

# Do Energy Drinks Make You Better at School and Sports?

Here's what the science says...  
plus other ways to wake up!

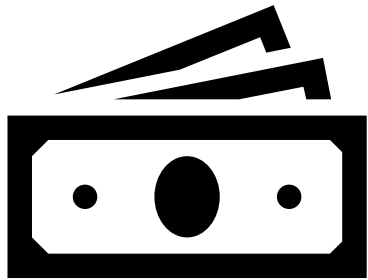
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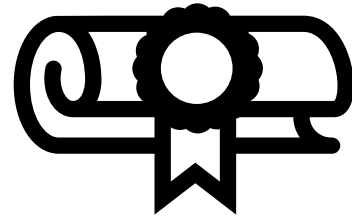
# Learning Objectives

- Understand the target populations of energy drink marketing
- Identify the active ingredients in energy drinks
- Describe the effects of energy drinks on academic and athletic performance
- List the guidelines for safe consumption of energy drinks
- Name healthy alternatives to increase energy

# The Impact of Energy Drinks



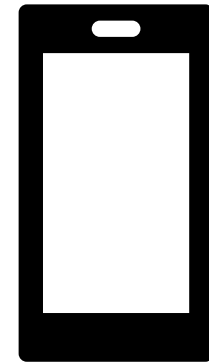
WHAT: \$17.8 billion industry<sup>1</sup>



WHO: 43% of undergrads<sup>2</sup>



WHY: 77% for study/exams and 44% to stay awake/alert<sup>2</sup>



HOW: Marketing to Gen Z and Millennials<sup>3</sup>

# Energy Drink Marketing

## Target consumers:







- Adolescent and youth adults
- Gamers
- Athletes
- Students

## Methods:

- Sponsorships
- Social media
- Sporting events
- Influencers/celebrities



# What's In Your Energy Drink?

Ingredients (in 16 oz.)	 Red Bull	 MONSTER ENERGY	 ROCKSTAR	 bang	 REIGN TOTAL BODY FUEL™	 CELSIUS LIVE FIT
<b>Caffeine</b>	160 mg	160 mg	160 mg	300 mg	300 mg	266 mg*
<b>Taurine</b>	2000 mg	2000 mg	2000 mg			<1800 mg
B vitamins	x	x	x	x	x	x
Guarana		x	x			x
Ginseng		x	x			
Glucurono- lactone		x	x			x
Coenzyme Q				x	x	

\*Celsius contains 200 mg caffeine in each 12-oz can

# Caffeine: Myth vs Fact

You can build a  
tolerance to  
caffeine<sup>4,5</sup>

Caffeine is  
addictive<sup>6,7,8</sup>

Caffeine  
promotes  
weight loss<sup>9,10</sup>

Caffeine causes  
dehydration<sup>11,12</sup>

# Taurine: Myths and Misconceptions<sup>13</sup>

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- Taurine comes from bull semen
- Taurine is a stimulant
- Natural taurine is safer than synthetic taurine



