

EDITORIAL

HAZARDS OF ENERGY DRINKS

Worldwide, nearly 500 different brands of energy drinks are marketed nowadays. The energy drinks' industry sky rocketed in recent years, with estimated sales of over 12.5 billion USD in 2012: showing an increase of 60% sales as compared to 2008. "Dr. Enuf" was the first ever energy drink that appeared in US markets in 1949. The sales of energy drinks soared dramatically after the launch of Red Bull in 1997. In 2013 more than 5.8 billion liters of energy drinks were consumed in around 160 countries, of which, 65% of the consumers were adolescents and young people.

The main ingredients of energy drinks are Caffeine, added sugars, taurine, guarana and l-carnitine. The literature lacks in the standard and scientific definition of energy drinks. The highly caffeinated drinks are referred to as energy drinks; many of which contain greater than 80 grams of Caffeine per 8-oz serving, which amounts for 3 times of caffeine in cola drinks. The guarana ingredient is usually overlooked by many people; surprisingly, each gram of guarana contains 40 to 80 gram of Caffeine, and it has longer half life due to its potential interaction with other compounds. Manufacturing companies do not mention this large amount of caffeine in their list of ingredients; therefore, actual caffeine exceeds that listed on the cans. According to the Centre of disease control (CDC), energy drinks may have as high as 27 spoons of sugar in one can.

These highly caffeinated and carbohydrate rich drinks have potentially adverse effects on the human health. They range from dehydration, insomnia, arrhythmias, irritability, obesity, diabetes, violent social behaviors, hypocalcemia, metabolic acidosis, seizures to cardiac arrest. They may increase risk of miscarriage, intrauterine growth retardation and intrauterine death in pregnant women. The high caffeine and sugar content is responsible for the Type II diabetes due to increased risk of insulin resistance. There is 5.8 % increase in insulin resistance with each mg/kg increase of caffeine. Energy drinks lead to 2.4 folds increased risk of dental erosion: low pH and high sugar content being responsible for it. Even cases of acute liver injury has been documented due to high energy drinks in AASLD 2016.

In 2014, Europe passed a legislation which compelled the manufacturers that all Energy Drinks will have "High caffeine content: Not recommended for children or pregnant or breast-feeding women" label. However, Denmark, Turkey and Uruguay prohibit energy drinks entirely and Australia recently banned 5 brands due to high caffeine content. Unfortunately, no rules and regulations have been placed in our country, and there is lack of research studies as well. It is the need of the day for our legislatures and law makers to give directions to the manufacturers about ingredients, limit the consumption of energy drinks through creating awareness among youth for the health hazards related

to these, and especially the pregnant and breast-feed mothers who are at high risk.

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