

## Energy drinks; a public health hazard for adolescents

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Madam, Caffeine is widely consumed as part of many drinks all over the world. The Food and Drug Administration of USA started to doubt the safety of caffeinated drinks first in 2010. Four Loko which was the first energy drink that combined caffeine with alcohol and received opposition.<sup>1</sup> In 2013 Health Canada limited quantity content of caffeine to 180mg per regular serving bottle. As compared to other drinks like tea, coffee and soft drinks, caffeine content contained by "energy drinks" exceeds this limit which is associated with more adverse effects.<sup>2,3</sup> The common one of these being electrolyte imbalances such as hypokalaemia leading to arrhythmias and endothelial cell dysfunction which impairs coronary blood flow during exercise hence leading to ischaemia and cardiac arrest.<sup>2</sup> Energy drinks have also been shown to alter neural functions mediated by acetylcholine. Neurological effects include increased attention, agility and anxiety on acute use but withdrawal after chronic use causes inattention, irritability and depression.<sup>3</sup> Co-administration of ingredients like Taurine and Ginseng which are found in energy drinks can cause stomach upset and bowel irritability.

Although "energy drinks" like Red Bull and Sting by PepsiCo are an emerging industry in Pakistan,<sup>4</sup> there is scarcity of quality epidemiological data available. Energy Drinks are consumed by all age groups but the most vulnerable to its use and ill effects are adolescents and

young adults.<sup>2,3</sup> This could be potentially a disastrous public health issue in a country like Pakistan where adolescents and young adults make the majority of the population of Pakistan. Javaid and colleagues showed that this vulnerable group has limited health literacy regarding these issues.<sup>5</sup> Hence it is paramount to recognize this as public health hazard. The first step would be to identify research agenda around this area. We propose: a nationwide epidemiologic data collated with demographic data, actual clinical studies looking at the adverse events in different age groups with short term and long term clinical outcomes including association with morbidity and mortality. If actual research shows significant health hazards, then federal drug enforcement agency has to take control over caffeine content of different products, their production, consumption, correct labeling, and side effect reporting as similar to other medications or tobacco. This would include all products with caffeine content including regular soft drinks and energy drinks.

### References

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