

## ANNEX B – HOW ENERGY DRINKS DIFFER FROM OTHER DRINKS

1. Since the rapid increase in the consumption of energy drinks, there have been concerns around the potential negative impacts on health and wellbeing.
2. Researchers have observed many links between adolescent energy drink consumption and other negative health behaviours. These behaviours also contribute to being overweight or obese, for example, skipping breakfast, eating fast food and consuming more calories overall<sup>1</sup>.
3. Some energy drinks have high levels of sugar. Recent Kantar purchasing data shows that diet variants of soft drinks are outperforming full sugar versions<sup>2</sup>. The data does not suggest that energy drink purchasing is following the same trend. The sales of regular energy drinks remains stable despite a rise in sugar-free varieties.
4. Due to the presence of other ingredients such as taurine, guarana and B vitamins<sup>3</sup>, energy drinks are different to other caffeinated products. To date, evidence is unclear if the health outcomes associated with energy drinks are linked to the caffeine content alone, the other ingredients, or the combination.
5. A Canadian study<sup>4</sup> found that young people (aged 12 – 24) were significantly more likely to report adverse events after consuming energy drinks compared with coffee. Adverse events included fast heartbeat, difficulty sleeping, headache, stomach problems, chest pain and seizures. This supports previous suggestions that consider energy drinks as a “novel” exposure due to the combination of ingredients.
6. We also know that energy drinks are detrimental to oral health and cause harm to irreplaceable tooth enamel<sup>5,6</sup>. For the purposes of this consultation, we are focusing on the caffeine aspect of energy drinks rather than the sugar content or acidity. The average caffeine content of these drinks is 311 milligrams per litre<sup>7</sup>.
7. We know that young people consume caffeine from other dietary sources. However, it would take a large amount of chocolate to consume the same level of caffeine as in one can of energy drink. In addition, there is no evidence that young people overconsume caffeine from other caffeinated foods or drinks.

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<sup>1</sup> Visram, S. and Hashem. K. (2016). Energy drinks: What’s the evidence? Food Research Collaboration Policy Brief. Available at: <https://foodresearch.org.uk/publications/energy-drinks>

<sup>2</sup> O’Mahoney, A. (2019). New kid in town. The Grocer, 1 June 2019, Print edition, pp. 41-51.

<sup>3</sup> Levels are sometimes higher than recommended intakes. See Lage-Yusty, M. A., Villar-Blanco, L. and López-Hernandez, J. (2019). Evaluation of caffeine, vitamins and taurine in energy drinks. Journal of Food and Nutrition Research, 58. Available at: [www.vup.sk/en/download.php?bullID=2017](http://www.vup.sk/en/download.php?bullID=2017)

<sup>4</sup> Hammond, D., Reid, J. L. and Zukowski, S. (2018). Adverse effects of caffeinated energy drinks among youth and young adults in Canada: A web-based survey. Canadian Medical Association Journal, 6. Available at: <https://doi.org/10.9778/cmajo.20160154>

<sup>5</sup> Science and Technology Committee (2018). Thirteenth Report of Session 2017-19: Energy drinks and children. Available at: <https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/821/821.pdf>

<sup>6</sup> Pinto, S. C. et al. (2013). Erosive potential of energy drinks on the dentine surface. BMS Research Notes, 6. Available at: <https://doi.org/10.1186/1756-0500-6-67>

<sup>7</sup> Department of Health and Social Care (2018). Consultation on proposal to end the sale of energy drinks to children. See Impact Assessment. Available at: <https://www.gov.uk/government/consultations/ending-the-sale-of-energy-drinks-to-children>

## Evidence of harm

8. Research indicates that young people who report daily consumption of energy drinks are twice as likely to report low psychological and physical wellbeing. Furthermore, they are four times as likely to have low educational achievement. This is compared to young people who reported never consuming energy drinks<sup>8</sup>.

9. Teachers report a negative impact on young people's participation at school after consuming energy drinks<sup>9</sup>. In a recent survey, 13% of respondents stated energy drinks as a main contributor to poor behaviour and a barrier to learning.

10. Other social, educational, health and lifestyle factors could all contribute to the effects on health and behaviour seen. Due to ethical considerations of conducting randomised control trials on young people, it is unlikely we will see evidence establishing clear causal effects from energy drinks consumption.

11. The evidence included in this document suggests strong associations with energy drink consumption and negative health, wellbeing and education outcomes. In contrast, there is little evidence demonstrating benefits for young people.

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<sup>8</sup> Department of Health & Social Care Reviews Facility, Brunton, G. et al. (2019). Caffeinated energy drinks use and reported effects in young people: a rapid overview of systematic reviews. Available at: [http://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=67\\_oNBqGgcw%3d&tabid=3751&portalid=0&mid=7546](http://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=67_oNBqGgcw%3d&tabid=3751&portalid=0&mid=7546)

<sup>9</sup> The National Association of Schoolmasters Union of Women Teachers. Energy drinks. Available at: <https://www.naswt.org.uk/advice/in-the-classroom/behaviour-management/energy-drinks.html>