



**RESEARCH SUMMARY**  
Date Compiled: June 2018

**Key Takeaways from Included Research**

- Stronger alcohol policies (including those that aren't specifically driving-related) in a state tend to reduce alcohol-related crash fatalities. This includes crash fatalities below the current legal limit for driving in the U.S.
- Contrary to the claims of the proponents of offering beer sales at college football games, such sales may have negative effects on game attendance, instead of positive effects.
- The morphing of alcohol suppliers into alcohol retailing needs to be carefully monitored and regulated to prevent erosion of three-tier alcohol control systems and to reduce alcohol-related harms.
- A major report concludes that alcohol consumption is a causal risk factor for cancer of the head and neck, female breast, stomach, liver, and colorectum. The report also recommends a number of evidence-based alcohol policies that have promise to reduce alcohol-related cancers. These include increasing alcohol taxes.
- Binge/heavy drinking may be a factor in the incidence of Alzheimer's disease, through suppressing the brain's ability to remove beta-amyloid proteins.
- The increase in women's drinking over the past several years, has led to dramatic increases in alcoholic cirrhosis, a very expensive condition to treat.

**ASSOCIATION OF STATE ALCOHOL POLICIES WITH ALCOHOL-RELATED  
MOTOR VEHICLE CRASH FATALITIES AMONG US ADULTS**

May 2018

**Importance:** Motor vehicle crashes are a leading cause of mortality. However, the association between the restrictiveness of the alcohol policy environment (i.e., based on multiple existing policies) and alcohol-related crash fatalities has not been characterized previously to date.

**Objective:** To examine the association between the restrictiveness of state alcohol policy environments and the likelihood of alcohol involvement among those dying in motor vehicle crashes in the United States.

**Design, Setting, and Participants:** This investigation was a repeated cross-sectional study in which state alcohol policies (operationalized by the Alcohol Policy Scale [APS]) from 1999 to 2014 were related to motor vehicle crash fatalities from 2000 to 2015 using data from the Fatality Analysis Reporting System (1-year lag). Alternating logistic regression models and

generalized estimating equations were used to account for clustering of multiple deaths within a crash and of multiple crashes occurring within states. The study also examined independent associations of mutually exclusive subgroups of policies, including consumption-oriented policies vs driving-oriented policies. The study setting was the 50 US states. Participants were 505 614 decedents aged at least 21 years from motor vehicle crashes from 2000 to 2015.

**Main Outcomes and Measures:** Odds that a crash fatality was alcohol related (fatality stemmed from a crash in which 1 driver had a blood alcohol concentration [BAC] 0.08%).

**Results:** From 2000 to 2015, there were 505 614 adult motor vehicle crash fatalities in the United States, of which 178 795 (35.4%) were alcohol related. Each 10–percentage point increase in the APS score (corresponding to more restrictive state policies) was associated with reduced individual-level odds of alcohol involvement in a crash fatality (adjusted odds ratio [aOR], 0.90; 95% CI, 0.89-0.91); results were consistent among most demographic and crash-type strata. More restrictive policies also had protective associations with alcohol involvement among crash fatalities associated with BACs from greater than 0.00% to less than 0.08%. After accounting for driving-oriented policies, consumption-oriented policies were independently protective for alcohol-related crash fatalities (aOR, 0.97; 95% CI, 0.96-0.98 based on a 10–percentage point increased APS score).

**Conclusions and Relevance:** Strengthening alcohol policies, including those that do not specifically target impaired driving, could reduce alcohol-related crash fatalities. Policies may also protect against crash fatalities involving BAC levels below the current legal limit for driving in the United States.

**Source:**

Naimi, T. S., Xuan, Z., Sarda, V., Hadland, S. E., Lira, M. C., Swahn, M. H., et al. (2018). Association of state alcohol policies with alcohol-related motor vehicle crash fatalities among US adults. *JAMA Internal Medicine*.

**Related Media Coverage:**

CBS 13 Sacramento: [Stricter State Alcohol Access Rules Can Save 800 DUI Deaths A Year, Study Says](#)

## **THE EFFECTS OF BEER SALES ON ATTENDANCE AT COLLEGIATE FOOTBALL GAMES**

May 2018

**Abstract**

Collegiate sports have become increasingly popular in recent years with college football seeing, arguably, the greatest rise in popularity. This has led to an increased number of Football Bowl Subdivision (FBS) bowl games, which now culminate in a college football playoff. Universities are constantly developing new and innovative ways to increase revenue. One potential solution receiving increased consideration is the option of selling beer throughout stadiums. Previous research has separately focused on aspects of beer consumption and factors that influence collegiate sport attendance, but not in the same study. Thus far, studies focusing specifically on the topic of how beer sales affect attendance have been lacking. The purpose of this study is to examine whether or not the sale of beer inside FBS collegiate stadiums affects attendance. Our results indicate there is a negative correlation between beer availability and attendance. No significant difference was found as to whether or not stadium location, on- or off-campus, affects attendance figures.

