

## **Submission to the Board of Health: Alcohol and Caffeinated Energy Drinks**

HL18.1 (March 20, 2017)

CAMH strongly supports the recommendations of Toronto's Medical Officer of Health dealing with the issue of caffeinated energy drinks and alcohol in the context of the city's Municipal Alcohol Policy.

The marketing of energy drinks targets younger users and their introduction has resulted in concerns about the health impact of these drinks, particularly among these younger users.<sup>1</sup> The concerns are related to potential adverse effects ranging from cardiovascular problems to increased risk-taking and injuries.<sup>2</sup> At CAMH, since 1977 we have conducted a survey of the Ontario student population in grades 7-12 called the Ontario Student Drug Use and Health Survey (OSDUHS). We have observed, with this survey, that energy drink use is relatively common among adolescents and increases with age. In 2015 we observed that 35% of students in grade 7 reported use of energy drinks in the past year, and the percentage of users increased from 19% in grade 7 to 46% in grade 12.<sup>3</sup> Our research also confirmed the association of energy drink use with adverse correlates among Ontario adolescents, including binge drinking, use of tobacco and cannabis, and needing medical treatment for an injury.<sup>4</sup> The nature of the study design does not allow us to draw causal conclusions. Nevertheless, many studies have identified these negative relationships, and as a precautionary measure many have recommended the prevention of energy drink use by children and adolescents.<sup>5</sup>

While energy drinks are a relatively new product, alcohol use has a much longer history and evidence on the negative effects of inappropriate use of alcohol is very clear.<sup>6</sup> These negative effects are particularly concerning among adolescents and young adults, where alcohol has been identified as the leading contributing factor to serious injury and premature mortality.<sup>7</sup> Alcohol use is common in Canada, both in the adolescent and adult population.<sup>8</sup>

A major concern identified with energy drink use has been their use with alcohol. In the 2015 OSDUHS survey, we observed that 14% of students in grades 7-12 reported mixing energy drinks with alcohol consumption at least once in the previous year; use increases with grade, with 4% reporting mixing alcohol and energy drinks in the past year in grade 8, increasing to 23% in grade 12.<sup>9</sup> Consuming energy drinks mixed with alcohol has been associated with a variety of adverse consequences, such as increased alcohol consumption, increased injury susceptibility and impaired driving.<sup>10</sup> While the mechanisms for these adverse effects remain unclear, several have been posited. For example, Azagba and colleagues<sup>11</sup> noted that combining alcohol with energy drinks might lead to increased feelings of alertness and decreased perceptions of impairment by alcohol, leading to increased drinking, greater risk-taking and increased likelihood of injury. In our research, we have found that the likelihood of students having sustained a Traumatic Brain Injury (TBI) in the past year increased substantially with the frequency of self-reported consumption of energy drinks mixed with alcohol; students who reported consuming energy drinks mixed with alcohol 6 or more times in times in the past year had odds of experiencing a TBI in the past year nearly 8 times higher than those not reporting any consumption of these drinks.<sup>12</sup> As a result of this accumulating body of evidence, Health Canada has recommended that alcohol not be mixed with energy drinks.<sup>13</sup>

While evidence on this issue continues to evolve and more research to clarify causal relationships is needed, the current data support the importance of reducing any risks resulting from the mixing of alcohol with energy drinks, as emphasized by Health Canada.<sup>14</sup> Thus, the recommendations by the Medical Officer of Health are entirely consistent with best health practices, and CAMH supports them completely.

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**camh** The Centre for Addiction and Mental Health (CAMH) is Canada's largest mental health and addiction teaching hospital and one of the world's leading research centres in this field, with a provincial mandate to conduct research, engage in public education and participate in the development of healthy public policy in the area of addictions and mental health. CAMH is committed to playing a leading role in transforming society's understanding of mental illness and substance use and building a better health care system. To help achieve these goals, CAMH communicates evidence-informed policy advice to stakeholders and policymakers.

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<sup>1</sup> Brache et al. (2012), Caffeinated alcoholic beverages in Canada: Prevalence of use, risks and recommended policy responses, Ottawa: CCSA. Breda et al. (2014), Energy drink consumption in Europe: A review of the risks, adverse health effects, and policy options to respond, *Frontiers in Public Health* 2: 1-5. Health Canada (2015), Caffeinated energy drinks, available from <http://www.hc-sc.gc.ca/fn-an/prodnatur/caf-drink-boissons-eng.php>

<sup>2</sup> Breda, 2014. Hamilton et al. (2013); Energy drink consumption and associations with demographic characteristics, drug use and injury among adolescents, *Canadian Journal of Public Health*, 104: e496-e501. Visram et al. (2016), Consumption of energy drinks by children and young people, *BMJ Open* 6: e010380.

<sup>3</sup> Boak et al. (2015), Drug use among Ontario students, 1977-2015: Detailed OSDUHS findings (CAMH Research Document Series No. 41), Toronto: CAMH.

<sup>4</sup> Hamilton et al., 2013.

<sup>5</sup> Brache et al., 2012. Breda, 2014. Health Canada (2012), Questions and answers: Caffeinated energy drinks, available from: <http://www.hc-sc.gc.ca/fn-an/prodnatur/questions-caf-eng.php#a17>

<sup>6</sup> World Health Organization (2014), *Global Status Report on Alcohol*, Geneva, Switzerland: WHO. Rehm et al. (2009), Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders, *Lancet* 373: 2223-33.

<sup>7</sup> Gore et al. (2011), Global burden of disease in young people aged 10-24 years: a systematic analysis, *Lancet* 377: 2093-2102.

<sup>8</sup> Boak et al, 2015. Ialomiteanu et al. (2016), CAMH Monitor eReport 2015: Substance use, mental health and well being among Ontario adults, 1977-2013 (CAMH Research Document Series No. 45), Toronto: CAMH.

<sup>9</sup> Boak et al, 2015.

<sup>10</sup> Breda et al, 2014. Visram et al, 2016.

<sup>11</sup> Azagba et al. (2013), The consumption of alcohol mixed with energy drinks: Prevalence and key correlates among Canadian high school students, *CMAJ Open* 17: E19-E26.

<sup>12</sup> Ilie et al. (2015), Energy drinks, alcohol, sports and traumatic brain injuries among adolescents, *PloS One* 10: e0135860.

<sup>13</sup> Health Canada, 2012.

<sup>14</sup> Health Canada, 2012.