



Washington State Liquor and Cannabis Board

Research Brief Alcohol and Sporting Events

September 2024

LCB Research Program

The Research Program at the Washington State Liquor and Cannabis Board (LCB) is a non-partisan, transparent resource focused on public health and safety outcomes related to the products, policy, and regulation of alcohol, cannabis, tobacco, and vapor products.

Purpose

This brief provides a summary of the research literature on alcohol consumption during sporting events, best alcohol management practices, and potential risks associated with distilled spirits consumption relative to other alcoholic beverages (e.g., wine and beer). This brief is based on a review of existing evidence including scientific literature, government reports, policies, and other credible information sources.

This document does not represent an official position of LCB.

Written by:

Sarah Okey, PhD, Research Program Manager
Tyler Watson, PhD, MPH, Research Specialist

Reviewed by:

Nick Glodosky, PhD, Research Analyst

Contact

For further information about the Research Program and its work, please visit:
lcb.wa.gov/research_program.

For specific questions about this brief, please email the Research Program at:
lcbresearch@lcb.wa.gov

Alcohol Use at Sporting Events

Drinking alcohol during sporting events is common in the U.S. On average, rates of alcohol use increase on days with large sporting events, and people who self-identify as sports fans tend to have heavier episodic drinking and greater alcohol use problems relative to non-sports fans.¹⁻² One study found that 40% of individuals drank alcohol while attending baseball and football games, and attendees who were under the age of 35 years old had almost eight times the odds of having a blood alcohol content (BAC) greater than 0.08%.³

Studies suggest alcohol drinking patterns are highly influenced by environmental factors and context, including sporting events. For example, a recent international study examined football spectators and found alcohol consumption patterns increased when the game was scheduled earlier in the day relative to later in the day.⁴ They also found people drank more when they watched the game at a stadium or with friends compared to at-home or with family.⁴ Overall, these findings suggest alcohol use during sporting events is prevalent and there are several factors that influence patterns of use.

Concerns

There are several public health and safety concerns related to alcohol use at sporting events. Most (but not all) of the literature on this topic comes from sporting events at the collegiate level (i.e., college and university athletics).⁵⁻⁶ In general, there is evidence to support the association between game days and increased crime and negative alcohol-related behaviors.⁶⁻⁸ For example, a recent study examining reported crime

in the vicinity of two major sports venues in Ohio found that crime frequency, particularly violent crimes (e.g., assaults), resisting arrest, and property violations (e.g., trespassing), were higher on sporting event days than non-sporting event days.⁸

Allowing Alcohol Sales in Stadiums

Although there is consistent research showing public health and safety risks of alcohol-related consequences on game days, there is less defined research examining the impact of allowing alcohol to be legally sold at sports stadiums.⁹ One study examined twelve college-level institutions and found no difference in conduct problems recorded by campus police after the decision to sell alcohol within campus football stadiums.⁶ However, there have also been several lawsuits filed due to alcohol-related injuries at sports venues. One example is the case of *Verni v. Harry M. Stevens* which involved an intoxicated individual who left a stadium and caused an automobile accident that severely and permanently injured a two-year old passenger in another vehicle.¹⁰ Most cases like these appear to fall within the category of lacking proper alcohol management strategies, such as continued service to intoxicated people and lack of security to maintain safe premises.

Restricting Spirits in Stadiums

A common alcohol restriction in stadiums is for distilled spirits, such as prohibiting spirits to be consumed in certain sections or to be sold throughout the entire stadium. One study, albeit older, surveyed 74 sports venue managers and found that only half of the facilities allowed the sale of hard liquor in some fashion.¹⁰ This practice appears

most common in collegiate sports. For example, in 2019 the Southeastern Conference (SEC) league lifted the ban of beer and wine sales, but not spirit sales for on-campus venues.¹¹