**Source:**

Augustin, J. D., Traugutt, A., & Morse, A. (2018). The effects of beer sales on attendance at collegiate football games. *The Journal of SPORT*, 6(1), 2.

**Full free text:** <https://digitalcommons.kent.edu/cgi/viewcontent.cgi?article=1050&context=sport>

**WHEN SUPPLIERS MORPH INTO RETAILERS**

June 2018

... Responsible retailing of alcohol is exceptionally important. We rely on our retail licensees to prevent sales to minors and intoxicated persons. This takes skill in observation, judging age, checking ID, knowing the signs of intoxication, and handling very delicate situations.

But now we face another situation where suppliers are entering the retail business, sometimes without the training or skills needed for good retailing. Today, we have over 6,000 breweries, the majority of which are small microbreweries or brew pubs. They may perceive similar challenges “getting their product to market,” or have developed a business model selling their product direct to consumers from a tap room. It is not uncommon for these tap rooms to become full-fledged restaurants and entertainment venues. Rather than have some people come in and taste the product for possible future sale, their model entails large numbers of customers drinking substantial amounts of product.

To accomplish this evolving business model they often approach policy-makers to add license privileges as a way to increase their business success. And, sometimes, training on good serving practices was not included as a requirement ...

**Source:** Healthy Alcohol Marketplace

**Free full text:** <http://healthyalcoholmarket.com/wordpress/>

**DIET, NUTRITION, PHYSICAL ACTIVITY AND CANCER: A GLOBAL PERSPECTIVE**

May 2018

**OUR MAJOR FINDINGS ON CANCER AND ALCOHOL**

There is strong evidence that consuming:

*alcoholic drinks INCREASES the risk of*

- mouth, pharynx and larynx cancers
- oesophageal cancer (squamous cell carcinoma)
- breast cancer (pre and postmenopause)

*two or more alcoholic drinks a day (30 grams or more) INCREASES the risk of*

- colorectal cancer

*three or more alcoholic drinks a day (45 grams or more) INCREASES the risk of*

- stomach cancer
- liver cancer

*up to two alcoholic drinks a day (up to 30 grams) DECREASES the risk of*

- kidney cancer

## **Policy Recommendations**

### **Public health and policy implications**

- A whole-of-government, whole-of-society approach is necessary to create environments for people and communities that are conducive to limiting alcohol consumption.
- A comprehensive package of policies is needed to reduce alcohol consumption at a population level, including policies that influence the availability, affordability and marketing of alcoholic beverages. Policymakers are encouraged to frame specific goals and action according to their national context.

### **Labelling and packaging**

- Labels describing alcohol content (per cent of pure alcohol)
- Labels describing calories, ingredients and serving sizes
- Prominent, clearly worded warning labels on drinks to indicate alcohol-related harm

### **Healthy and safe schools, workplaces, public institutions and health facilities**

- Restrictions on alcohol consumption in educational buildings, workplaces and health facilities

### **Fiscal policies**

- Excise taxes on alcoholic drinks, graduated by volume of ethanol, that are reviewed regularly
- Minimum pricing for alcoholic drinks sold in retail establishments and licensed premises

### **Marketing restrictions**

- Bans or restrictions on alcohol marketing and advertising across all types of media and sponsorship, particularly marketing that reaches large numbers of youth and other vulnerable populations
- Restrictions on alcohol promotion in educational buildings, workplaces and health facilities

### **Improve the food and drink supply**

- Limits on the amount of alcohol in products (e.g. ready drinks, beer, wine)
- Limits on additives to alcoholic drinks, such as stimulants like caffeine and taurine

### **Incentives in communities**

- Licensing system on retail sales or public health oriented government monopolies on the production and/or sale of alcohol

### **Restriction on drinking public spaces**

- Restrictions on days and hours of sale of alcohol
- Restriction on purchase of alcohol at petrol stations

### **Healthy urban design**

- Restrictions on density of on-premise and off-premise alcohol outlets and integration of public health considerations into relevant planning laws

### **Integrate actions across sectors**

- Drink-driving laws and blood alcohol concentration limits through sobriety checkpoints
- An appropriate minimum age for purchase or consumption of alcoholic drinks
- Governance for multisectoral/stakeholder engagement to harmonize alcohol policies across government sectors

