Older drinkers may experience fewer hangovers due to less intense drinking

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Many people are familiar with the uncomfortable morning-after symptoms of excessive drinking, commonly known as a hangover. While it is a common phenomenon, little is known about hangover differences across the lifespan. A study of hangovers across adulthood has found their severity depends on age.

Results will be published in the February 2014 issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

"While it is true that a hangover is mostly referred to in a humorous way, we could also say they are the most frequent alcohol-related morbidity," said Janne S. Tolstrup, a research program director at the University of Southern Denmark as well as corresponding author for the study. "Millions of Euros are wasted each year due to absence from work caused by hangovers. Also there is some evidence that hangovers, rather then being a natural curb on excessive drinking, may actually be a gateway into alcoholism."

"The etiology of the hangover is not understood, so … a better understanding of what causes a hangover might further illuminate the physiology of alcohol," added Jonathan Howland, a professor of emergency medicine at the Boston University School of Medicine, and director of the Boston Medical Center Injury Prevention Center. "It appears as though not everyone is equally susceptible to hangovers, and it is possible that resistance to hangovers plays a role in the development

of drinking problems. Furthermore, neurocognitive impairment such as attention/reaction time appears to be a residual next-day effect of intoxication in the presence of a hangover, but not in the absence of a hangover. This could have implications for occupational performance and safety."

"This is the only really large population-based study that has included information on hangovers," said Tolstrup. "While there have been tens of thousands of studies on the more direct effects of alcohol, there have only been fewer than 200 published papers on the hangover. Added to this, to date hangover studies have focused almost exclusively on young adults with no previous studies including adults aged beyond their 30s. This paper rectifies that with its very large sample size of 50,000 individuals, including 30,000 older than the age of 40, and makes a major contribution to understanding hangover across the lifespan. We plan to use this information for prospective studies on whether individuals who experience hangovers have a different risk for having alcohol-related diseases than individuals who do not experience hangovers."

Tolstrup and her colleagues used 2007 and 2008 information gathered by the Danish Health Examination Survey (DANHES), an Internet-based health survey that asked participants about their diet, smoking, alcohol and physical activity. Analysis was performed on data provided by 51,645 individuals (24,118 males, 27,527 women) 18 to 94 years of age living in 13 municipalities in Denmark.

"We found that the tendency to have hangovers decreased by increasing age," said Tolstrup. "The first explanation that pops up is that this finding would be due to differences in drinking pattern in different age groups. However, trying to account for such differences as much as we could, did not even out the differences in hangover tendency. In other words, while it is true that older individuals on average binge-drink less

often than younger individuals, we did not find in our data that results were due to differences in drinking patterns."

"Although the association between amount of alcohol consumed and the likelihood of hangover was well established before this paper," added Howland, "the details of this relationship are relatively unexplored. In other words, an individual consuming a given amount of alcohol might get a hangover on one occasion, but not another."

"It is important to note that we did not assess intensity of binge drinking, just frequency," added Richard Stephens, a senior lecturer in psychology at Keele University and co-author of the study. "Given what we know about drinking patterns across the lifespan, it's likely that our younger drinkers' binges would have been of greater intensity, involving more alcohol, than those of our older drinkers, even though the average weekly consumption was about the same. This is one possible explanation of the reduced hangover incidence with increasing age that we found.

Tolstrup added that these findings are particularly relevant for younger drinkers. "From a medical point of view, binge drinking is never a good idea," he cautioned. "A low to moderate alcohol intake is shown to have beneficial effects on the cardiovascular system, especially among mid-aged individuals. Some research indicates that this beneficial effect is reversed if the alcohol is taken in binges.

"Hangovers predominantly affect younger, less experienced drinkers," said Stephens. "Younger drinkers in their late teens and 20s are several times more likely to get a hangover than older, more experienced drinkers. In light of links between hangover and risk of alcoholism, younger drinkers should beware."