University at Buffalo
The State University of New York

Research Institute on Addictions

January 11, 2017

Toronto Board of Health
10th floor, West Tower, City Hall
100 Queen Street West
Toronto, ON M5H 2N2

Dear Members of the Board:

I am writing in regard to MM55.48, Councillor De Baeremaeker's motion to restrict marketing and sales of energy drinks to those under 19 in the city of Toronto. As a substance use researcher and public health advocate, albeit in the United States rather than Canada, I would like to take this opportunity to extend my strong support for the motion.

As you are no doubt aware, the energy drink industry sets great store by the argument that their products are generally no stronger than coffee. That is true as far as it goes; the most popular energy drink brands (Red Bull, Monster, Rockstar) contain about 80mg per 8oz serving (10mg caffeine per ounce), which is 2-3 times stronger than most soft drinks but still on the low end of the coffee spectrum. (Concentrated energy "shots" like 5 Hour Energy Shot are a notable exception, containing about 10 times as much caffeine per ounce as their full-size counterparts.)

Caffeine dosage aside, however, energy drink use by children and adolescents raises unique concerns for five key reasons.

1. Children are more sensitive to the effects of caffeine than adults, due to both size (lower body mass means that the drug has a disproportionate impact) and metabolism (our systems process caffeine differently at different points on the developmental trajectory). Whereas a safe daily dose for most healthy adults is in the range of 400mgs, the American Academy of Pediatrics strongly recommends that children consume no more than 100mg of caffeine per day -- a standard well below the caffeine limit of 180mg for energy drinks in Canada.

2. Unlike coffee, energy drinks contain an obscure cocktail of sweeteners, amino acids, vitamins, and plant extracts, the composition of which varies from one brand to another. The interactions within these proprietary blends are neither well regulated nor well understood, but some common ingredients (such as ginseng, guarana, or bitter orange) have stimulant properties that synergistically reinforce the impact of caffeine on the nervous system. The caffeine in an energy drink may therefore pack a bigger punch than a comparable dose in other caffeinated beverages, such as coffee, tea, or soft drinks.

3. Unlike coffee, energy drinks are new enough that they are still frequently confused with soft drinks (much lower caffeine dosage) or sports drinks (no caffeine at all). This confusion, combined with misleading and unsubstantiated marketing claims about the functional benefits of the products, increases the likelihood that young athletes will use energy drinks to enhance athletic performance. Some energy drink manufacturers have even actively targeted body builders and/or athletes as a key consumer demographic, despite the established risks of coupling caffeine (a vasoconstrictor and diuretic) with physical exertion. In the United States, both the National Collegiate Athletic Association and the National Federation of High Schools have warned against energy drink use by young athletes. Nevertheless, anecdotal evidence indicates that it is still regrettably common practice for misguided coaches to hand out energy drinks to fatigued players as a mid-game pick-me-up.

4. Unlike coffee, energy drinks are commonly used in ways that actually increase their riskiness for consumers. Coffee drinking is associated with longstanding traditions that may help to minimize adverse

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effects; it is generally sipped slowly, which slows the absorption of caffeine, and has (at least until quite recently) been considered a drink for adults. In contrast, energy drinks are generally chilled (which allows them to be consumed quickly) and lightly carbonated (which may aid in absorption). In addition, energy drink marketers have in some instances overtly encouraged rapid consumption, known as "chugging" or "slamming." This practice can have adverse consequences, as evidenced by the now-defunct slogan for Spike Shooter, "So good you'll want to slam the whole can," which ended with the hospitalization of several Colorado Springs high school students from caffeine toxicity a few years ago).

5. Unlike coffee, energy drinks are explicitly marketed with imagery, narratives, and aesthetics design to appeal to young adults -- and implicitly to adolescents, for whom narratives that promote adventure, rebellion, and extreme lifestyles are just as attractive if not moreso. The city of San Francisco is currently conducting a lawsuit against Monster Energy for its youth-friendly marketing practices. A recent report to members of the U.S. Congress found clear evidence that, contrary to industry claims, adolescents were frequent targets of product marketing practices, including child-friendly product designs and placement on store shelves as well as the aggressive use of viral marketing via social media.

The growing popularity of caffeinated energy drinks worldwide has been accompanied by increasing reports of adverse health consequences associated with their use. The best available scientific evidence indicates a robust correlation between caffeine levels in energy drinks and negative health and safety consequences, particularly among younger users. In the United States, ongoing reportage by the U.S. Food and Drug Administration, the National Poison Data System, and the Drug Abuse Warning Network (DAWN) all point to increasing rates of caffeine toxicity among children (see attached). It is also likely that, despite growing numbers of documented poisonings and emergency department visits, adverse events related to caffeinated energy drink use remain significantly underreported – because caffeine is widely dismissed as a harmless drug with exclusively salutary effects, or (more troublingly) not as a drug at all.

I hope some or all of the above comments may be useful in supporting your case before the City Council. If there is any further information or clarification I can offer, please don't hesitate to contact me.

Respectfully,

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