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Alcopops



73.6%

Among underage drinkers, 73.6% consumed a “flavored alcoholic beverage” in the **past month**.




Miech, R. A., Johnston, L. D., Patrick, M. E., O'Malley, P. M., & Bachman, J. G. (2024). Monitoring the Future national survey results on drug use, 1975–2023: Overview and detailed results for secondary school students. Monitoring the Future Monograph Series. Ann Arbor, MI: Institute for Social Research, University of Michigan. Available at Source: [Saving lives, spending less: the case for investing in noncommunicable diseases](#). Geneva: World Health Organization: 2021. Licence: CC BY-NC-SA 3.0 IGO, 17.9% 24.3% 73.6%

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Alcopop


- Introduced 1980's
- Single serving RTD
- Transitional product
- 1 standard alcoholic drink



Supersized Alcopop


- Introduced 2002 to 2007
- Single serving RTD
- Transitional product
- 4.7 to 5.5 standard alcoholic drinks

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Alcopop

- Introduced 1980's
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- 1 standard alcoholic drink



Supersized Alcopop

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Supersized Alcopops: Youth Use

2011-2012 Nation-Wide Study

- 9% of underage drinkers consumed a supersized alcopop in the last 30 days
- 6% consumed Four Loko

Preference for Supersized Alcopops

- More likely to consume when they could select the alcohol

Cleary, K., Levine, D.A., & Hoffman, R.S. (2012). Adolescents and Young Adults Presenting to the Emergency Department Intoxicated from a Caffeinated Alcoholic Beverage: A Case Series. *Annals of Emergency Medicine*, 59, 67-69. DiLoreto, J.T., Siegel, M., Hinchey, D., Valerio, H., Kinzel, K., Lee, S., Chen, K., et al. (2012). Assessment of the average price and ethanol content of alcoholic beverages by brand-United States, 2011. *Alcoholism: Clinical and Experimental Research*, 36, 1288-1297. Mart, S.M. (2011). *Alcohol Marketing in the 21st Century: New Methods, Old Problems. Substance Use and Misuse*, 46, 889-892. doi: 10.3109/10826084.2011.570622.



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Retail Availability

More than 75% of retail locations that sold supersized alcopops were **gas stations and convenience/neighborhood stores.**

These are the types of stores youth most often obtain alcohol from.

Rosheim, M.E., Thoms, D.L., Wagenaar, A.C., Xuan, Z., & Aryal, S. (2015). High Alcohol Concentration Products Associated with Poverty and State Alcohol Policies. *American Journal of Public Health, 105*(9), 1886-1892. doi: 10.2105/AJPH.2015.302705
Dent, C., Grube, J., Biglan, A. (2005). Community level alcohol availability and enforcement of possession laws as predictors of youth drinking. *Preventive Medicine, 40*, 355-362.
Harrison, P.A., Fulkerson, J.A., Park, E. (2000). The relative importance of social versus commercial sources in youth access to tobacco, alcohol, and other drugs. *Preventive Medicine, 31*, 39-48.
Wagenaar, A.C., Finnegan, J.R., Wolfson, M., Anstine, P.S., Williams, C.L., Perry, C.L. (1993). Where and how adolescents obtain alcoholic beverages. *Public Health Reports, 108*, 459-464.

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Price

Four Loko is among the **least expensive** ready-to-drink alcohol products available in the retail market.



Diloreto JT, Siegel M, Hinchey D, et al. Assessment of the Average Price and Ethanol Content of Alcoholic Beverages by Brand-United States, 2011. *Alcoholism: Clinical and Experimental Research*. 2012;36(7):1288-1297. doi:10.1111/j.1530-0277.2011.01721.x.
Rosshelm, M.E., Thoms, D.L., Treffers, R.D., Trangenstein, P.J., McDonald, K.K., Ahmad, R., Siklo, S.S., Gonzalez-Pons, K.M., Suzuki, S., Jernigan, D.H. (2019). Price of Four Loko in Large U.S. Cities, 2018. *Alcoholism: Clinical and Experimental Research*. doi:10.1111/acer.14080

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\$10 Worth of Alcohol

If you drank \$10 worth of Four Loko within two hours, your peak blood alcohol content would be:

- Men: (63.75/your body weight in pounds) - 0.034
- Women: (76.5/your body weight in pounds) - 0.034



Rosshelm, M.E., Thoms, D.L., Treffers, R.D., Trangenstein, P.J., McDonald, K.K., Ahmad, R., Siklo, S.S., Gonzalez-Pons, K.M., Suzuki, S., Jernigan, D.H. (2019). Price of Four Loko in Large U.S. Cities, 2018. *Alcoholism: Clinical and Experimental Research*. doi:10.1111/acer.14080

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The Effects of Blood Alcohol Concentration

