disease in the young

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Recreational drinking, smoking, and drug use is linked to premature heart disease in young people, particularly younger women, finds research published online in the journal *Heart*.

Those who regularly use 4 or more substances are 9 times as likely to be

affected, the findings indicate.

The numbers of new cases of [heart disease \(atherosclerotic cardiovascular disease\)](#) have been increasing in [young adults](#), but the potential role of recreational substance use isn't entirely clear.

To probe this further, the researchers explored whether the recreational use of tobacco, cannabis, alcohol, and illicit drugs, such as amphetamine and cocaine, might be linked to prematurely and extremely prematurely furred up arteries.

They drew on information supplied to the 2014-2015 nationwide Veterans Affairs Healthcare database and the Veterans with premature Atherosclerosis (VITAL) registry.

Extremely premature heart disease was defined as an 'event', such as a [heart attack](#), angina, or stroke before the age of 40, while premature heart disease was defined as an event before the age of 55 in men and before the age of 65 in women.

In all, there were 135,703 people with premature heart disease and 7716 with extremely premature heart disease. They were compared with 1,112, 45 patients who didn't have premature heart disease.

Recreational use of any substance was independently associated with a higher likelihood of premature and extremely premature heart disease.

Patients with premature heart disease were more likely to smoke (63% vs 41%), drink (32% vs 15%), and to use cocaine (13% vs 2.5%), amphetamines (3% vs 0.5%), and cannabis (12.5% vs 3%).

After accounting for potentially influential factors, such as [high blood pressure](#), diabetes, and high cholesterol, those who smoked tobacco were

nearly twice as likely to have premature heart disease while those who drank recreationally were 50% more likely to do so.

Cocaine users were almost 2.5 times as likely to have premature heart disease, while those who used amphetamines were nearly 3 times as likely to do so. Cannabis users were more than 2.5 times as likely to have premature heart disease while those using other drugs were around 2.5 times as likely to do so.

The higher the number of substances used recreationally, the greater was the risk of premature heart disease, ranging from a doubling in risk with the use of 1 substance to a 9-fold heightened risk for those using 4 or more.

Similar trends were observed among those who had extremely premature heart disease, with recreational substance use associated with 1.5 to 3 times higher odds of heart disease.

The associations were even stronger among women with premature and extremely premature heart disease than among similarly affected men.

This is an observational study, and as such can't establish causality. And the researchers acknowledge that they were unable to gather information on other potentially influential factors, such as the dose and duration of recreational substance use.

In a linked editorial, Dr. Anthony Wayne Orr of LSU Health Shreveport, Louisiana, points out that use of cocaine and methamphetamine have been associated with faster cell ageing and neurocognitive decline, with higher than average loss of grey matter.

And epidemiological studies suggest that 1 in 5 young adults misuse several substances and that these 'polysubstance users' often start using at

younger ages, and so have worse health over the long term, he says.

The growing body of published research on these issues "suggests the need for a nationwide education campaign on the potential long-term damage being done to the cardiovascular system in patients with substance use disorders," he argues.

These people need to be aware of the long term consequences for their health beyond the risk of an overdose, while doctors should screen patients with a history of substance misuse, he says.

"We are only young once, and we should do everything in our power to maintain that state as long as we can," he concludes.

More information: Recreational substance use among patients with premature atherosclerotic cardiovascular disease, *Heart* (2021). [DOI: 10.1136/heartjnl-2020-318119](https://doi.org/10.1136/heartjnl-2020-318119)

Editorial: Young at heart? Drugs of abuse cause early-onset cardiovascular disease in the young, [DOI: 10.1136/heartjnl-2020-318856](https://doi.org/10.1136/heartjnl-2020-318856)

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