

#### 5 October 2018

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Parliament House, 4 Harvest Terrace
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Dear Ms Wells,



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## RE: Submission to Select Committee on Personal Choice and Community Safety

As the largest Research Institute in Western Australia, with specific expertise in research into the health and wellbeing of children, we are pleased to have the opportunity to make the following submission to the Select Committee. The Committee will appreciate the challenging task of undertaking its review, given that it entails balancing the desire for personal freedoms and choice on one hand, with the need to protect the public and public good on the other.

The Telethon Kids Institute has its primary mission to bring together community, researchers, practitioners, policy makers and funders, who share our vision to improve the health and wellbeing of children through excellence in research. This mission is positioned in a context that seeks to balance individual freedom and choice amid the need to promote the health and development of children.

As an Institute we acknowledge that individual freedoms are rarely absolute, come with responsibilities and depend on respect for the rights of others. While most free Western societies greatly value individual freedoms, these are normally balanced to ensure minimal conflict with competing rights and obligations. For example, in Australia the rights of individuals to start fires are curtailed to limit the risk to people and property.

In asserting this we also note a common understanding that freedoms should not apply equally to Children, in order to properly protect their interests. Protection from such vulnerabilities is consistent with libertarian societies adopting more restrictive rules which apply to children and adolescents under prescribed age limits, including, but not limited to the following:

- 1. Rules to prevent minors from swimming unaccompanied in dangerous locations, or from driving, smoking or drinking alcohol.
- 2. Rules requiring children to wear bicycle helmets and car seatbelts and/or to use car seats or booster seats, where appropriate.
- 3. Planning restrictions applying to houses with children, concerning requirements for provision of safety rails and pool fences

At Telethon Kids we have obtained evidence that a number of policies can help protect the health and safety of children:

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- 1. Evidence that vaccination of children prevents rates of serious infectious diseases, MMR, pneumococcus, haemophilus influenzae, rotavirus.
- 2. Cyber safety to protect Children and Adolescents from psychological and social harm
- 3. Evidence that implementation of the 'Friendly Schools' program in primary and high schools reduced bullying, cyber bullying and the associated mental health harms.
- 4. Mandatory wearing of Bicycle Helmets to prevent head injury.
- 5. Guidelines recommending the prohibition of sale of energy drinks to minors.
- 6. Avoidance of maternal alcohol use during pregnancy to prevent Fetal Alcohol Spectrum Disorder.
- 7. Guidelines recommending the prohibition of sale of tobacco products and e-cigarettes to children.
- 8. Evidence that incarceration of minors is associated with high levels of self-harm and suicide and that early intervention may minimise such harm.
- 9. Work in Aboriginal communities have shown that ensuring safe environments for pregnant mothers is correlated with better outcomes for children.
- 10. Work on education of children relates to better health outcomes.
- 11. Studies showing the built environment (including greenspace) has a positive effect on child health outcomes and social development.
- 12. Mandatory fortification of flour with folic acid to prevent neural tube defects such as spina hifida
- 13. Evidence that mandatory pool fences prevent drownings of children.
- 14. Evidence that reducing speed limits to 40km/hr in school zones and shopping strip zones showed a consistent pattern in reduced overall casualties with greater reductions in serious crashes involving pedestrians, cyclists and children/adolescents.
- 15. Sun safety policies (eg. 'No hat no play') in avoidance of new naevi and had a positive effect on sun-protective behaviours of children.

Additionally, we are currently advocating for a ban on the sale of energy drinks to children (<18 years of age) due to the significant negative impact these drinks have on children's health. The evidence for this is outlined in Appendix 1. Indeed, Telethon Kids Institute would be pleased to provide the committee with supporting evidence for any of the above initiatives, if requested.