### **Inform people**

- Public awareness campaigns about risks of alcohol consumption and cancer
- Development and communication of 'lower-risk' drinking guidelines

### **Counselling in health care**

- Prevention, routine screening, treatment and care for alcohol use in health services
- Brief psychosocial interventions for persons with hazardous and harmful alcohol use

### **Education and skills**

- Mandated training in responsible beverage service for servers and managers where alcohol is served

## **TRANSCRIPTOME ANALYSIS OF ALCOHOL-TREATED MICROGLIA REVEALS DOWNREGULATION OF BETA AMYLOID PHAGOCYTOSIS**

May 2018

### **Abstract**

**Background:** Microglial activation contributes to the neuropathology associated with chronic alcohol exposure and withdrawal, including the expression of inflammatory and anti-inflammatory genes. In the current study, we examined the transcriptome of primary rat microglial cells following incubation with alcohol alone, or alcohol together with a robust inflammatory stimulus.

**Methods:** Primary microglia were prepared from mixed rat glial cultures. Cells were incubated with 75 mM ethanol alone or with proinflammatory cytokines ("TII": IL1 $\beta$ , IFN $\gamma$ , and TNF $\alpha$ ). Isolated mRNA was used for RNAseq analysis and qPCR. Effects of alcohol on phagocytosis were determined by uptake of oligomeric amyloid beta.

**Results:** Alcohol induced nitrite production in control cells and increased nitrite production in cells co-treated with TII ...

**Conclusions:** Our results define alterations that occur to microglial gene expression following alcohol exposure and suggest that alcohol effects on phagocytosis could contribute to the development of Alzheimer's disease.

### **Source:**

Kalinin, S., González-Prieto, M., Scheiblich, H., Lisi, L., Kusumo, H., Heneka, M. T., et al. (2018). Transcriptome analysis of alcohol-treated microglia reveals downregulation of beta amyloid phagocytosis. *Journal of Neuroinflammation*, 15(1), 141.

**Full free text:** <https://jneuroinflammation.biomedcentral.com/articles/10.1186/s12974-018-1184-7>

### **Related Media Coverage:**

Daily Mail: [Boozing may lead to Alzheimer's: Alcohol stops the brain from clearing away toxic clumps that lead to the memory-robbing disease, reveals study](#)

## **THE HIGH BURDEN OF ALCOHOLIC CIRRHOSIS IN PRIVATELY INSURED PERSONS IN THE UNITED STATES**

March 2018

### **Abstract**

Alcoholic cirrhosis (AC) is a major cause of liver-related morbidity and mortality in the United States. Rising rates of alcohol use disorders in the United States will likely result in more alcoholic liver disease. Our aim was to determine the prevalence, health care use, and costs of AC among privately insured persons in the United States. We collected data from persons aged 18-64 with AC (identified by codes from the *International Classification of Diseases*, Ninth and Tenth Revisions) enrolled in the Truven MarketScan Commercial Claims and Encounters database (2009-2015). We determined yearly prevalence, weighted to the national employer-sponsored, privately insured population. Using competing risk analysis, we estimated event rates for portal hypertensive complications and estimated the association between AC and costs as well as admissions and readmissions. In 2015, 294,215 people had cirrhosis and 105,871 (36%) had AC. Mean age at AC diagnosis was 53.5 years, and 32% were women. Over the 7 years queried, estimated national cirrhosis prevalence rose from 0.19% to 0.27% ( $P < 0.001$ ) and for AC from 0.07% to 0.10% ( $P < 0.001$ ). Compared to non-AC, AC enrollees were significantly more likely to have portal hypertensive complications at diagnosis and higher yearly cirrhosis and alcohol-related admissions (25 excess cirrhosis admissions and 6.3 excess alcohol-related admissions per 100 enrollees) as well as all-cause readmissions. Per-person costs in the first year after diagnosis nearly doubled for AC versus non-AC persons (US\$ 44,835 versus 23,319). *Conclusion:* In a nationally representative cohort of privately insured persons, AC enrollees were disproportionately sicker at presentation, were admitted and readmitted more often, and incurred nearly double the per-person health care costs compared to those with non-AC.

### **Source:**

Mellinger, J. L., Shedden, K., Winder, G. S., Tapper, E., Adams, M., Fontana, R. J., ... & Lok, A. S. (2018). The high burden of alcoholic cirrhosis in privately insured persons in the United States. *Hepatology*.

### **Related Media Coverage:**

Healthline: [Alcohol-Related Cirrhosis in Women Spikes 50% in Less Than a Decade](#)