



RESEARCH SUMMARY
Date Compiled: July 2018

Key Takeaways from Included Research

- The World Health Organization’s recommended increasing alcohol taxes (and other alcohol policy “best buys”) to reduce the global burden of noncommunicable (chronic) diseases: cancer, heart disease, stroke, diabetes, chronic lung disease, and mental health problems.
- A study of beer sales in collegiate football stadiums found a negative correlation between beer availability and attendance, that is, selling beer in stadiums led to decreased attendance.
- Total underage exposure to alcohol advertising declined by 12.6% and noncompliant exposure declined by 50.3% in the second quarter of 2017. Still, youth under the legal drinking age saw 1.9 billion noncompliant alcohol advertising exposures, and this number could be greatly reduced by instituting “no-buy” lists for serially noncompliant networks/programs.
- Meta-analyses of studies found that: 1) for men, any alcohol consumption was associated with an increase in the risk for hypertension; 2) for women, there was no risk increase for consumption of 1 to 2 drinks/day and an increased risk for higher consumption levels. There was no protective effect found for light/moderate drinking.
- A study of female college students found that frequent binge drinking was associated with poorer bone density, even when controlling for physical activity, smoking, and other factors.
- Medium-term (10 years) moderate-to-heavy drinking among young adults may result in reduced gray matter in the brain.

**TIME TO DELIVER: REPORT OF THE WHO INDEPENDENT HIGH-LEVEL COMMISSION ON
NONCOMMUNICABLE DISEASES**

June 2018

... Further, many people will die prematurely as a result of four NCDs—cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes. These four diseases are largely preventable through public policies that tackle four main risk factors: tobacco use, harmful use of alcohol, unhealthy diets, and physical inactivity ...

Recommendations:

- Implement fiscal measures, including raising taxes on tobacco and alcohol, and consider evidence-based fiscal measures for other unhealthy products

Enact WHO Best Buys

REDUCE THE HARMFUL USE OF ALCOHOL

- Increase excise taxes on alcoholic beverages
- Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)
- Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced hours of sale)

Source:

World Health Organization (2018). *Time to deliver: Report of the WHO Independent High-Level Commission on Noncommunicable Disease*. Geneva: WHO.

Full text: <http://apps.who.int/iris/bitstream/handle/10665/272710/9789241514163-eng.pdf?ua=1>

THE EFFECTS OF BEER SALES ON ATTENDANCE AT COLLEGIATE FOOTBALL GAMES

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

Free full text: <https://digitalcommons.kent.edu/cgi/viewcontent.cgi?article=1050&context=sport>

ALCOHOL ADVERTISING COMPLIANCE ON CABLE TELEVISION, APRIL-JUNE (Q2) 2017

June 2018

In the 2-year period ending in 2017 Q2, youth under the legal drinking age saw 1.9 billion noncompliant alcohol advertising exposures, about 1 out of every 17 alcohol advertising exposures seen by youth on cable TV. However, in 2017 Q2, total underage exposure declined by 12.6% and noncompliant exposure declined by 50.3%. In contrast to previous years, total underage exposure over the two-year period also declined.

Similar to findings in the 2017 Q1 report,²¹ there were fewer overlapping programs on the 12-quarter and single quarter no-buy lists compared to previous reports. Yet, 77.8% of noncompliant impressions in 2017 Q2 occurred on serially noncompliant programs. Alcohol industry codes require a post-audit of advertising placements to identify programs and dayparts that resulted in noncompliant exposure.¹²⁻¹⁵ The findings of this quarterly report indicate that noncompliant alcohol advertising exposure is highly concentrated on a relatively small number of programs and networks. In fact, advertisers could increase the likelihood that future ad placements comply with the current advertising guidelines by not advertising on the programs and the network dayparts on both the 12 quarter and the single quarter no-buy lists.

Source:

Ross, Henehan, Joannes, Hines, & Jernigan (2018). *Alcohol advertising compliance on cable television, April-June (Q2) 2017*. Baltimore: Center on Alcohol Marketing and Youth.

Free full text: http://www.cammy.org/docs/resources/reports/alcohol-advertising-monitoring/CAMY_CableTV_2017_Q2.pdf

SEX-SPECIFIC ASSOCIATIONS BETWEEN ALCOHOL CONSUMPTION AND INCIDENCE OF HYPERTENSION: A SYSTEMATIC REVIEW AND META-ANALYSIS OF COHORT STUDIES

June 2018

Background: Although it is well established that heavy alcohol consumption increases the risk of hypertension, the risk associated with low levels of alcohol intake in men and women is unclear.

