

# Alcohol and Caffeine

## Public Health Impact of Excessive Alcohol Use

- Excessive alcohol use is responsible for about 88,000 deaths in the United States each year<sup>1</sup> and \$249 billion in economic costs in 2010.<sup>2</sup>
- Binge drinking (consuming 4 or more drinks per occasion for women or 5 or more drinks per occasion for men) is responsible for more than half of these deaths<sup>3</sup> and three quarters of economic costs.<sup>2</sup>
- Binge drinking is also associated with many health and social problems, including alcohol-impaired driving, interpersonal violence, risky sexual activity, and unintended pregnancy.<sup>4</sup>
- Most people younger than age 21 who drink report binge drinking, usually on multiple occasions.<sup>5</sup>

## Dangers of Mixing Alcohol and Caffeine

- The *Dietary Guidelines for Americans* [↗](https://health.gov/dietaryguidelines/2015/guidelines/appendix-9/) (<https://health.gov/dietaryguidelines/2015/guidelines/appendix-9/>) cautions against mixing alcohol with caffeine.<sup>6</sup>
- When alcohol is mixed with caffeine, the caffeine can mask the depressant effects of alcohol, making drinkers feel more alert than they would otherwise. As a result, they may drink more alcohol and become more impaired than they realize, increasing the risk of alcohol-attributable harms.<sup>6-10</sup>



- Caffeine has no effect on the metabolism of alcohol by the liver and thus does not reduce breath or blood alcohol concentrations (it does not “sober you up”) or reduce impairment due to alcohol consumption.<sup>6</sup>

## Dangers of Mixing Alcohol and Energy Drinks

- Energy drinks typically contain caffeine, plant-based stimulants, simple sugars, and other additives.<sup>8</sup>
- Mixing alcohol with energy drinks is a popular practice, especially among young people in the United States.<sup>11–13</sup> In 2017, 10.6% of students in grades 8, 10, and 12 and 31.8% of young adults aged 19 to 28 reported consuming alcohol mixed with energy drinks at least once in the past year.<sup>12,13</sup>
- In a study among Michigan high school students, those who binge drank were more than twice as likely to mix alcohol with energy drinks as non-binge drinkers (49.0% vs. 18.2%). Liquor was the usual type of alcohol consumed by students who reported mixing alcohol and energy drinks (52.7%).<sup>14</sup>
- Drinkers aged 15 to 23 who mix alcohol with energy drinks are 4 times more likely to binge drink at high intensity (i.e., consume 6 or more drinks per binge episode) than drinkers who do not mix alcohol with energy drinks.<sup>15</sup>
- Drinkers who mix alcohol with energy drinks are more likely than drinkers who do not mix alcohol with energy drinks to report unwanted or unprotected sex, driving drunk or riding with a driver who was intoxicated, or sustaining alcohol-related injuries.<sup>16</sup>

## Caffeinated Alcoholic Beverages

- Caffeinated Alcoholic Beverages (CABs) were premixed beverages popular in the 2000s<sup>17</sup> that combined alcohol, caffeine, and other stimulants. They were malt or distilled spirits-based beverages and they usually had a higher alcohol content than beer (e.g., 12% alcohol by volume compared to 4% to 5% for beer).<sup>7,17</sup>
- CABs were heavily marketed in youth-friendly media (e.g., social media) and with youth-oriented graphics and messaging that connected the consumption of these beverages with extreme sports or other risk-taking behaviors.<sup>18</sup>
- In November 2010, the US Food and Drug Administration (FDA) told the manufacturers of seven CABs that their drinks could no longer stay on the market in their current form, stating that “FDA does not find support for the claim that the addition of caffeine to these alcoholic beverages is ‘generally recognized as safe,’ which is the legal standard.”<sup>7,19</sup> Producers of CABs responded by removing caffeine and other stimulants from their products.<sup>8</sup>

## Prevention Strategies

- The Community Preventive Services Task Force recommends effective population-based strategies for preventing excessive alcohol consumption and related harms, including increasing alcohol excise taxes, limiting alcohol outlet density, and commercial host (dram shop) liability for service to underage or intoxicated customers.<sup>20</sup>
- States and communities have also developed educational strategies to alert consumers to the risks of mixing alcohol with energy drinks. At least one community enacted an ordinance requiring retailers to post warning signs informing consumers of the risks of mixing alcohol and energy drinks.<sup>21</sup>
- Monitoring and reducing youth exposure to alcohol advertising through “no-buy” lists could also help reduce underage drinking. No-buy lists identify television programming that advertisers can avoid to improve compliance with the alcohol industry’s self-regulated alcohol marketing guidelines.<sup>22</sup>

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