

Exploring the use of alcohol-interactive prescription medication among US drinkers

January 16 2015

Approximately 71 percent of American adults drink alcohol. While alcohol interacts negatively with a number of commonly prescribed medications, little is known on a population level about the use of alcohol-interactive (AI) prescription medication among US drinkers. A new study has found that almost 42 percent of drinkers in the US population have used one or more alcohol-interactive prescription medications.

Results will be published in the February 2015 online-only issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

"To our knowledge there have been only four previous US population-based studies," said Rosalind A. Breslow, an epidemiologist in the division of epidemiology and prevention research at the National Institute on Alcohol Abuse and Alcoholism as well as corresponding author for the study. "Three, conducted only among elderly people, concluded that substantial numbers of seniors were both drinking and taking [alcohol](#)-interactive medications and called for increased awareness about possible harmful consequences. One, conducted among adults of all ages, had a similar conclusion based on assessment of a limited number of prescription medications. Ours is a national-level study that estimates the proportion of adult drinkers who use a wide range of prescription medications that can interact with alcohol to cause numerous harms ranging from nausea, headaches, and loss of coordination to internal bleeding, heart problems, and difficulties in

breathing."

Breslow added that her group expected to find greater prevalence among older drinkers. "People develop more chronic diseases as they age," she said, "so older people are more likely to be taking medications, many of which can interact harmfully with alcohol. They also may be taking multiple medications to treat multiple diseases. In addition, older people are at particularly high risk for harmful alcohol-medication interactions. There is some evidence that, as we age, our ability to metabolize alcohol decreases so alcohol might remain in our systems longer to interact with medications. Furthermore, the metabolism of several medications that interact with alcohol slows as we get older, creating a larger window for potential alcohol/medication interactions. For instance, diazepam - known as Valium - hangs around in the body about three times longer in a 60-year-old than a 20-year-old, thereby creating a much longer window for potential interactions with alcohol."

Breslow and her co-authors examined data from the 1999-2010 National Health and Nutrition Examination Survey, in which 26,657 adults (13,557 men, 13,100 women) aged ≥20 years had provided data on past-year alcohol consumption and past-month prescription medication use. Analyses were adjusted for age, race/ethnicity, education, marital status, and smoking, and were also weighted in order to be nationally representative.

"Almost 42 percent of drinkers in the US population used one or more AI prescription medications," said Breslow. "Among seniors, aged 65 and older, the proportion was even higher, almost 78 percent. Regardless of age, the main therapeutic classes of AI medications used in the population were cardiovascular agents such as blood pressure medications, central nervous system agents such as sleeping pills, pain medications, and muscle relaxers, metabolic agents such as medications for diabetes and cholesterol, and psychotherapeutic agents such as

antidepressants and antipsychotics."

Breslow noted that her group had expected a high prevalence rate, however, she emphasized that the data referred to potential, not actual, prevalence. "The data don't tell us exactly how many people in that 41.5 percent actually drink and take their medications within a similar time frame or how often they do so," she said. "However, if someone drinks regularly and takes medications regularly, the likelihood of taking them within a similar time frame is pretty high."

According to co-author Aaron White, a neuroscientist in the division of epidemiology and prevention research at the National Institute on Alcohol Abuse and Alcoholism, the consequences of mixing prescription medications with alcohol can have a variety of effects, some deadly.

"Alcohol can increase blood pressure, which could be counterproductive if one is taking medications to control blood pressure," he explained.

"Mixing diuretic medications with alcohol, which is also a diuretic, could contribute to dehydration. Mixing alcohol and other sedatives, like sleeping pills or narcotic pain medications, can cause sleepiness, problems with coordination, and potentially suppress brain stem areas tasked with controlling vital reflexes like breathing, heart rate, and gagging to clear the airway. Alcohol increases insulin levels and lowers blood glucose, so combining alcohol with antidiabetic agents that regulate glucose levels could cause an undesirable drop in blood sugar. And, over time, alcohol can contribute to insulin insensitivity."

"Our findings highlight a major gap in the literature," said Breslow. "We found no US nationally representative data that queried combined use of alcohol with a wide range of [prescription medications](#) and yet it appears that a large percentage of people who drink regularly could be at risk of serious alcohol and medication interactions."

Breslow suggested that individuals who drink, particularly the elderly, should be educated about the risks of combining alcohol with their medications. "We suggest asking one's doctor or pharmacist whether they should avoid alcohol while taking the medications they are prescribed," she said.

More information: "Prevalence of Alcohol-Interactive Prescription Medication Use among Current Drinkers: United States, 1999-2010," *Alcoholism: Clinical & Experimental Research*, 2015.

Provided by Alcoholism: Clinical & Experimental Research

Citation: Exploring the use of alcohol-interactive prescription medication among US drinkers (2015, January 16) retrieved 3 May 2024 from <https://medicalxpress.com/news/2015-01-exploring-alcohol-interactive-prescription-medication-drinkers.html>

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