Methods and Results: We searched Medline and Embase for original cohort studies on the association between average alcohol consumption and incidence of hypertension in people without hypertension. Random-effects meta-analyses and metaregressions were conducted. Data from 20 articles with 361 254 participants (125 907 men and 235 347 women) and 90 160 incident cases of hypertension (32 426 men and 57 734 women) were included. In people drinking 1 to 2 drinks/day (12 g of pure ethanol per drink), incidence of hypertension differed between men and women (relative risk women vs men=0.79; 95% confidence interval, 0.67–0.93). In men, the risk for hypertension in comparison with abstainers was relative risk=1.19 (1.07–1.31; I²=59%), 1.51 (1.30–1.76), and 1.74 (1.35–2.24) for consumption of 1 to 2, 3 to 4, and 5 or more standard drinks per day, respectively. In women, there was no increased risk for 1 to 2 drinks/day (relative risk=0.94; 0.88–1.01; I²=73%), and an increased risk for consumption beyond this level (relative risk=1.42; 1.22–1.66).

Conclusions: Any alcohol consumption was associated with an increase in the risk for hypertension in men. In women, there was no risk increase for consumption of 1 to 2 drinks/day and an increased risk for higher consumption levels. We did not find evidence for a protective effect of alcohol consumption in women, contrary to earlier meta-analyses.

Source:

Roerecke, M., Tobe, S. W., Kaczorowski, J., Bacon, S. L., Vafaei, A., Hasan, O. S., et al. (2018). Sex-specific associations between alcohol consumption and incidence of hypertension: a systematic review and meta-analysis of cohort studies. *Journal of the American Heart Association*, 7(13), e008202.

Free full text: <http://jaha.ahajournals.org/content/7/13/e008202.full.pdf?download=true>

HEAVY EPISODIC DRINKING IS ASSOCIATED WITH POORER BONE HEALTH IN ADOLESCENT AND YOUNG ADULT WOMEN

Objective:

Osteoporosis is a costly bone disease characterized by low bone mineral density (BMD) that primarily affects postmenopausal women. One factor that may lead to osteoporosis is a failure to reach peak bone mass (PBM) in early adulthood. In older adults and animal models, heavy episodic drinking (HED) has been found to predict failure to reach PBM. However, this relationship has yet to be investigated in adolescent human females.

Method:

Female college students (N = 87; 60% White) reported age at menarche, hormonal contraceptive use, physical activity, smoking habits, and HED history via an online survey and then received a dual energy x-ray absorptiometry bone scan to assess both lean body mass and BMD at the lumbar spine.

Results:

Frequent HED (having four or more drinks within 2 hours on 115 or more occasions since the start of high school, which is approximately equal to 1.6 episodes per month over this period) was associated with decreased vertebral BMD even when variables most commonly associated with bone health (lean body mass, physical activity, age at menarche, smoking, and oral contraception use) were controlled for. However, early HED initiation (beginning HED at age 15 years or younger) was not significantly related to BMD.

Conclusions:

This is the first study to assess the impacts of early HED initiation and frequent HED during adolescence on the bone health of young women. Results suggest frequency of HED before reaching PBM, but not age at initiation, may be negatively related to skeletal health during young adulthood. These findings encourage research into the association between HED and BMD in late adolescence.

Source:

LaBrie, J. W., Boyle, S., Earle, A., & Almstedt, H. C. (2018). Heavy episodic drinking is associated with poorer bone health in adolescent and young adult women. *Journal of Studies on Alcohol and Drugs*, 79(3), 391-398.

Free full text: <https://www.jsad.com/doi/pdf/10.15288/jsad.2018.79.391>

Related Media Coverage:

Medical Daily: <https://www.medicaldaily.com/binge-drinking-teens-can-cause-weak-bones-forever-women-424773>

CHANGES IN THE SERUM METABOLITE PROFILE CORRELATE WITH DECREASED BRAIN GREY MATTER VOLUME IN MODERATE-TO-HEAVY-DRINKING YOUNG ADULTS

May 2018

Abstract

Our aim was to analyse metabolite profile changes in serum associated with moderate-to-heavy consumption of alcohol in young adults and to evaluate if these changes are connected to reduced brain grey matter volumes. Study population consisted of young adults with a ten-year history of moderate-to-heavy alcohol consumption (n = 35) and light-drinking controls (n = 27). We used targeted liquid chromatography mass spectrometry method to measure concentrations of metabolites in serum and 3.0 T magnetic resonance imaging to assess brain grey matter volumes. Alterations in amino acid and energy metabolism were observed in the moderate-to-heavy drinking young adults when compared to the controls. After correction for multiple testing, the group of moderate-to-heavy drinking young adults had increased serum concentrations of 1-methylhistamine ($p = 0.001$, $d = 0.82$) when compared to the controls. Furthermore, concentrations of 1-methylhistamine ($r = -0.48$, $p = 0.004$) and creatine ($r = -0.52$, $p = 0.001$) were negatively correlated with the brain grey matter volumes in the females. Overall, our results show association between moderate-to-heavy use of alcohol and altered metabolite profile in young adults as well as suggest that some of these changes could be associated with the reduced brain grey matter volume.

Source:

Heikkinen, N., Kärkkäinen, O., Laukkanen, E., Kekkonen, V., Kaarre, O., Kivimäki, P., et al.. (2018). Changes in the serum metabolite profile correlate with decreased brain grey matter volume in moderate-to-heavy-drinking young adults. *Alcohol*.

Related Media Coverage:

Medical Xpress: [Drinking changes young adults' metabolite profile](#)