Relative Risk Between Spirits and Other Alcohol Types. In general, research has increasingly shown that any amount of alcohol has health risks.¹² Whether it is distilled spirits, beer, or wine, all have negative health impacts on adults, children, and fetal development. However, there is some evidence that spirits and higher-concentration alcohol beverages are linked to greater problems and societal burden than alcohol with lower concentration alcohol by volume (ABV), such as beer and wine.¹³ For example, spirits appear to increase blood alcohol concentration (BAC) more quickly and promote higher levels of impairment relative to beer and wine.¹³ This finding remains even after controlling for dose (ABV). There is also evidence that the association between spirit use and aggression/violence is higher relative to beer and wine use, although the exact mechanism for *why* is unknown.¹³ It is possible that this finding may be more associated with the typical contexts in which this drink is consumed.¹³ For example, people experience higher arousal effects (e.g., aggression) when consuming alcohol in highly stimulating environments such as sporting events.¹⁴

Another primary concern for spirits is that adolescents under 21 years of age seem to prefer spirits over other types of lower-ABV alcoholic beverages.¹⁵ Some research additionally suggests that binge drinking in youth most commonly involve spirits relative to other alcoholic beverages.¹⁶ This evidence suggests

that spirits may pose differential risk to young people.

Policies

There are currently a range of policies across the U.S. and around the world restricting alcohol consumption and sales inside sporting facilities. In general, restrictions typically range from total bans on sales, spatial bans (e.g., alcohol can only be consumed in certain areas), and product bans (e.g., no distilled spirits/only low-ABV beverages like beer and wine).⁹

Washington State Regulations

[WAC 314-02-058](#) allows professional sporting events to sell beer, wine, and spirits in approved restaurants, lounges, private suites, temporary lounges, beer gardens, or other approved service areas. Beer, wine, and spirits may also be served and consumed in club seats during events. Only beer and wine may be consumed in general seating areas during events.

Additional regulations include:

- Strategies to prevent the sale and service of alcohol to persons under 21 and those who appear intoxicated;
- Minimum service and security staff ratio of one staff person to 50 attendees;
- Mandatory alcohol server training for all service staff;
- Maximum of two alcoholic beverages per sales transaction;
- Alcoholic beverage containers must be significantly different from nonalcoholic beverage containers;
- Site plan designating all alcohol service areas (e.g., beer gardens); and

- Minimum lighting requirements in areas where alcohol is served or consumed.

Other U.S. State Regulations

Like Washington, some other states including [Idaho](#) and [North Carolina](#) have specific regulations and restrictions for alcohol sales in sporting events. However, there are other states that do not have such restrictions. For example, [Tennessee](#), [Arizona](#), and many other states allow alcohol sales at sporting events but do not have specific restrictions on where alcohol can be sold and consumed. [New York](#) only mandates that a sporting facility must “establish nonalcoholic seating accommodations, separate from other seating accommodations.”

Current Policies at National Football League (NFL) Stadiums

American football is by far the most popular sport in the U.S. Viewers watched three times as many NFL minutes in 2023 compared to Major League Baseball (MLB), the second-most-viewed sports league.¹⁷ In 2023 total NFL game attendance was nearly 19 million with an average attendance of 70,000 people per game.¹⁷

An online search was conducted for publicly available alcohol policies for the 30 NFL stadiums in the U.S. Of those 30, only three stadiums did not clearly post information about alcohol policies.

Age Verification. All stadiums require individuals to be 21+ years old to buy and drink alcohol. Six stadiums require IDs to be checked regardless of age. [Gillette Stadium](#) requires “patrons younger than 25 and who have out-of-

state IDs” to visit Guest Services for an ID check.

