Energy Drinks- Topic of the Month

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What are energy drinks?

There are two kinds of energy drink products, energy drinks and energy shots. Energy drinks contain caffeine and usually other plant-based stimulants. Most are high in sugar, containing about 8-11% carbohydrates, although some are artificially sweetened. Energy shots contain the same ingredients as energy drinks, but in a concentrated form, usually 2 oz. or less. Both are marketed to consumers as a way to boost energy, improve mental sharpness and physical performance.

While many think sports drinks are also energy drinks, they are not! Sports drinks are made with water and sugar; most contain 6-8% carbohydrates and a mixture of electrolytes. They are designed to provide rehydration after extended periods of vigorous exercise.[2]

Energy drinks should not be used for hydration prior to, during or after physical activity.[2]

Energy Drink Ingredients

The major active ingredient in energy drinks is caffeine. Most energy drinks contain caffeine levels much higher than caffeine levels in soda. For example, Red Bull contains 80 mg of caffeine per 8 fl. oz. serving and Extreme energy 5-Hour Shot contains 220 mg per 2 fl. oz. serving.[5] In comparison, 12 oz. serving of Coke contains 35-40 mg of caffeine.

Energy drinks may also contain other ingredients such as taurine, guarana, kola nuts, yerba mate, glucuronolactone, B vitamins, ginseng, gingko biloba or antioxidants. Guarana is derived from the seeds of a South African tree and is naturally high in caffeine. Taurine is an amino acid which enhances the effect of caffeine. Other ingredients may come with a health claim, but the amount of these added ingredients is usually very small and thus the benefit minimal.

Note: The sugar content in many energy drinks is comparable to that in sodas and fruit drinks.

Are Energy Drinks Safe?

Caffeine is a central nervous system stimulant and can cause negative health effects if consumed in large quantities. Large intake of caffeine can cause dehydration, anxiety, disrupted sleep, increased blood pressure, and irregular or elevated heart rate.[6] For healthy adults, an intake of 400 mg or less of caffeine per day is considered safe. Drinking several energy drinks in a short period of time, along with other sources of caffeine could result in a toxic caffeine dose.

Most other ingredients found in energy drinks have not been thoroughly tested for safety.

Even though these beverages are called "drinks", most manufacturers label and market them as dietary supplements. The FDA regulates dietary supplements different than foods, the ingredients in supplements do not have to be proven as safe; instead, the *FDA must prove that they are unsafe before a product is banned from sale*. There have been minimal studies on the effects of the various stimulants and additives found in energy drinks, despite the health claims of the manufacturers.

Risks to Children and Pregnant Women

The American Academy of Pediatrics (AAP) has stated that "caffeine and other stimulant substances contained in energy drinks have no place in the diet of children and adolescents."[1] One of the concerns is the increased risk of caffeine toxicity due to children's lower body weight. Children should not consume more than 2.5 mg caffeine/kg of body weight.

A preschooler weighing 30 lbs. should not consume more than 35 mg of caffeine or the equivalent to caffeine in one can of Coke.

Pregnant and breastfeeding *wo*men are encouraged to limit their caffeine intake to no more than 200 mg of caffeine each day. This is approximately the amount in one 12 oz. cup of coffee. Studies have shown that this amount of caffeine does not appear to be a major contributing factor in miscarriage or preterm birth.[3] Pregnant women may be especially sensitive to caffeine because it may take longer for caffeine to be excreted from their bodies.[3]

Moms who are breastfeeding are advised to limit their caffeine intake to 300-400 mg per day, since a small amount of caffeine consumed (1%) will cross into breast milk. Breastfed babies may be very sensitive to caffeine and may become fussy or have trouble sleeping even with small amounts of caffeine.[4]

Discussing Energy Drinks with Participants

If a WIC participant shares that they consume energy drinks in their household, begin by exploring their reasons. Ask permission to share helpful information about energy drinks (see ideas below). Then, if appropriate, discuss other things that might help with feeling more rested and energetic and/or ways to reduce the quantity of energy drinks consumed. Be sure to guide the discussion based on the interest and motivation of the participant.

Helpful Information:

- The main ingredient found in energy drinks that provides "energy" is caffeine.
    - The amount of caffeine in some energy drinks is very high, higher than in soda.
    - Large consumption of caffeine can have seriously negative health effects.
    - High levels of caffeine can be dangerous for children because of their small body size.
    - Pregnant women and breastfeeding women are advised to limit caffeine.

- Health claims about ingredients found in energy drinks are not well studied.
- Energy drinks contain similar amounts of sugar/calories as soda and fruit drinks.
- Energy drinks can contribute to dehydration and are not the same as sports drinks!

Resources

1. Sports Drinks and Energy Drinks for Children and Adolescents: Are They Appropriate? (American Academy of Pediatrics (AAP) June 2011)
2. POSITION STATEMENT AND RECOMMENDATIONS FOR THE USE OF ENERGY DRINKS BY YOUNG ATHLETES (National Federation of State High School Associations (NFHS) Sports Medicine Advisory Committee (SMAC), January 2021)
3. Moderate Caffeine Consumption During Pregnancy (American College of Obstetrician and Gynecology (ACOG) August 2010)
4. Caffeine (La Leche League International (llli), June 2021)
5. Safety and Efficacy of Energy Drinks (Today's Dietician April 2018)

References- Complete Listing of Hyperlinks:

Sports Drinks and Energy Drinks for Children and Adolescents: Are They Appropriate? (https://publications.aap.org/pediatrics/article/127/6/1182/30098/Sports-Drinks-and-Energy-Drinks-for-Children-and?_ga=2.256611464.2017696123.1667511965-229876160.1661443892)

POSITION STATEMENT AND RECOMMENDATIONS FOR THE USE OF ENERGY DRINKS BY YOUNG ATHLETES (https://www.nfhs.org/media/4295168/energy-drink-position-statement-final-2-14-21.pdf)

Moderate Caffeine Consumption During Pregnancy (https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2010/08/moderate-caffeine-consumption-during-pregnancy)

Caffeine (https://www.llli.org/breastfeeding-info/caffeine/)

Safety and Efficacy of Energy Drinks (https://www.todaysdietitian.com/newarchives/0418p30.shtml)

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