

Science and Technology Committee Energy Drinks Inquiry

1.1 The Institute of Alcohol Studies (IAS) welcomes the opportunity to submit evidence to the Science and Technology Committee. The IAS is an independent institute bringing together evidence, policy and practice from home and abroad to promote an informed debate on alcohol's impact on society. Our purpose is to advance the use of the best available evidence in public policy decisions on alcohol.

1.2 The focus of this inquiry is on energy drinks. Though some energy drinks do contain alcohol, such as Dragon Soop and Buckfast, a key focus of this inquiry is on non-alcoholic energy drinks. For that reason, we are unable to comment on many of the committee's questions, and have confined ourselves to two key areas:

1. **What links there are between use of energy drinks and other behaviours, and whether energy drink consumption drives those behaviours or vice versa.** We focus here on whether energy drink consumption drives alcohol consumption
2. **What the evidence is on the risks being increased, or reduced, through the way energy drinks are consumed.** We focus here on the potential increased risk of energy drink consumption together with alcohol consumption

The links between use of energy drinks and alcohol use

2.1 There is some evidence of a link between energy drink consumption and alcohol consumption in young people. For example, a US study published in October 2017 found that persistent energy drink consumption amongst a sample aged 21-25 showed a predicted increased risk for alcohol use disorder at age 25.¹ Similarly a rapid review by Visram et al. noted that "several cross-sectional studies indicated that energy drink use by children and young people was strongly and positively associated with higher rates of smoking, alcohol and other substance use".² The review went on to note that studies have found that energy drinks used as a baseline were able to predict either number of drinking days or frequency of alcohol consumption at follow-up after 12 or 16 months.³

2.2 Alcohol is linked to over 200 medical conditions and injuries including cancer, liver disease, heart disease, stroke and mental ill health.⁴ Alcohol is estimated by the Government to cost the NHS £3.5 billion every year,⁵ and 12,800 cases of alcohol-related cancer are diagnosed in the UK each year.⁶ Over the last decade, alcohol-related hospital admissions have increased by 64%,⁷ and liver disease now kills more people than diabetes and road deaths combined.⁸ Anything that encourages young people to start drinking, or to increase their alcohol consumption, should

¹ Arria, AM et al. (2017) [Trajectories of energy drink consumption and subsequent drug use during young adulthood](#), Drug and Alcohol Dependence

² Visram, S et al. (2016) [Consumption of energy drinks by children and young people: a rapid review examining evidence of physical effects and consumer attitudes](#), British Medical Journal

³ Ibid.

⁴ World Health Organisation (2018) [Alcohol Factsheet](#)

⁵ Home Office (2012) [Impact assessment for Minimum Unit Pricing](#)

⁶ Parkin DM (2011) [Cancers attributable to consumption of alcohol in the UK in 2010](#) British Journal of Cancer

⁷ Public Health England, [Local alcohol profiles for England](#)

⁸ British Liver Trust, [Facts about liver disease](#)

therefore be treated with caution. However, although the studies which have been carried out to date show a clear correlation between energy drink and alcohol use, there has not yet been enough research into a causal relationship between the two and we believe that further research should be conducted in this area.

Recommendation: Further research into the causal relationship between consumption of energy drinks and alcohol.

Evidence on increased risk through the consumption of energy drinks together with alcohol

3.1 Consumption of energy drinks together with alcohol is commonplace. The European Food Safety Authority found that 71% of young adult energy drink consumers in the EU (18 – 29 years) drank energy drinks together with alcohol.⁹ Perhaps more worryingly, they found that 59% of the 15-18 age group of energy drink consumers (i.e. including those below the legal age of alcohol consumption) drank energy drinks with alcohol.¹⁰

3.2 Co-consumption of alcohol and energy drinks can involve drinks being mixed either at home or in a licensed premises, for example vodka and Red Bull or Jagermeister and Red Bull in “Jagerbombs”. Alternatively, co-consumption can involve pre-mixed drinks such as Dragon Soop, a 8% abv drink which contains 4 units of alcohol and 175mg caffeine per can, or Buckfast, which has a reputation for being linked to excessive consumption and was once described by Helen Liddell, former Secretary of State for Scotland, as “a recipe for human misery and anti-social behaviour.”¹¹

3.3 The Visram et al. review included a study which explored perceptions of alcoholic caffeinated drinks among 12–17 years finding that young people liked them because they increased the ‘fun’ at parties and acted as a ‘pick me up’.¹² The review also found qualitative studies which showed young adults deliberately using energy drinks to stay awake longer and continue drinking.¹³ A report on alcohol and energy drinks from Alcohol Concern Wales indicated that this behaviour has been actively encouraged by energy drink manufacturers in the past, quoting the following from the Red Bull website in 2011:

“Having maximum fun at a long lasting club session or a house party requires robust physical endurance. That’s why a whole generation swears by the boost of Red Bull to fly through the night.”¹⁴

3.4 Studies have indicated there are negative impacts of co-consumption of alcohol and energy drinks. The Alcohol Concern report states that “consuming energy drinks

⁹ European Food Safety Authority (2013) [Gathering consumption data on specific consumer groups of energy drinks](#)

¹⁰ Ibid.