Given such substantial evidence base for protection of children from harm, the Telethon Kids Institute would expect that any consideration of either changes to existing, or proposals for new, legislation or regulations would have due regard for their impact on the exposure of the children of Western Australia to avoidable risks. Consideration of this impact is crucial to ensure that our most vulnerable younger members of our society are protected as much as possible from serious threats, enabling them to grow to become healthy adults capable of making independent, informed decisions.

Yours sincerely

**Professor Jonathan Carapetis** 

**Executive Director** 

## **APPENDIX 1: Select Committee on Personal Choice and Community Safety**

The Telethon Kids Institute appreciates the opportunity to make a submission to the *Select Committee on Personal Choice and Community Safety* in **response to the Terms of Reference:** 

(3) any other measures introduced to restrict personal choice for individuals as a means of preventing harm to themselves

# Call for a ban on the sale of energy drinks to children (<18 years of age) due to the significant negative impact these drinks have on children's health



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## Why ban the sale of energy drinks to children?

Energy drinks are a serious health risk to children. Children and parents are largely unaware of this health risk, despite the packaging stating these drinks, "are not recommended for consumption by children". Energy drinks provide a potent source of caffeine and can contain high levels of sugar, sodium and herbal stimulants. They are linked to serious adverse health effects leading several countries (such as Denmark, Sweden, Turkey, Norway, Iceland, UAE, Uruguay, Latvia and Lithuania) to ban the sale of these drinks to children or altogether. Amid public health concerns, the UK government is also considering placing a ban on the sale of energy drinks to children, recently launching a parliamentary enquiry into the consumption of energy drinks.

Findings from our own WA-based research (described in section 5 below), combined with international evidence indicate that legislative and policy changes addressing children's access to energy drinks are warranted. If politicians do not intervene and regulate in this area, then consumption of these beverages by children may increase, resulting in children significantly suffering negative health impacts.

## What are energy drinks?

Energy drinks are defined as, "a flavoured, non-alcoholic beverage to which other substances have been added, that: (a) contains caffeine; and (b) has the purpose of enhancing mental performance." Examples of popular energy drink brands sold in WA include Red Bull, Monster, Mother, Rockstar and "V". They have catapulted to popularity among young people and represent one of the fastest growing segments of the beverage market, with annual sales in Australia increasing more than 600% between 2001 and 2012. In 2015 it was reported that the global energy drink market was worth 38.2 billion euro globally (approximately 55 billion AUD), with a further 40% growth forecast by 2020.

## Reasons why a ban on the sale of energy drinks to children in WA is needed:

#### 1. Other countries have or are currently considering implementing a ban to protect children

Concerns about the risks of excessive caffeine consumption previously led to outright bans on energy drinks in Denmark, Turkey, Norway, Uruguay, Iceland, and France.<sup>4,5</sup> Other countries have taken a more specific regulatory approach by setting rules for sales to minors; e.g., energy drinks are banned for under 18-year-olds in Latvia and Lithuania and banned for under 16-year-olds in the UAE. In Sweden, sales of some products are restricted to pharmacies and sales to children (<15 years) are banned.<sup>6</sup> Amid public health concerns, the UK government is considering placing a ban on the sale of energy drinks to children under 16 or 18 years, recently launching a parliamentary enquiry into the consumption of energy drinks. Several UK major supermarket and pharmacy retailers have already prioritised children's health over profits and banned the sale of energy drinks to children <16 years; including Waitrose, Sainsbury's, Tesco, Lidl, Asda, Aldi and Boots. Waitrose was the first supermarket to implement the voluntary ban in the UK citing that they, "decided to sell these products in line with the labelling guidance. These drinks carry advice stating that they are not recommended for children, so we chose to proactively act on that guidance, particularly given the widespread concerns which have been raised about these drinks when consumed by under 16". The public's reaction to the ban on energy drinks to children in the UK has been overwhelmingly positive.