Drink Limit. There were 24 stadiums that have a two-drink maximum per transaction. [Everbanks Stadium](#) also clarified that a double cocktail was considered two drinks. [Caesars Superdome](#) defined one serving size to be no more than 25 ounces of beer, six ounces of wine, and two ounces of distilled spirits. Notably, these serving sizes are greater than the definition of one standard drink of alcohol.¹⁸

Restricted Sales Hours. Another notable trend across NFL stadiums were the restricted sales hours, although specific restrictions varied. For example, 16 stadiums indicated alcohol sales ended after the third quarter for football games. [Metlife](#) ends sales at the beginning of the third quarter. [Highmark](#)’s policy is that sales start when gates open and until the 70th minute. [Lambeau Field](#) reported last call was at 11:30 p.m.

Restricting Alcohol from Entering or Leaving the Stadium. There were 15 stadiums with bans on alcohol entering the stadium. There were nine stadiums that specified bans on alcohol leaving the stadium.

Safety Programs. Four stadiums discussed rewards programs for responsible consumers and/or designated drivers. Both [Hard Rock Stadium](#) and [Ford Field](#) promoted a designated driver pledge to give individuals not drinking a free soda, water, or non-alcoholic beer. Designated drivers are also entered into a raffle prize, and Hard Rock Stadium has specific sections in the stadium that are alcohol-free, family-friendly areas.

Lumen Stadium (Seattle, WA)

[Lumen Stadium](#) is the only NFL stadium in Washington and has the following policies listed on their website:

- Any guest who appears to be under age 30 must present a valid ID;
- No alcohol will be sold to guests who are under 21 years old;
- There is a two beer/wine limit per transaction at concession stands and portable concessions until alcohol sales are cut off, which varies by event;
- There is a one spirit limit, per transaction, at club locations until alcohol sales are cut off, which varies by event; and
- Alcohol beverages may not be brought into Lumen Field.

Best Practices

There are several strategies considered to be best practices for managing alcohol at large events, including within sports facilities.¹⁹ These include:

- *Effective planning and collaboration.* For example, provide clear and comprehensive training to staff and discuss rationale on current alcohol policies.
- *Education and information.* For example, provide clear communication and messaging before the event (e.g., when tickets are bought) and during the event (e.g., use flyers and signs about alcohol policies and to promote safe use).
- *Access and promotion for low-ABV or nonalcoholic beverages.* For example, prominently display non-alcohol drink options and provide promotions for their purchase.
- *Water access.* Water is either affordable or free.

- *Food promotion.* Provide access to high-quality food that is varied and can support different dietary restrictions. Post large signage for food outlets relative to alcohol outlets.
- *Alcohol restrictions on entry.* Maintain clear policies and security to minimize alcohol being mistakenly or discreetly brought into the stadium.
- *Restrict sale hours.* End alcohol sales before the end of the event.
- *Restrict purchase amounts.* Limit the sale of alcohol to a maximum of two servings per transaction. Ensure that purchase amounts reflect standard drinks.
- *Provide alcohol-free seating areas.* Maintain specific areas that are free of alcohol, particularly for those younger than 21 years old and for those who have or may be at risk for a substance use disorder.
- *Provide safe areas for intoxicated patrons.* Provide dedicated first-aid areas that are staff by qualified health providers.
- *Ensure security and staffing are active.* Train security and ensure consistent monitoring and enforcement of all laws and policies.
- *Provide post-event evaluation.* Debrief all events and record outcomes of interest (e.g., ejections due to intoxication). Get feedback from various stakeholders.

