



RESEARCH SUMMARY

Date Compiled: September 2021

Key takeaways from included research:

- There is an association among the COVID-19 pandemic, the public health response to it, changes in alcohol policy, and alcohol consumption. Public health monitoring of alcohol consumption during the pandemic is warranted.
- Individual atrial fibrillation (AF) episodes were associated with higher odds of recent alcohol consumption, providing objective evidence that a modifiable behavior may influence the probability that a discrete AF event will occur.
- In a new cohort study, frequent drinking was a more important risk factor for incident GI cancers than the amount of alcohol consumed per occasion. Individuals should be cautioned about regular consumption of small amounts of alcohol in addition to the total amount of alcohol consumption or amount per occasion.
- Recreational marijuana legalization may increase the risk of alcohol and marijuana co-use among adolescents. Greater restrictions on the numbers of alcohol and marijuana retail outlets and hours of operation and advertising and higher taxes on alcohol and marijuana products may help reduce the availability of these substances to adolescents.

ALCOHOL CONSUMPTION IN RESPONSE TO THE COVID-19 PANDEMIC IN THE UNITED STATES **August 2021**

Abstract

Objectives: Excessive alcohol use is a serious and growing public health problem. Alcoholic beverage sales in the United States increased greatly immediately after the stay-at-home orders and relaxing of alcohol restrictions associated with the COVID-19 pandemic. However, it is not known to what degree alcohol consumption changed. This study assesses differences in alcohol drinking patterns before and after the enactment of stay-at-home orders.

Methods: In May 2020, a cross-sectional online survey of 993 individuals using a probability-based panel designed to be representative of the US population aged 21 and older was used to assess alcohol drinking patterns before (February, 2020) and after (April, 2020) the enactment of stay-at-home orders among those who consumed alcohol in February, 2020 (n=555). Reported differences in alcohol consumption were computed, and associations between differences in consumption patterns and individual characteristics were examined.

Results: Compared to February, respondents reported consuming more drinks per day in April (+29%, $P < 0.001$), and a greater proportion reported exceeding recommended drinking limits (+20%, $P < 0.001$) and binge drinking (+21%, $P = 0.001$) in April. These differences were found for all sociodemographic subgroups assessed. February to April differences in the proportion exceeding drinking limits were larger for women than men ($P = 0.026$) and for Black, non-Hispanic people than White, non-Hispanic people ($P = 0.028$).

Conclusions: There is an association among the COVID-19 pandemic, the public health response to it, changes in alcohol policy, and alcohol consumption. Public health monitoring of alcohol consumption during the pandemic is warranted.

Source: Barbosa, C, Cowell, AJ, & Dowd, WN. (2021). Alcohol Consumption in Response to the COVID-19 Pandemic in the United States. *Journal of Addiction Medicine*, 15(4), 341–344. <https://doi.org/10.1097/ADM.0000000000000767>

ACUTE CONSUMPTION OF ALCOHOL AND DISCRETE ATRIAL FIBRILLATION EVENTS **August 2021**

Abstract

Background: Patients' self-reports suggest that acute alcohol consumption may trigger a discrete atrial fibrillation (AF) event.

Objective: To objectively ascertain whether alcohol consumption heightens risk for an AF episode.

Design: A prospective, case-crossover analysis.

Setting: Ambulatory persons in their natural environments.

Participants: Consenting patients with paroxysmal AF.

Measurements: Participants were fitted with a continuous electrocardiogram (ECG) monitor and an ankle-worn transdermal ethanol sensor for 4 weeks. Real-time documentation of each alcoholic drink

consumed was self-recorded using a button on the ECG recording device. Fingertick blood tests for phosphatidylethanol (PEth) were used to corroborate ascertainments of drinking events.

Results: Of 100 participants (mean age, 64 years [SD, 15]; 79% male; 85% White), 56 had at least 1 episode of AF. Results of PEth testing correlated with the number of real-time recorded drinks and with events detected by the transdermal alcohol sensor. An AF episode was associated with 2-fold higher odds of 1 alcoholic drink (odds ratio [OR], 2.02 [95% CI, 1.38 to 3.17]) and greater than 3-fold higher odds of at least 2 drinks (OR, 3.58 [CI, 1.63 to 7.89]) in the preceding 4 hours. Episodes of AF were also associated with higher odds of peak blood alcohol concentration (OR, 1.38 [CI, 1.04 to 1.83] per 0.1% increase in blood alcohol concentration) and the total area under the curve of alcohol exposure (OR, 1.14 [CI, 1.06 to 1.22] per 4.7% increase in alcohol exposure) inferred from the transdermal ethanol sensor in the preceding 12 hours.

Limitation: Confounding by other time-varying exposures that may accompany alcohol consumption cannot be excluded, and the findings from the current study of patients with AF consuming alcohol may not apply to the general population.

Conclusion: Individual AF episodes were associated with higher odds of recent alcohol consumption, providing objective evidence that a modifiable behavior may influence the probability that a discrete AF event will occur.