All members of the Australian Beverage Council (peak body) involved in the manufacture or distribution of energy drinks have voluntarily agreed to not direct any marketing and advertising activities at children.<sup>8</sup> During the UK parliamentary enquiry, Monster Energy Drink Company categorically stated their primary market is 18 to 34 years.<sup>9</sup> Thus, if children aren't the target market for energy drinks, and the product itself states it isn't suitable for children, then why should energy drinks *not* be banned to children, at least as a precautionary measure until the safety of these drinks can be comprehensively investigated?

#### 2. Current Australian regulatory requirements aren't enough to protect children

Energy drinks are regulated under Standard 2.6.4 of the Australia New Zealand Food Standards Code. The maximum amount of caffeine permitted is 320mg per Litre. Yet manufacturers are bypassing regulation through a legal loophole - if a product is called a "dietary supplement" it is not bound by these caffeine limits.<sup>4</sup> Energy drink labels must state they are **not recommended for children**, pregnant or lactating women and individuals sensitive to caffeine. **However, no restrictions are placed on who can purchase these drinks and they are widely available and accessible to children.** Labels must also state, *'Consume no more than [quantity (as cans, bottles or mL)] per day'*. This maximum daily amount is currently 500mL/day. Yet energy drinks are available in sizes exceeding 500mL. Furthermore, there are no legal requirements as to the wording, location, size and visibility of the advisory statements, which have been described by participants in a recent Australian study as confusing, of low visibility, and often worded to encourage excess consumption.<sup>10</sup> In fact, only two-fifths of energy drink consumers are aware of the guidelines displayed on product packaging,<sup>10</sup> indicating that **legislative and policy changes addressing these issues are needed.** 

## 3. The ingredients within energy drinks are a serious health risk to children

The **sugar and calories** in energy drinks are comparable to soft drinks, which have been associated with overweight and obesity, chronic metabolic diseases and dental caries. A 500mL sized can of energy drink contains an average of 56.5 grams of sugar (equivalent to 14 teaspoons) and 955 kilojoules (228 calories). One of the worst offenders is 'Rockstar Punched Energy + Guava, tropical guava flavour', which contains **21 teaspoons of sugar** per 500mL can. The World Health Organisation recommends children have no more than 3-4 teaspoons of sugar per day (6 teaspoons/day for adults). If a child has a single energy drink, their daily recommended sugar intake can be exceeded many times over.

The additional ingredients within energy drinks create a distinctive and independent health risk over and above that of soft drinks. Of particular concern is the potent source of **caffeine** (80mg per 250mL, equivalent to an instant cup of coffee) they provide, three times the amount present in soft drinks. Caffeine is a psychoactive substance that has dose-dependent effects on mood and physiology.<sup>13</sup> These effects differ depending on age, body size and general health and in adults, can include anxiety and insomnia at low doses (~50mg), tremors, seizures, tachycardia and miscarriage at moderate doses (~250-500mg), vomiting, psychosis, hallucinations and stroke at high doses (>500mg) and even sudden death (toxicity >15mg/kg).<sup>5,14,15</sup> The addition of caffeine to energy drinks is particularly concerning for children, who have a lower tolerance to caffeine and who are more vulnerable to its effects.<sup>16</sup> There is no established 'safe level' of caffeine intake for children or adolescents. A recent review into the safety of dietary caffeine reported adverse effects at levels of 3mg/kg of body weight.<sup>15</sup> After consuming a single retail unit of energy drink, 70% of children (5-12 yrs) and 40% of adolescents (13-19 yrs) would be estimated to exceed this adverse effect level.<sup>17</sup>