# Do B-vitamins give us energy<sup>14</sup>?

Group of 8 water-soluble vitamins

Help your body turn food into energy

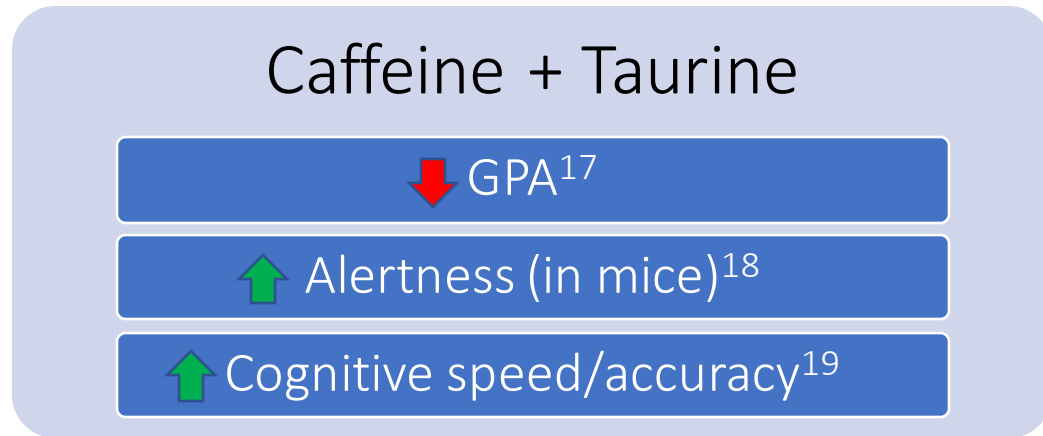
Deficiency is unlikely

Supplementation recommended for vegetarians  
and older population

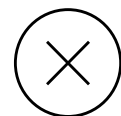
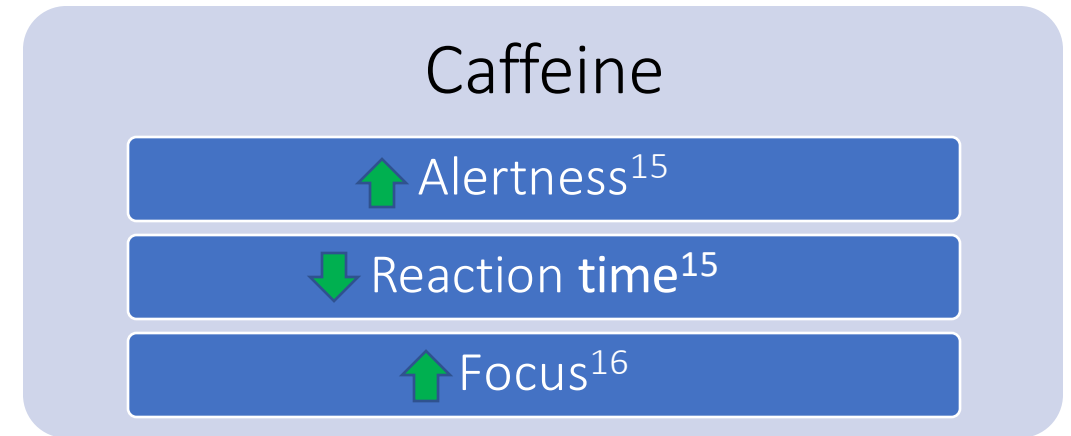
Toxicity does not usually occur



# Academic: How Energy Drink Ingredients Affect Thinking



VS.



CAFFEINE + TAURINE FOUND TO HAVE NO EFFECT ON:

- Cognitive ability during exercise<sup>20</sup>
- Working memory<sup>16</sup>
- Length of time spent studying<sup>21</sup>

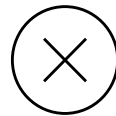
# Energy Drinks Effects on Athletic Performance

Caffeine + Taurine<sup>19, 22-23</sup>

↓ Reaction time

↓ Inflammation markers

↓ Rating of perceived exertion



CAFFEINE + TAURINE FOUND TO HAVE NO EFFECT ON:

- Cardiorespiratory fitness indices<sup>22, 23</sup>
- Cycling performance<sup>23</sup>
- Running/sprint performance<sup>22, 23</sup>

**\*It has been suggested that energy drinks may be harmful to individuals at higher cardiovascular risk\*<sup>24</sup>**

# Guidelines for Consuming Energy Drinks Safely

 Look out for banned ingredients<sup>26</sup>

 Check the nutrition label for sugar content

 Be aware of the serving size

 Limit mixing with alcohol<sup>27,28</sup>

 Avoid caffeine overload

**Safe Caffeine Limit<sup>25</sup>:**

**400  
mg/day**

# Healthy Alternatives to Energy Drinks

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- Sleep
- Hydration
- Natural caffeine sources
- Exercise
- Eating balanced meals



# Caffeine Equivalents - 100 mg



Espresso  
~2 oz



Black Coffee  
~9 oz



Red Bull  
~11 oz



Green Tea  
~21 oz

# Energy Drink vs. Energy-Rich Snack

**Caffeine: 160 mg**



## **Monster:**

Total calories: 230  
Sodium: 370 mg  
Total carbs: 58 g  
Added sugar: 54 g

VS.

**Caffeine: 89 mg**



## **Snack:**

Total calories: 320  
Sodium: 0 g  
Total carbs: 17g  
Added sugar: 11 g

# Bottom Line

Energy drinks are...

- **Popular**
- Composed of **stimulants, sweeteners, vitamins**, and more
- Shown to have **slim-to-no effects** on performance
  - Caffeine alone may be more effective<sup>30,31</sup>
- **Not recommended:**
  - In large quantities
  - With alcohol
  - For folks with risk factors



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# Questions?

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Thank you!

# Our Team



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