BLOOD ALCOHOL CONCENTRATION (BAC) IN G/DL	TYPICAL EFFECTS	PREDICTABLE EFFECTS ON DRIVING
.02	Some loss of judgment; relaxation, slight body warmth, altered mood	Decline in visual functions (rapid tracking of a moving target), decline in ability to perform two tasks at the same time (divided attention)
.05	Exaggerated behavior, may have loss of small-muscle control (e.g., focusing your eyes), impaired judgment, usually good feeling, lowered alertness, release of inhibition	Reduced coordination, reduced ability to track moving objects, difficulty steering, reduced response to emergency driving situations
.08	Muscle coordination becomes poor (e.g., balance, speech, vision, reaction time, and hearing), harder to detect danger; judgment, self-control, reasoning, and memory are impaired	Concentration, short-term memory loss, speed control, reduced information processing capability (e.g., signal detection, visual search), impaired perception
.10	Clear deterioration of reaction time and control, slurred speech, poor coordination, and slowed thinking	Reduced ability to maintain lane position and brake appropriately
.15	Far less muscle control than normal, vomiting may occur (unless this level is reached slowly or a person has developed a tolerance for alcohol), major loss of balance	Substantial impairment in vehicle control, attention to driving task, and in necessary visual and auditory information processing

National Highway Traffic Safety Administration. (2024). Drunk driving. Retrieved from <https://www.nhtsa.gov/risky-driving/drunk-driving>

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First Time Consumption of Four Loko

Classroom surveys at public universities in FL, MT, and VA

Undergraduate lifetime drinkers (n - 1,036)

46% had consumed Four Loko (n = 474)

40% age 21 or older, but **93% first drank Four Loko when under 21**

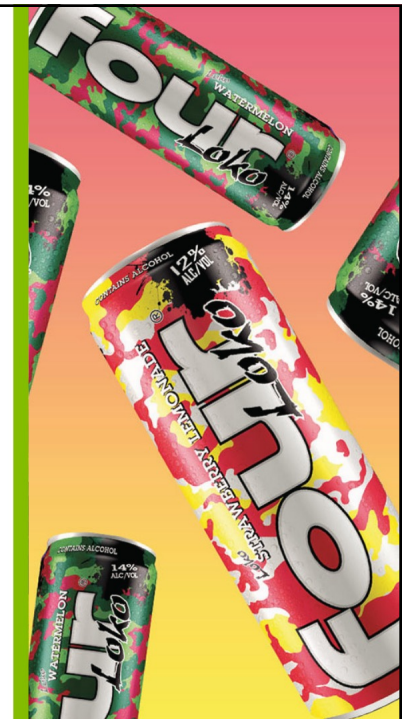
58% consumed at least 1 entire can

- 10% drank 2 or more cans their first time drinking it

Among those who finished 1 or more cans:

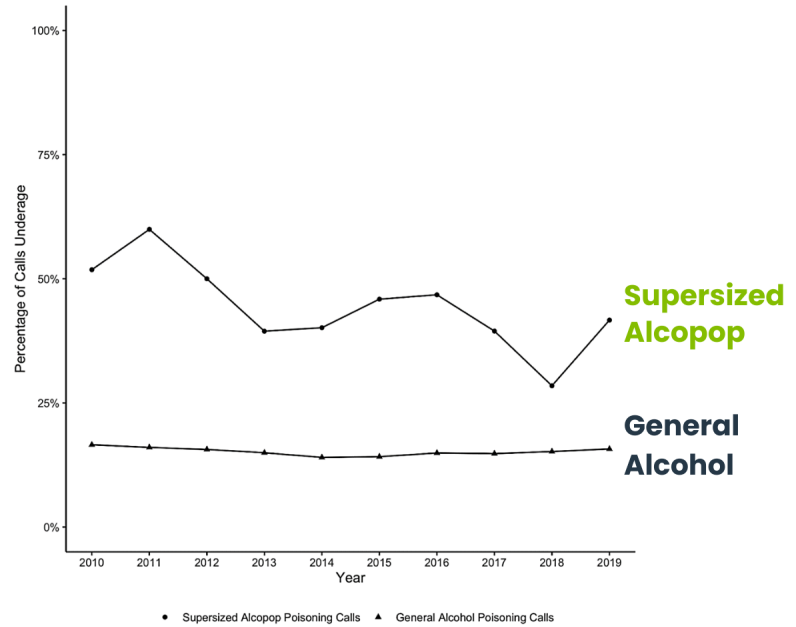
- **34% blacked out**
- **18% vomited**
- Students in FL and VA were more likely to black out (AOR = 1.9) and/or vomit (AOR = 2.0) than students in MT

Rossheim, M.E., Greene, K.M., Yurasek, A.M., Barry, A.E., Gonzalez-Pons, K.M., Trangenstein, P.J., Cavazos, T., Nelson, C., Treffers, R.D., Thambi, D.L., & Jernigan, D.H. (in press). Underage drinkers' first experience consuming a popular brand of supersized alcopop. *American Journal of Drug and Alcohol Abuse*. doi: 10.1080/00952990.2019.1653316



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Percent of calls to poison control for consumers under the legal drinking age (under 21 years old)



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Sexual Assault

Four Loko vs. Bud Light

Compared to victims of sexual assault who had consumed Bud Light, **victims who consumed Four Loko had 9.3 times the odds of being a minor**, adjusting for whether they were given the alcohol by the perpetrator.