The advertising and marketing of energy drinks also may put young people at further risk of **caffeine intoxication** compared to other caffeinated products, such as coffee. For example, energy drinks are attractively packaged and heavily marketed to youth, whereas coffee is not. Energy drink advertisements promise consumers improved energy, performance and concentration, thus young consumers may falsely believe that more is better and consume multiple servings. Energy drinks are often sold in multipacks at discounted prices and are **freely available for children to purchase**, despite the packaging stating that these drinks, **"are not recommended for consumption by children"**. Furthermore, compared to coffee, which is hot and drunk slowly, energy drinks can be ingested quickly, delivering a large jolt of caffeine to the blood and heart. Some energy drinks even encourage rapid ingestion. For example, one brand's tagline is, "The flavour is so good you will want to slam the whole can". There is also the real danger that young consumers don't realise how much caffeine they are ingesting; for example, **one 500mL can of energy drink contains the caffeine equivalent of two cups of instant coffee** which can be detrimental to young children's developing bodies. Childhood and adolescence are periods of rapid growth and the final stages of brain development, a time when adequate sleep and good nutrition are especially important.<sup>4</sup>

Other common ingredients in energy drinks (e.g., herbal stimulants, amino acids, B group vitamins) are often present in quantities that exceed recommended daily intakes. Many have stimulant effects themselves and it is possible that these 'toxic combinations' of ingredients (i.e., high sugar, high caffeine, herbal stimulants, amino acids and sodium) interact with caffeine and exacerbate its effects.<sup>18</sup>

Some energy drinks (e.g., "V") contain excessively high levels of **sodium**, with one 500mL can providing 550mg of sodium which is more salt than a large McDonald's French fries and more than a quarter of a child's recommended daily intake. High sodium diets are a well-established risk factor for cardiovascular disease.<sup>19</sup>

The Australian Dietary Guidelines recognise energy drinks have no place in the diet of children, stating that they, "are not suitable for children".<sup>20</sup> The best way to improve children's energy levels is through eating a nutritious diet, engaging in regular physical activity and getting adequate sleep.

#### 4. Energy drinks have been linked to a wide range of adverse health effects

Two systematic reviews (conducted in 2014 and 2015) of serious adverse events occurring following consumption of energy drinks have linked energy drinks with a number of cardiovascular and neurological problems including: arrhythmias, myocardial ischemia, aneurysm/dissection, cardiac arrest, vasospasm, coronary thrombosis, cardiomyopathies, hypertension, seizures, cerebrovascular accident and neuro-psychiatric events (suicidal ideation and psychosis). More specifically there is international evidence linking energy drinks with adverse health effects in children and young people. These include: higher rates of smoking, alcohol (including binge-drinking) and other substance use, sensation seeking, self-destructive behaviour, problems with behavioural regulation and metacognitive skills, increased sedentary behaviour, headaches, stomach aches, hyperactivity and sleeping problems, insomnia, tiredness/fatigue, irritation and hyperactivity/inattention symptoms. Problems with behaviours and sleeping problems, insomnia, tiredness/fatigue, irritation and hyperactivity/inattention symptoms.

Data from calls to the Australian Poisons Information Centre indicate that reports of adverse reactions caused by energy drinks are increasing (a five-fold increase between 2004-2010), particularly among adolescents.<sup>23</sup> The majority of these exposures occurred when energy drinks were used alone (i.e., not in conjunction with other drinks or substances). The most common symptoms were palpitations, agitation, dizziness, gastro-intestinal upset, headache, insomnia, tremor, hallucinations, seizures and arrhymias/cardic ishaemia. At least 128 subjects required hospitalisation. In the U.S., emergency department visits directly caused by consuming an energy drink, or where an energy drink was a contributing factor more than doubled from 10,068 to 20,783 between 2007 and 2011<sup>24</sup> and 18 deaths were linked to energy drinks between 2004-2012.<sup>25</sup> **Given the increasing popularity of energy drinks, the increase in emergency department visits related to these drinks and the seriousness of many of the adverse health and behaviour-related outcomes reported in the scientific literature, legislative and policy changes addressing children's access to energy drinks are clearly needed.** 