References

1. Nelson, T. F., & Wechsler, H. (2003). School spirits: Alcohol and collegiate sports fans. *Addictive behaviors*, 28(1), 1-11. [https://doi.org/10.1016/S0306-4603\(01\)00296-9](https://doi.org/10.1016/S0306-4603(01)00296-9)
2. Leavens, E. L., Croff, J., Feddor, R., & Olson, K. (2019). It's game time: drinking intentions, alcohol consumption, and consequences at college tailgates. *Substance use & misuse*, 54(1), 11-17. <https://doi.org/10.1080/10826084.2018.1485698>
3. Erickson, D. J., Toomey, T. L., Lenk, K. M., Kilian, G. R., & Fabian, L. E. (2011). Can we assess blood alcohol levels of attendees leaving professional sporting events?. *Alcoholism: clinical and experimental research*, 35(4), 689-694. <https://doi.org/10.1111/j.1530-0277.2010.01386.x>
4. Pennay, A., Van Egmond, K., Anderson-Luxford, D., Wright, C. J., Caluzzi, G., Livingston, M., ... & Kuntsche, E. (2023). Social and contextual factors associated with drinking before, during and after watching Australian Football League games: A pilot ecological momentary assessment study. *Drug and alcohol review*, 42(6), 1349-1357. <https://doi.org/10.1111/dar.13706>
5. Mitchell, M., & Montgomery, R. D. (2015). Beer and ball on campus? The issue of in-stadium alcohol sales. *International Journal of Environmental Research and Public Health*, 7, 269-283.
6. Popp, N., Bane, A., Howell, S., & Osborne, B. (2020). To serve and protect: Examining the relationship between selling alcohol in college football venues and negative fan behaviors. *Journal of Applied Sport Management*, 12(1), 6. <https://doi.org/10.7290/jasm120106>
7. Barry, A. E., Russell, A., Howell, S., Phan, P., Reyes, D., & Bopp, T. (2019). (Unintended) Consequences of initiating an alcohol sales policy at college football stadiums: A case study. *Journal of American College Health*, 67(5), 397-401. <https://doi.org/10.1080/07448481.2018.1484366>
8. Menaker, B. E., McGranahan, D. A., & Sheptak Jr, R. D. (2019). Game day alters crime pattern in the vicinity of sport venues in Cleveland, OH. *Journal of Sport Safety and Security*, 4(1), 1.
9. Taylor, J., Strang, L., & Disley, E. (2018). *Alcohol and international football tournaments*. RAND.
10. Filce, R., Hall, S. A., & Phillips, D. (2016). Stadium alcohol management: a best practices approach. 10.5199/ijsmart-1791-874X-21c
11. SEC Sports (2019) SEC Revises Conference Alcohol Policy. <https://www.secsports.com/news/2019/05/sec-revises-conference-alcohol-policy>.
12. Mehta, G., & Sheron, N. (2019). No safe level of alcohol consumption—Implications for global health. *Journal of hepatology*, 70(4), 587-589.
13. Rehm, J., & Hasan, O. S. (2020). Is burden of disease differentially linked to spirits? A systematic scoping review and implications for alcohol policy. *Alcohol*, 82, 1-10. <https://doi.org/10.1016/j.alcohol.2019.06.005>
14. Corbin, W. R., Hartman, J. D., Bruening, A. B., & Fromme, K. (2021). Contextual influences on subjective alcohol response. *Experimental and clinical psychopharmacology*, 29(1), 48. <https://doi.org/10.1037/pha0000415>
15. Healthy Youth Survey (2023). Frequency report of results, statewide, grades 6, 8, 10, and 12. <https://www.askhys.net/SurveyResults/FrequencyReports>
16. Naimi, T. S., Siegel, M., DeJong, W., O'Doherty, C., & Jernigan, D. (2015). Beverage-and brand-specific binge alcohol consumption among underage youth in the US. *Journal of substance use*, 20(5), 333-339.
17. Statista (2024). National Football League total attendance at regular season games 2008 to 2023. <https://www.statista.com/statistics/193420/regular-season-attendance-in-the-nfl-since-2006/>
18. Centers for Disease Control and Prevention (2024). About standard drink sizes. <https://www.cdc.gov/alcohol/standard-drink-sizes/index.html>

19. Lyne, M., & Galloway, A. (2012). Implementation of effective alcohol control strategies is needed at large sports and entertainment events. *Australian and New Zealand journal of public health*, 36(1), 55-60. <https://doi.org/10.1111/j.1753-6405.2011.00813.x>