

# Alcohol abuse may raise risk of death in patients with abnormal heart rhythms

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When patients under age 54 were hospitalized with abnormal heart rhythms, those who abused alcohol were 72% more likely to die before being discharged, according to preliminary research to be presented July 27-30, 2020, at the virtual American Heart Association's Basic Cardiovascular Sciences 2020 Scientific Sessions. The meeting is a premier global exchange of the latest advances in basic cardiovascular science including research in fields like microRNAs, cardiac gene and cell therapy, and cardiac development.

"Alcohol abuse has [harmful effects](#) on [physical health](#), leading to more illness and death in patients with heart problems. This is the first study to explore whether alcohol abuse is a risk factor for death in patients hospitalized with arrhythmia," said Rikinkumar S. Patel, M.D., M.P.H., lead author of the study and a [resident physician](#) in the department of psychiatry at Griffin Memorial Hospital in Norman, Oklahoma.

Arrhythmias are conditions in which the heart beats too slowly, too quickly or erratically. Underlying [heart problems](#) can result in arrhythmia when

electrical impulses are unable to move through the heart properly to generate a steady beat. Excessive alcohol use is known to promote the development of arrhythmia.

In the current study, researchers reviewed deaths among almost 115,000 patients (ages 15 to 54) hospitalized for arrhythmia between 2010 and 2014. Nearly one in 10 of the patients were also diagnosed with alcohol abuse, in this study defined as drinking that causes problems at home, work, or school, whether or not the person is considered physically dependent on alcohol.

The researchers found:

- arrhythmia patients were significantly more likely to die in the hospital if they had clogged arteries, diabetes or were aged 45-54 rather than being a younger adult; and
- after adjusting for other risks, patients hospitalized with [abnormal heart rhythms](#) were 72% more likely to die of any cause before discharge if they also were diagnosed with alcohol abuse or dependence.

"Physicians should educate patients with alcohol problems about their risk of hospitalization for arrhythmia and their increased risk of death. Integrated care models need to be developed to formulate strategies to counter problematic alcohol use and improve the health-related quality of life of patients," Patel said.

Further studies are needed to determine the impact of social alcohol use in people with abnormal heart rhythms who do not abuse alcohol. The design of this study cannot prove a cause and effect relationship between [alcohol abuse](#) and death from abnormal heart rhythms. Results of this study on adults aged 54 and younger, who are the most likely to have substance abuse problems, may not

be generalizable to older adults.

Data used in this analysis come from the Nationwide Inpatient Sample, a large database that contains information on more than 7 million hospital stays each year. The study received no funding.

Co-authors are Temitope Ajibawo, M.D., and Virendrasinh Ravat, M.D. Author disclosures are in the abstract.

Provided by American Heart Association

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