Source: Marcus, GM, Vittinghoff, E, Whitman, IR, et al. (2021). Acute Consumption of Alcohol and Discrete Atrial Fibrillation Events. *Ann Intern Med.* [Epub ahead of print 31 August 2021]. doi:10.7326/M21-0228

ASSOCIATION OF THE FREQUENCY AND QUANTITY OF ALCOHOL CONSUMPTION WITH GASTROINTESTINAL CANCER **August 2021**

Abstract

Objective: To evaluate the relative association of the frequency of drinking vs the amount of alcohol consumed per occasion with the development of GI cancers.

Design, Setting, and Participants: A population-based retrospective cohort study used data from the Korean National Health Insurance System database on 11 737 467 participants without cancer who underwent a national health screening program from January 1, 2009, to December 31, 2010. Participants were followed up from the year after their health screening date until they received a diagnosis of GI cancer, death, or December 31, 2017. The median follow-up duration was 6.4 years (interquartile range, 6.4-7.4 years). Statistical analysis was performed from January 1, 2019, to March 31, 2020.

Exposures: Weekly alcohol consumption (nondrinker [0 g/week], mild drinker [0-104 g/week], moderate drinker [105-209 g/week], and heavy drinker [\geq 210 g/week]), drinking frequency, and amount per occasion.

Results: Among 11 737 467 participants (6 124 776 women [52.2%]; mean [SD] age, 54.6 [10.4] years), 319 202 (2.7%) developed GI cancer. Compared with nondrinkers, the risk of GI cancer was higher for mild drinkers (adjusted hazard ratio [aHR], 1.04; 95% CI, 1.03-1.05), moderate drinkers (aHR, 1.14; 95% CI, 1.12-1.15), and heavy drinkers (aHR, 1.28; 95% CI, 1.26-1.29). The risk of GI cancer increased linearly with the frequency of drinking in a dose-dependent manner (aHR, 1.39; 95%

CI, 1.36-1.41 for individuals who drink every day). In contrast, the risk of GI cancer appeared to increase with consumption up to 5 to 7 units per occasion (aHR, 1.15; 95% CI, 1.14-1.16), and then the HRs were no higher for those with a higher intake per session than 5 to 7 units (8-14 units per occasion: aHR, 1.11; 95% CI, 1.09-1.12; >14 units per occasion: aHR, 1.11; 95% CI, 1.08-1.14). Given similar weekly alcohol consumption levels, the risk of GI cancer increased with a higher frequency of drinking and decreased with a higher amount per occasion. Risk patterns for 6 specific cancers were generally similar to that of all GI cancers.

Conclusions and Relevance: In this cohort study, frequent drinking was a more important risk factor for incident GI cancers than the amount of alcohol consumed per occasion. Individuals should be cautioned about regular consumption of small amounts of alcohol in addition to the total amount of alcohol consumption or amount per occasion.

Source: Yoo, JE, Shin, DW, Han, K, et al. (2021). Association of the Frequency and Quantity of Alcohol Consumption With Gastrointestinal Cancer. *JAMA Netw Open*; 4(8):e2120382. doi:10.1001/jamanetworkopen.2021.20382

RECREATIONAL MARIJUANA LEGALIZATION AND CO-USE WITH ALCOHOL AMONG ADOLESCENTS **August 2021**

Abstract

Introduction: Little is known about the possible impacts of recreational marijuana legalization on alcohol and marijuana co-use among underage youth. This study examines the association between recreational marijuana legalization in California in 2016 and alcohol and marijuana co-use among adolescents. Additional analyses investigate the associations between recreational marijuana legalization and co-use among past 30-day drinkers and marijuana users and the frequency of alcohol and marijuana use among co-users.

Methods: This study used annual cross-sectional data from 7th, 9th, and 11th graders (N=3,319,329) who participated in the California Healthy Kids Survey from 2010–2011 to 2018–2019. Measures included past 30-day alcohol and marijuana use and student demographic characteristics, survey year, pre–post recreational marijuana legalization, and urbanicity. Multilevel regression analyses were conducted in 2021.

Results: Recreational marijuana legalization was associated with greater odds of past 30-day alcohol and marijuana co-use in the total sample (OR=1.06, 95% CI=1.05, 1.07). Recreational marijuana legalization was more strongly associated with co-use among adolescents who reported past 30-day alcohol use (OR=1.58, 95% CI=1.52, 1.62) and heavy drinking (OR=1.25, 95% CI=1.21, 1.29) but was inversely related to co-use among past 30-day marijuana users (OR=0.76, 95% CI=0.74, 0.78). Among past 30-day co-users, there was a positive association with the frequency of marijuana use ($\beta=0.36$, SE=0.07).

Conclusions: Recreational marijuana legalization may increase the risk of alcohol and marijuana co-use among adolescents. Greater restrictions on the numbers of alcohol and marijuana retail outlets and hours of operation and advertising and higher taxes on alcohol and marijuana products may help reduce the availability of these substances to adolescents.

Source: Paschall, MJ, García-Ramírez, G, & Grube, JW. (2021). Recreational marijuana legalization and co-use with alcohol among adolescents. *American Journal of Preventive Medicine*. <https://doi.org/10.1016/j.amepre.2021.06.003>Get rights and content