¹¹ The Times (2004) [Drink buck stops at government says tonic wine firm](#)

¹² Jones, SC (2011) ‘You wouldn’t know it had alcohol in it until you read the can’: adolescents and alcohol-energy drinks, cited in Visram, S et al. (2016)

¹³ Visram, S et al. (2016) [Consumption of energy drinks by children and young people: a rapid review examining evidence of physical effects and consumer attitudes](#), British Medical Journal

¹⁴ Cited in, Alcohol Concern Cymru (2011) [Mixed Messages, Alcohol and Energy Drinks](#) However the link to the website is no longer available.

with alcohol may make drinkers feel more alert, although this does not make them any less drunk.”¹⁵ The stimulant effect of caffeine which allows drinkers to stay awake for longer means they can consume more alcohol on a single occasion. A Canadian survey of 72 male energy drink users found that when students consumed alcohol with energy drinks they drank significantly more alcohol (an average of 8.6 drinks compared to 4.6 drinks).¹⁶ There is also a risk that drinkers may perceive themselves to be less drunk than they are and engage in riskier behaviours: the US Centre for Disease Control states in its alcohol and caffeine factsheet that people who mix alcohol and caffeine “may drink more alcohol and become more impaired than they realize, increasing the risk of alcohol-attributable harms”¹⁷

3.5 The Alcohol Concern Wales report cited a 2011 study which tested subjects on a task to measure inhibitory and activational mechanisms of behavioural control. It found that alcohol alone increased both inhibitory failures and increased response times compared to a baseline. Alcohol with an additional energy drink counteracted some of the response activation impairment but didn’t counteract the inhibitory failures. This study concluded that energy drinks could have consequences for risk-taking behaviour in drinkers as “the mix of impaired behavioural inhibition and enhanced stimulation is a combination that may make [alcohol mixed with energy drink] consumption riskier than alcohol consumption alone”.¹⁸

3.6 There is also evidence linking the mixture of energy drinks with alcohol to an increased risk of sexual assault for both men and women. One study involving US college students found that those who reported combining energy drinks with alcohol were more than twice as likely to take advantage of someone else sexually, and almost twice as likely to be taken advantage of sexually themselves. They were twice as likely to be hurt or injured, and twice as likely to require medical attention.¹⁹ Another US study found that the risk of becoming a victim of sexual assault increased for both men and women who combined energy drinks with alcohol, with a much stronger association for men than for women.²⁰

3.7 There are some international examples of governments taking action on pre-mixed alcohol and caffeine drinks. In November 2010, the US Food and Drug Administration (FDA) ruled that seven caffeinated alcoholic drinks must be removed from sale 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.”²¹ The Canadian Government does not allow the sale of pre-mixed alcoholic caffeinated energy drinks and advises consumers not to

¹⁵ Alcohol Concern Cymru (2011) [Mixed Messages, Alcohol and Energy Drinks](#)

¹⁶ Price et al (2010) Energy drink co-administration is associated with increased reported alcohol ingestion, *Drug Alcohol Rev.*, cited in Ferre and O’Brien (2011) [Alcohol and Caffeine: The Perfect Storm](#), *Journal of Caffeine Research*

¹⁷ Centre for Disease Control (2017) [Alcohol and Caffeine Factsheet](#)

¹⁸ Marczynski, C.A, et al (2011) [Effects of energy drinks mixed with alcohol on behavioral control: risks for college students consuming trendy cocktails](#), *Alcoholism: Clinical and Experimental Research*

¹⁹ O’Brien et al. (2008) [Caffeinated Cocktails: Energy Drink Consumption, High-risk Drinking, and Alcohol-related Consequences among College Students](#), *Academic Emergency Medicine*

²⁰ Addiction.com, [Sex Assault Links to Alcohol and Energy Drinks](#)

²¹ Centre for Disease Control (2017) [Alcohol and Caffeine Factsheet](#)

mix alcohol with energy drinks. They continue to permit alcoholic drinks with flavourings which naturally contain caffeine such as coffee.²²

3.8 Within the UK, the Scottish Labour Party proposed in 2010 setting a maximum limit of 15mg/100ml for caffeine in alcoholic drinks, as in place in Denmark, Iceland and Norway, though this was unsuccessful.²³

Recommendation: The Committee should consider the evidence for restrictions on the sale of pre-mixed alcoholic energy drinks in the UK.

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²² Government of Canada, [Questions and Answers: Caffeinated energy drinks](#)

²³ BBC News (2010) [Call to cut caffeine in alcohol](#)