May reflect brand preference, however...

95% of sexual assault victims who were minors **were provided the alcohol by the perpetrator** of assault, compared to one-third of victims 18 years or older.

Rosshem, M.E., Gonzalez-Pons, K.M., Tillett, K.K., Treffers, R.D., Trangenstein, P.J., Lerch, J., Taxman, F.S., Greene, K.M., LaParco, C.R., & Jernigan, D.H. (2023). Alcopops Disproportionately Consumed by Minors in Sexual Assault Cases. *Health Behavior Research*. Vol. 6: No. 4. <https://doi.org/10.4148/2572-1836.1203>

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The Perfect Storm

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Cheap!

The Perfect Storm

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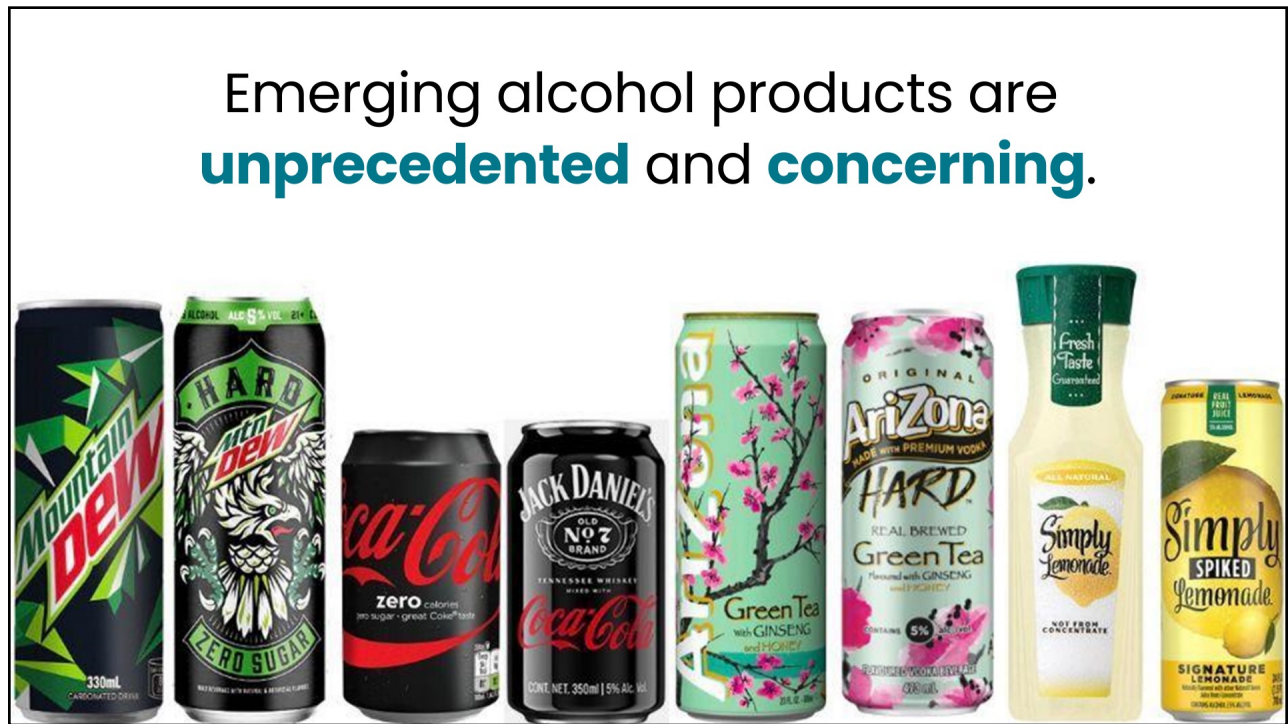
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The 16 NCD Best Buy Interventions

ALCOHOL



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

Source: Saving lives, spending less: the case for investing in noncommunicable diseases. Geneva: World Health Organization; 2021. License: CC BY-NC-SA 3.0 IGO.

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How can you use this information?

Telling the local story



Eroding protections



Protect people using what we've learned



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A collage of various beverage cans including Four Loko, Bud Light Raz-Ber-Rita, Josee Spicy Margarita, Bud Light Straw-Ber-Rita, Parks, Twisted Lemonade, Twisted Tea, SF Blackberry, Iced Tea + Lemonade, Bud Light, Margarita, and Watermelon Four Loko.

Contact Information

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