#### 5. Local WA evidence highlights concerns over the safety of energy drinks

In the first study internationally on the prevalence of energy drink consumption in a population-based sample of young adults we found 48% of 20 year olds used energy drinks at least monthly, with consumption ranging from 1 to 10 cans per drinking occasion. <sup>26</sup> In comparison with non-consumers, these individuals were more likely to be male, experience anxiety, smoke cigarettes, use alcohol and illicit drugs. <sup>26,27</sup> These findings are not surprising given the aggressive marketing that associates energy drinks with high risk extreme behaviours that appeal to youth. Young people are particularly vulnerable to product marketing and packaging. <sup>28</sup> Further research involving the same sample of WA youth from the RAINE study, revealed a positive longitudinal association between energy drink consumption and mental health problems; males who changed from being a non-energy drink consumer at age 20 to an energy drink consumer at age 22, experienced a significant increase in symptoms of depression, anxiety, and stress, compared to males who remained a non-energy drink consumer over the two-year time period. <sup>29</sup>

In 2015 our team conducted qualitative research with 41 young people aged 12-25 years in Perth.<sup>30</sup> Participants reported they used energy drinks to; conform with peers, stay awake playing video games, complete assignments/exams and play sport. Many were allowed to drink energy drinks at school. While a few participants reported they were unaffected by energy drinks, many reported experiencing negative psychological and/or physiological effects, including poor concentration, fidgeting, agitation, lethargy, sleeplessness, stress, shaking, fainting, increased heart rate and hallucinations, or knew of friends who had. Most of these effects were reported to be experienced after consuming just one 250mL can. The overconsumption of these drinks led some participants to believe they were, "going to die"; with one reporting their friend was hospitalised. Several reported being "addicted" to energy drinks, experiencing severe withdrawal symptoms with attempted cessation.

In Australia's largest study on adolescents and energy drinks, our 'Amped Up' study surveyed 3688 adolescents aged 12-17 years (recruited from 25 secondary schools located across the State) about their energy drink use. Our preliminary analyses indicate half (51.2%) of those surveyed had tried an energy drink; and of these 'ever consumers', 23.4% reported consuming them monthly, 19.2% reported consuming them weekly and 2% reported consuming them every day, with the average age of first consuming an energy drink being age 10. Overall, 55.4% of adolescents who had ever consumed an energy drink reported that they had experienced at least 1 adverse event, including stomach upset (24.6%), heart palpitation (24.5%), difficulty sleeping/insomnia (24.3%), headache (24.0%) and agitation (22.9%). The prevalence of reported adverse events was greater among energy drink consumers than among coffee consumers (55.4% vs 47.4%), as was the proportion who reported seeking or considering seeking medical help for adverse events (16.9% v. 13.2%). Thus, more than half of Western Australian adolescents who had consumed energy drinks reported adverse outcomes, some serious enough to warrant seeking medical help. The adverse outcomes were consistent with the physiologic effects of caffeine but were significantly more prevalent than with other sources of caffeine, such as coffee.

### 6. Peak health bodies and the Australian community have called for an energy drink ban

Many peak health bodies support the restriction of the sale of energy drinks to children including the Australian Medical Association, the Australian Dental Association, the Australian Obesity Policy Coalition, the UK Royal College of Paediatrics and Child Health and the American Academy of Pediatrics, to name a few. The Australian community share similar concerns; in 2014, Federal Parliament received a petition calling for the ban of energy drinks to under 18's, signed by over 13,500 people.<sup>31</sup> Furthermore, in WA, the state-wide 2012 Nutrition Monitoring Survey Series (3,000+ people) indicated 85% of participants were concerned about the sale of energy drinks to children.<sup>32</sup> In 2014, attendees at the 1st International Energy Drinks Conference at Deakin University drafted a "Statement of Concern" regarding energy drinks, which called for energy drinks to be prohibited from sale to consumers below 18 years of age.<sup>33</sup>

