

If it looks like a duck and quacks like a duck...: Energy “shots” should be regulated as energy drinks in Canada

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ABSTRACT

In 2012, Health Canada transitioned caffeinated energy drinks from *Natural Health Product* to *Food and Drug* classification and regulations, implementing temporary guidelines with requirements such as caffeine content limits, mandatory cautionary labelling, and restrictions on health claims. “Energy shots” often contain as much or more caffeine compared to energy drinks and have been associated with a similar number of adverse health events. However, current requirements for energy drinks do not apply to energy shots, which remain classified as “natural health products” on the basis that they are “not consumed or perceived as foods” in the same way as energy drinks. An online survey was conducted with Canadian youth and young adults aged 12–24 years ($N=2040$) in October 2014 to examine perceptions of energy shots. Respondents viewed an image of a popular energy shot and were asked which term best described it, with six randomly-ordered options. The vast majority (78.8%) perceived the energy shot as an “energy drink” (vs. “supplement”, “vitamin drink”, “natural health product”, “soft drink” or “food product”). Given consumer perceptions and the similarity in product constituents, there is little basis for regulating energy shots differently from energy drinks; these products should be subject to similar labelling and health warning requirements.

KEY WORDS: Energy drinks; caffeine; policy

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In 2012, Health Canada transitioned caffeinated energy drinks from *Natural Health Product* (NHP) to *Food and Drug* classification and regulations, based on product characteristics, consumer perceptions and use. Until food and drug regulations are issued for energy drinks, Health Canada is granting *Temporary Marketing Authorizations* to products that meet specific requirements, including limits on caffeine content, mandatory cautionary labelling, and restrictions on health claims.¹ Since 2012, more than 300 caffeinated energy drinks have been granted such authorizations.²

The current requirements for energy drinks in Canada do not apply to “energy shots,” which remain classified as a “natural health product” and are thus subject to NHP regulations rather than the more comprehensive labelling and other requirements for energy drinks. The rationale given for energy shots remaining classified as NHPs is as follows:

Caffeinated products that are not consumed or perceived as foods will continue to be classified as NHPs. For example, many products termed “Energy Shots” are distinguished from foods by their smaller volumes and product representation. Health Canada has set the upper limit for the volume of an energy shot at 90 mL; therefore, caffeinated products that are pre-packaged, ready-to-consume, containing 90 mL or less, and meant to be consumed in a single dose, shall be classified as NHPs (p. 6).¹

Despite their smaller volume, the caffeine content of energy shots is often equivalent to larger energy drinks. For example, *5-hour Energy* – the most popular energy shot in Canada – contains 190 mg of caffeine,³ more than the maximum allowed for energy

drinks. Indeed, Health Canada’s maximum caffeine limit is higher for energy shots (200 mg per container) than for energy drinks (180 mg per container).⁴ Energy shots have also been associated with a similar number of adverse health events as energy drinks. A search of Health Canada’s Adverse Reaction database⁵ as of May 2015, which includes voluntary reports from consumers and health professionals, indicates 16 adverse events for *5-hour Energy*, more than any brand of energy drink other than Red Bull. A number of these are serious or life-threatening events.^{5,6} In the United States, the FDA has received reports citing the possible involvement of *5-hour Energy* shots with 13 deaths between late 2008 and 2012.^{6,7} Since 2009, *5-hour Energy* has been mentioned in approximately 90 filings with the FDA, including more than 30 serious or life-threatening injuries, such as heart attacks and convulsions.⁷

Health Canada’s primary rationale for continuing to treat energy shots as NHPs rather than including them as foods with energy drinks is that they are “not consumed or perceived as foods” in the same way as energy drinks. We tested that assumption in a

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Figure 1. 5-hour Energy product shown in survey

population-based study, conducted in October 2014 to examine the use and perceptions of energy drinks among youth and young adults in Canada.

An online survey was conducted with respondents aged 12–24 in all provinces ($N=2040$), recruited via email through Léger's consumer panel (which includes more than 400,000 active members, half of whom were sampled using probability-based methods).⁸ Surveys were conducted in English ($n=1329$) or French ($n=711$) with youth aged 12–17 ($n=1013$) and young adults aged 18–24 ($n=1027$). Respondents received remuneration from Léger in accordance with their usual incentive structure. The study was reviewed by and received ethics clearance from the Office of Research Ethics at the University of Waterloo. A full description of the study methods is published elsewhere and can be found in the Technical Report.⁸

Respondents were shown an image of a popular energy shot brand (5-hour Energy; see Figure 1) and asked “Which of the following do you think best describes this product?” Participants were provided with six options that appeared in random order: “Energy drink”, “Supplement”, “Vitamin drink”, “Natural health product”, “Soft drink” and “Food product”, as well as “Don't know” and “Refuse to answer”. A total of 78.8% of respondents perceived the energy shot as an “energy drink”, followed by 9.5% who viewed it as a supplement, 2.5% as a vitamin drink, 1.9% as a natural health product, 0.9% as a soft drink, 0.6% as a food product, and 5.5% selected “don't know” (a further 6 respondents refused to answer).

