



PROTECTING, MAINTAINING AND IMPROVING THE HEALTH OF ALL MINNESOTANS

Energy Drinks

February 2016 WIC Topic of the Month

They seem to be everywhere—complete with flashy names and pretty labels. Some even feature the color pink and advertise that they donate to a particular cause. What are they? Energy drinks! And don't we all need a little extra energy? The manufacturers of energy drinks would like us to think so.

What are energy drinks or energy shots? How are they different from sports drinks?

Energy drinks are beverages that *contain caffeine* and usually other plant-based stimulants. Most of them contain about 10% carbohydrates; some are artificially sweetened. They are marketed to consumers as a way to boost energy, improve mental sharpness and physical performance. Energy shots contain the same ingredients as energy drinks, but in a concentrated form, usually 2 oz. or less.

Sports drinks are different than energy drinks. Sports drinks usually contain 6-8% carbohydrates and a mixture of electrolytes and minerals, and sometimes vitamins. They are designed to address dehydration after extended periods of vigorous exercise. (3)

What ingredients are commonly found in energy drinks?

The major active ingredient in energy drinks is caffeine. Manufacturers are not required by the FDA to label the quantity of caffeine in drinks; the only requirement is that it be listed as an ingredient. Most energy drinks contain caffeine at levels much higher than the caffeine in soda. For example, Red Bull contains 80 mg of caffeine per 8 fl. oz. serving, or Extreme energy 5-Hour Shot contains 220 mg per 2 fl. oz. serving. By comparison, a 12 oz. serving of Coke contains 35-40 mg of caffeine. (1)

Sugar content in energy drinks is comparable to that in sodas and fruit drinks.

Energy drinks might also contain other "unusual" ingredients such as taurine, guarana, kola nuts, yerba mate, glucuronolactone, B vitamins, ginseng, ginkgo biloba or antioxidants. Taurine is an amino acid which enhances the effect of caffeine. Other ingredients might contain caffeine or other stimulants. Herbal ingredients may come with a health claim, but the amount of these added ingredients is usually very small.

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 disrupt sleep, increase blood pressure, and/or cause irregular or elevated heart rate, to name just a few effects. 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 of the 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 supplements differently than it does 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. For more information on health claims and safety studies for commonly added ingredients see: [UC-Davis Fact Sheet on Energy Drinks](#).

What are the risks to children and pregnant women?

Energy drink companies market to children. In fact, it’s estimated that *almost half of sales are to adolescents and children*. The American Academy of Pediatrics has stated that “caffeine and other stimulant substances contained in energy drinks have no place in the diet of children and adolescents.” (2) 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.** (4) A preschooler weighing 30 lbs. should not consume more than 35 mg of caffeine – the amount of caffeine in one can of Coke.

Pregnant women 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. Pregnant women may be especially sensitive to caffeine because it may take longer for caffeine to be excreted from their bodies. (5)

Moms who are breastfeeding are advised to limit their caffeine intake to 300-400 mg per day, since a small amount of caffeine consumed will cross into breast milk (about 1% the level in mother’s blood). Breastfed babies may be very sensitive to caffeine and may become fussy or have trouble sleeping, even with small amounts of caffeine. (6)

What about energy drinks mixed with alcohol?

Another popular trend, especially for young adults, is to mix energy drinks and alcohol. The caffeine in the energy drink masks the depressant effect of the alcohol. A recent study found that despite *not feeling intoxicated*, participants performed just as poorly on objective measures of motor coordination and reaction time as they did with alcohol alone.(7) This may cause an individual to overlook the debilitating effects of alcohol because of the alertness imparted by the energy drink. Those who mix energy drinks and alcohol were also found to be more likely to binge drink. (7)

How might I discuss energy drinks with WIC participants?

If a WIC participant indicates that she or her child consumes energy drinks often, begin by exploring the reasons for consuming energy drinks. After exploring her views and reasons for drinking energy drinks, ask permission to share some information about energy drinks. Then, if appropriate, discuss other things she might want to consider to feel more rested and energetic and/or ways to reduce the quantity of energy drinks consumed. Guide the discussion based on the interest and motivation of the participant.

Some information that you might share includes:

- 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 sodas;
 - Large consumption of caffeine can have negative effects on your health (see above);
 - High levels of caffeine can be dangerous for children because of their small 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 as soda and fruit drinks.
- Energy drinks *can contribute to dehydration*, and are NOT the same as sports drinks. Neither are recommended for children. (2)

Links to References and Other Resources about Energy Drinks

1. [UC-Davis Fact Sheet on Energy Drinks.](#)
2. [AAP Sports Drinks and Energy Drinks](#)
3. [NFHS Position Statement on Energy Drinks and Young Athletes](#)
4. [Today's Dietitian The Truth About Energy Drinks](#)
5. [ACOG Caffeine Consumption During Pregnancy](#)
6. [La Leche League Caffeine and Breastfeeding](#)
7. [CDC Caffeine and Alcohol](#)