In light of the increasing popularity of energy drinks, the increase in emergency department visits related to these drinks and the seriousness of many of the adverse health and behaviour-related outcomes reported in the scientific literature and our own local WA research, legislative and policy changes addressing children's access to energy drinks are clearly needed. The government could regulate the licensing and sale of energy drinks similarly to how alcohol is regulated (see our paper by Bromberg & Howard 2016 for a discussion on how this could be implemented in Australia<sup>34</sup>). This could significantly decrease the ability and desire of minors to obtain and consume energy drinks and compel those who distribute energy drinks to abide by strict regulations. If politicians do not intervene and regulate in this area, then consumption of these beverages by children may increase, resulting in children significantly suffering negative health impacts.

#### References

- 1. Food Standards Australia and New Zealand. Australia New Zealand Food Standards Code Standard 2.6.4 (2009): formulated caffeinated beverages. 2009.
- 2. Canadean Soft Drink Service. *Australia and New Zealand energy drink consumption volumes 1999-2012*. 2013.
- 3. Starling S. The world's unquenchable thirst for energy drinks. 2016; <a href="https://www.beveragedaily.com/Article/2016/06/14/The-world-s-unquenchable-thirst-for-energy-drinks">https://www.beveragedaily.com/Article/2016/06/14/The-world-s-unquenchable-thirst-for-energy-drinks</a>.
- 4. Oddy W, O'Sullivan T. Energy drinks for children and adolescents. *British Medical Journal*. 2009;339:64.
- 5. Seifert SM, Schaechter JL, Hershorin ER, Lipshultz SE. Health effects of energy drinks on children, adolescents, and young adults. *Pediatrics*. 2011;127(3):511-528.
- 6. Breda JJ, Whiting SH, Encarnação R, et al. Energy Drink Consumption in Europe: A Review of the Risks, Adverse Health Effects, and Policy Options to Respond. *Frontiers in Public Health*. 2014;2(134).
- 7. Written evidence submitted by Waitrose (END0037). *Science and Technology Committee*. UK Government Parliamentary Enquiry2018.
- 8. Australian Beverage Council. Energy drinks: an industry commitment 2018; <a href="http://www.australianbeverages.org/wp-content/uploads/2018/06/Energy-Drinks-AnIndustryCommitment.pdf">http://www.australianbeverages.org/wp-content/uploads/2018/06/Energy-Drinks-AnIndustryCommitment.pdf</a>. Accessed September 29, 2018.
- 9. Oral evidence: Energy Drinks, HC 821. *Science and Technology Committee*. UK Government Parliamentary Enquiry2018.
- 10. Peacock A, Droste N, Pennay A, Miller P, Lubman DI, Bruno R. Awareness of energy drink intake guidelines and associated consumption practices: a cross-sectional study. *BMC public health*. 2016;16(1):1.
- 11. Vartanian LR, Schwartz MB, Brownell KD. Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis. *Am J Public Health*. 2007;97(4):667-675.
- 12. Malik VS, Popkin BM, Bray GA, Després J-P, Willett WC, Hu FB. Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes A meta-analysis. *Diabetes Care*. 2010;33(11):2477-2483.
- 13. Pohler H. Caffeine intoxication and addiction. *The Journal for Nurse Practitioners*. 2010;6(1):49-52.
- 14. Rath M. Energy drinks: What is all the hype? The dangers of energy drink consumption. *Journal of the American Academy of Nurse Practitioners*. 2012;24:70-76.
- 15. Smith PF, Smith A, Miners J, NcNeil J, Proudfoot A. *Report from the Expert Working Group on the safety aspects of dietary caffeine*. Australia and New Zealand Food Authority;2000.
- 16. Ruxton C. The suitability of caffeinated drinks for children: a systematic review of randomised controlled trials, observational studies and expert panel guidelines. *Journal of human nutrition and dietetics*. 2014;27(4):342-357.
- 17. Thomson B, Schiess S. Risk profile: caffeine in energy drinks and energy shots. 2011.
- 18. Ali F, Rehman H, Babayan Z, Stapleton D, Joshi D-D. Energy drinks and their adverse health effects: a systematic review of the current evidence. *Postgraduate medicine*. 2015;127(3):308-322.
- 19. Graudal NA, Hubeck-Graudal T, Jürgens G. Effects of low-sodium diet vs. high-sodium diet on blood pressure, renin, aldosterone, catecholamines, cholesterol, and triglyceride (Cochrane Review). *American Journal of Hypertension*. 2012;25(1):1-15.
- 20. National Health and Medical Research Council. *Eat for health: Australian Dietary Guidelines. Providing the scientific evidence for healthier Australian diets.* Canberra: National Health and Medical Research Council.,;2013.
- 21. Goldfarb M, Tellier C, Thanassoulis G. Review of published cases of adverse cardiovascular events after ingestion of energy drinks. *The American Journal of Cardiology*. 2014;113(1):168-172.
- 22. Visram S, Cheetham M, Riby D, Lake A, Crossley S. Consumption of commercial energy drinks by children and adolescents: a systematic review of consumer attitudes and associations with health, behavioural, educational and social outcomes. *Journal of Epidemiology and Community Health*. 2015;69(Suppl 1):A80-A80.
- 23. Gunja N, Brown JA. Energy drinks: health risks and toxicity. *Med J Aust.* 2012;196(1):46-49.
- 24. Public Health Ontario. *Evidence Brief: Energy drinks and the body Reported adverse health events.* 2017
- 25. US Food and Drug Administration. Adverse event reports allegedly related to 5-Hour Energy, Monster and Rockstar. 2013; <a href="http://www.fda.gov/Food/NewsEvents/ucm328536.htm">http://www.fda.gov/Food/NewsEvents/ucm328536.htm</a>. Accessed March 1, 2013.