The results demonstrate that the vast majority of youth and young adults surveyed – the primary target group for energy drinks – perceive energy shots as an energy drink. This is consistent with evidence that they are used for similar reasons as energy drinks.⁹ To our knowledge, this is the only evidence on how consumers perceive energy shots. In the absence of any other empirical evidence, and given the similarity in product constituents, there appears to be little basis for regulating energy shots differently from energy drinks. Indeed, given the alarming number of adverse events associated with energy shots, these products should be subject to similar labelling requirements and health warnings as energy drinks. To our knowledge, the distinction between energy shots and energy drinks is unique to Canada and not reflected in other jurisdictions that require labelling of high caffeine products, such as the European Union.

REFERENCES

1. Health Canada, Food Directorate, Health Products and Food Branch. Category Specific Guidance for Temporary Marketing Authorization – Caffeinated Energy Drinks, December 2013. Available at: <http://www.hc-sc.gc.ca/fn-an/legislation/guide-ld/guidance-caf-drink-boiss-tma-amt-eng.php> (Accessed June 24, 2015).
2. Health Canada. Lists of Foods That Have Received Temporary Marketing Authorization Letters, Last updated March 31, 2015. Available at: <http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/list-tmal-rpsn-eng.php> (Accessed June 24, 2015).
3. Health Canada. Licensed Natural Health Products Database, 5-Hour Energy (NPN 80038715). Last modified February 27, 2014. Available at: <http://webprod5.hc-sc.gc.ca/lnhpd-bdpsnh/info.do?licence=80038715&lang=eng> (Accessed May 16, 2016).
4. Mackrael K. New limits placed on caffeine in ‘energy shots’. *The Globe and Mail*. Feb 5, 2013. Available at: <http://www.theglobeandmail.com/life/health-and-fitness/health/new-limits-placed-on-caffeine-in-energy-shots/article8286575/> (Accessed June 24, 2015).
5. Health Canada. Canada Vigilance Adverse Reaction Online Database. Available at: <http://www.hc-sc.gc.ca/dhp-mps/medeff/databasdon/index-eng.php> (Accessed May 7, 2015).
6. Mackrael K. Health Canada okays ‘energy shot’ drinks while U.S. probes possible links to deaths. *The Globe and Mail*. Feb 5, 2013. Available at: <http://www.theglobeandmail.com/life/health-and-fitness/health/health-canada-okays-energy-shot-drinks-while-us-probes-possible-links-to-deaths/article8236152/> (Accessed June 24, 2015).
7. Meier B. Caffeinated drink cited in reports of 13 deaths. *New York Times*. Nov 14, 2012. Available at: http://www.nytimes.com/2012/11/15/business/5-hour-energy-is-cited-in-13-death-reports.html?_r=0 (Accessed June 24, 2015).
8. Reid JL, Hammond D. Evaluating the Impact of Canada's Caffeinated Energy Drink Policy Among Youth and Young Adults: Online Survey, Technical Report, December 2014. Available at: www.davidhammond.ca/projects/energy-drinks/energy-drinks-national-survey/ (Accessed November 9, 2015).
9. Stephens MB, Attipoe S, Jones D, Ledford CJW, Deuster PA. Energy drink and energy shot use in the military. *Nutr Rev* 2014;72(S1):72–77. PMID: 25293546. doi: 10.1111/nure.12139.

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RÉSUMÉ

En 2012, Santé Canada a fait passer les boissons énergisantes caféinées de la catégorie et du cadre réglementaire des *Produits de santé naturels* à ceux des *Aliments et drogues* en leur appliquant des lignes directrices temporaires assorties d'exigences : limites sur la teneur en caféine, étiquetage de mise en garde obligatoire et restrictions sur les allégations santé. Les « doses énergisantes » (*energy shots*) contiennent souvent autant ou plus de caféine que les boissons énergisantes et sont associées à un nombre semblable de problèmes de santé. Toutefois, les exigences qui visent actuellement les boissons énergisantes ne s'appliquent pas aux doses énergisantes, encore classées comme des « produits naturels » parce qu'elles ne sont « ni consommées ni perçues à titre d'aliments » comme les boissons énergisantes. Nous avons mené un sondage en ligne auprès de jeunes et de jeunes adultes canadiens de 12 à 24 ans ($N=2\ 040$) en octobre 2014 afin d'examiner leurs perceptions des doses énergisantes. Les répondants ont

regardé la photo d'une dose énergisante populaire, et nous leur avons demandé de choisir parmi six options énumérées en ordre aléatoire le terme décrivant le mieux le produit. La très grande majorité des répondants (78,8 %) a qualifié la dose énergisante de « boisson énergisante » (plutôt que de « supplément », de « boisson vitaminée », de « produit de santé naturel », de « boisson gazeuse » ou de « produit alimentaire »). Étant

donné les perceptions des consommateurs et la similarité des composants de ces produits, il y a peu de raisons de réglementer les doses énergisantes différemment des boissons énergisantes; ces produits devraient être assujettis à des exigences d'étiquetage et de mise en garde semblables.

MOTS CLÉS : boissons énergisantes; caféine; politique