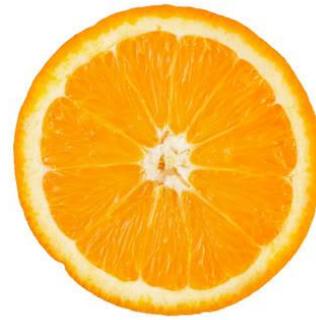


Prep School Performance Nutrition News with Kathleen Searles, MS, RD, LDN



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Nutritionist. Speaker. Consultant.

When I talk with high school students I am always surprised by their interest in energy shots and drinks. Many of them are aware of the caffeine and sugar content of these products, but they are still intrigued by the possibility of being more alert and energetic even when they can't get enough sleep. This month we'll take a look at what's in energy shots and whether they are safe and effective.

- Kathleen Searles, MS, RD, CSSD, LDN

Whats in an Energy Shot?

Energy shots are small drinks (usually about 2 ounces) that typically contain caffeine, some B-vitamins, and an "energy blend" that is unique to each manufacturer. You are probably familiar with the 5 Hour Energy brand, but there are other blends and forms of energy shots on the market, including energy strips, energy mists, energy gum and even energy lip balm!

The primary and most effective active ingredient in most energy shots is caffeine. Caffeine is a stimulant that can increase mental alertness. It is not always clear how much caffeine an energy shot contains. Energy shots are marketed as dietary supplements, rather than food, so have less stringent labeling requirements. According to the label, a 5 hour Energy shot has caffeine "comparable to a cup of the leading premium coffee".

Compare:

- 100 - 286 mg caffeine (range of caffeine for energy drinks and shots)
- 40-150 mg caffeine (average cup of coffee)
- 192 mg caffeine (8 oz. Starbucks regular drip coffee)

The suggested daily caffeine intake for teens is < 100 mg. The various B-vitamins are included in energy shots because they play a general role in energy metabolism by helping you utilize the energy from the food you eat. This requires only small amounts of B-vitamins, and large doses will not increase real or perceived energy. Some of the B-vitamins have been considered as possibly improving cognitive function, but there is not currently enough evidence to evaluate their effectiveness. In addition to the active ingredients, energy shots

Please call or e-mail me today to learn more information!

Contact Kathleen Searles, MS, RD, CSSD, LDN at [978-697-2834](tel:978-697-2834) or ksearles@lunchbox-nutritionist.com

Sidebar:

The International Society of Sports Nutrition has published a position stand on energy drinks, including energy shots. Their recommendations for teens follow:

- Only use energy shots with parental approval
- Consider the amount of caffeine and other nutrients in the product
- Have a thorough understanding of potential side effects
- Be aware that excess use (more than one serving per day) may lead to adverse events and harmful side-effects

Resources for this newsletter:

Campbell B et al. *Journal of the International Society of Sports Nutrition* 2013, 10:1

<http://www.jissn.com/content/10/1/1>

Lee E, Zellman, K . "Are Energy Shots Safe: Expert concerns about the popular

typically contain water, natural and artificial flavors, artificial sweeteners, and preservatives. Teens whose ADHD is exacerbated by benzoates should be sure to check labels, as some brands contain sodium benzoate.

pick-me-ups.” WebMD
<http://www.webmd.com/food-recipes/features/energy-shots-review>
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Here is a chart summarizing information about ingredients commonly used in energy shots:

Ingredient	Desired Function	Effectiveness	Safety
Caffeine	Increased mental alertness	Likely effective	Likely safe
Folic Acid (B-vitamin)	Cognitive function	Insufficient evidence	Likely safe
Vitamin B-12	Improve concentration	Insufficient evidence	Likely safe
Vitamin B-6	Cognitive function	Insufficient evidence	Likely safe
Niacin (B-vitamin)	Proposed as helpful in ADHD	Insufficient evidence	Likely safe
Choline, citicoline	Delay fatigue	Possibly ineffective	Likely safe
L-Phenylalanine	Proposed as helpful in ADHD	Possibly ineffective	Likely safe
Taurine (amino acid)	Improved attention	Insufficient evidence	Possibly safe
Glucuronic Acid, Gluconolactone, Malic Acid (related compounds)			Possibly safe
N-Acetyl-L-Tyrosine	Improved alertness after sleep deprivation	Possibly effective	Likely safe

Information from the Natural Medicines Comprehensive Database

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