- 26. Trapp GS, Allen KL, O'Sullivan T, Robinson M, Jacoby P, Oddy WH. Energy drink consumption among young Australian adults: Associations with alcohol and illicit drug use. *Drug and Alcohol Dependence*. 2014;134:30-37.
- 27. Trapp GSA, Allen KL, O'Sullivan T, Robinson M, Jacoby P, Oddy WH. Energy drink consumption is associated with anxiety in Australian young adult males. *Depression and Anxiety*. 2013;0:1-9.
- 28. Macchiette B, Roy A. Sensitive groups and social issues: are you marketing correct? *Journal of Consumer Marketing*. 1994;11(4):55-64.
- 29. Kaur S. Energy drink consumption and mental health problems in young adults: A prospective investigation. Perth, Western Australia: School of Population and Global Health, The University of Western Australia; 2017.
- 30. Francis J, Martin K, Costa B, et al. Informing intervention strategies to reduce energy drink consumption in young people: findings from qualitative research. *Journal of nutrition education and behavior*. 2017;49(9):724-733. e721.
- 31. Country women invigorate energy drink ban idea [press release]. 2014.
- 32. Pollard CM, Meng X, McStay C. Community concern about the sale of high-caffeine drinks to children under 12 years of age: Western Australia population survey results. *Health promotion journal of Australia: official journal of Australian Association of Health Promotion Professionals.* 2013;24(2):156.
- 33. Deakin University. Time to Take a Stand against the Sale of Caffeinated Energy Drinks. 2015; <a href="http://www.deakin.edu.au/about-deakin/media-releases/articles/time-to-take-a-stand-against-the-sale-of-caffeinated-energydrinks">http://www.deakin.edu.au/about-deakin/media-releases/articles/time-to-take-a-stand-against-the-sale-of-caffeinated-energydrinks</a>.
- 34. Bromberg M, Howard J. Red Bull: Does It Give You Wings or Cardiac Disturbances? Modifying the Law Regarding Energy Drinks in Australia. *Journal of law and medicine*. 2016;24(2):433-454.