Quiz Policies

Eligibility
The NCSF online quizzes are open to any currently certified fitness professional, 18 years or older.

Deadlines
Course completion deadlines correspond with the NCSF Certified Professionals certification expiration date. Students can obtain their expiration dates by reviewing either their certification diploma or certification ID card.

Cancellation/Refund
All NCSF continued education course studies are non-refundable.

General Quiz Rules
- You may not have your quiz back after sending it in.
- Individuals can only take a specific quiz once for continued education units.
- Impersonation of another candidate will result in disqualification from the program without refund.

Disqualification
If disqualified for any of the above-mentioned reasons you may appeal the decision in writing within two weeks of the disqualification date.

Reporting Policy
You will receive your scores within 4 weeks following the quiz. If you do not receive the results after 4 weeks please contact the NCSF Certifying Agency.

Re-testing Procedure
Students who do not successfully pass an online quiz have the option of re-taking. The fees associated with this procedure total $15 (U.S) per request. There are no limits as to the number of times a student may re-test.

Special Needs
If special needs are required to take the quiz please contact the NCSF so that appropriate measures can be taken for your consideration.
Quiz Rules

What Do I Mail Back to the NCSF?
Students are required to submit the quiz answer form.

What do I Need to Score on the Quiz?
In order to gain the .5 NCSF continued education units students need to score 80% (8 out of 10) or greater on the CEU quiz.

Where Do I Mail My Quiz Answer Form?
You will mail your completed answer form to:

NCSF
Attn: Dept. of Continuing Education
5915 Ponce de Leon Blvd., Suite 60
Coral Gables, FL 33146

How Many CEUs Will I Gain?
Professionals who successfully complete the any continuing education quiz will gain .5 NCSF CEUs per quiz.

How Much does each quiz cost?
Each quiz costs the student $15.00.

What Will I Receive When The Course Is Completed?
Students who successfully pass any of the NCSF online quizzes will receive their exam scores, and a confirmation letter.

How Many Times Can I Take The Quizzes For CEUs?
Individuals can take each NCSF quiz once for continuing education credits.
Energy Drinks

If product sales are an indication of need then there is evidently a deficit in energy. A growing craze to keep up with the hustle and bustle of modern society is to power down “liquid energy”. What better solution for daily fatigue than an on the go energy boost? The $2 to $3 shot (8 ounce serving) of energy found in a can is marketed to the young hip generation. The ingredients may vary slightly, but the message is the same: quick energy to keep you moving through your busy life. These drinks can be found at the local drug stores, convenience stores, gas stations, night clubs or even hardware stores. The demand is certainly there; the energy drink industry growth has reached over a billion dollars a year in sales.

Red Bull is the industry leader followed by over a hundred other competitors. Even the beverage powerhouses Coca-cola and Pepsi-co have hopped in to grab a share of this growing market. Coca-cola has taken a modest approach offering its Full Throttle and Vault products while Pepsi has several beverages that fall under this category including, Live Wire, MDX and AMP. Other brands (some fall under the large corporate conglomerate umbrellas) like SoBe drinks (Pepsi), Monster, Rock star, and Von Dutch represent just a few of the most common competitors. The contents of these drinks contain some type of stimulants accompanied by a variety of vitamins and minerals reported to increase energy.

<table>
<thead>
<tr>
<th></th>
<th>Red Bull</th>
<th>Monster</th>
<th>Rockstar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular</td>
<td>Sugar Free</td>
<td>Regular</td>
</tr>
<tr>
<td>Serving size</td>
<td>8.3 oz</td>
<td>8 oz</td>
<td>8 oz</td>
</tr>
<tr>
<td>Servings per container</td>
<td>1</td>
<td>2 per can</td>
<td>2 per can</td>
</tr>
<tr>
<td>Calories</td>
<td>110</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>Total Fat</td>
<td>0 g</td>
<td>0 g</td>
<td>0 g</td>
</tr>
<tr>
<td>Caffeine</td>
<td>80 mg</td>
<td>80 mg</td>
<td>80 mg</td>
</tr>
<tr>
<td>Total Carbs sugars</td>
<td>28 g</td>
<td>26 g</td>
<td>29 g</td>
</tr>
<tr>
<td>Proteins</td>
<td>0 g</td>
<td>0 g</td>
<td>0 g</td>
</tr>
<tr>
<td>Taurine</td>
<td>1000 mg</td>
<td>1000 mg</td>
<td>1000 mg</td>
</tr>
<tr>
<td>glucuronolactone</td>
<td>600 mg</td>
<td>600 mg</td>
<td>*</td>
</tr>
<tr>
<td>Niacin</td>
<td>100%</td>
<td>100%</td>
<td>20 mg</td>
</tr>
<tr>
<td>B6</td>
<td>250%</td>
<td>250%</td>
<td>2 mg</td>
</tr>
<tr>
<td>B12</td>
<td>80%</td>
<td>80%</td>
<td>6 mcg</td>
</tr>
<tr>
<td>B2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ginseng</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guarana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk Thistle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td>200 mg</td>
<td>200 mg</td>
<td>180 mg</td>
</tr>
</tbody>
</table>

*Energy Blend 2500mg (L-carintine, Glucose, Caffeine, Guarana, Inositol, Glucuronolactone, Maltodextrin)
### Common Ingredients

**Caffeine**
Caffeine is a common ingredient found in coffee, tea, soda, chocolate, nutritional supplements and even performance enhancers. It is a key sympathetic nervous system stimulant used in all of the energy-beverages. Some drinks also use various compounds that serve as caffeine replacements or additives. Guarana, found in the Guarana plant, is another common central nervous system stimulant found in many energy drinks. Taurine is used in the same type of products as a caffeine booster, but its efficacy has not been proven clinically to date. Moderate doses may act synergistically to speed up a person’s metabolism, increasing digestion and excretion.

Caffeine is classified as a drug, whose quantities are regulated in athletes participating in IOC and NCAA sanctioned events (Juhn., 2003). Studies have shown that appropriate amounts of caffeine (minimum quantity 200 mg) can have an ergogenic effect on aerobic activities. Increased times to exhaustion in cycling and running and improved tennis performance along with decreased times in 1500 meter swimming. There were no positive affects associated with short duration activities (Buchard et al., 2002).

The level of caffeine recommended to produce an ergogenic effect is 250 to 700 mg (Juhn., 2003) a drip method cup of coffee has on average between 110 to 150 mg of caffeine. Anything above those levels could cause you to be disqualified from a NCAA event or IOC event (Juhn MS, 2003). Over consumption of caffeine may lead to symptoms such as sweating, nervousness, or overall feeling of uneasiness associated with anxiety. These side effects are due to increases in
heart rate, blood pressure, vasoconstriction, increased amounts of fatty acids in the blood and increased production of gastric acid (nausea).

**Glucuronolactone**
Glucuronolactone is a common ingredient found in energy drinks because it is reported to fight fatigue, aid in memory retention and give a person a sense of well being. It is a naturally occurring compound produced from the metabolism of glucose. Glucuronolactone is also a precursor to taurine another substance commonly found in energy drinks.

**B Vitamins**
Each B Vitamin plays an important role in the production of energy and new cells in the body. The presence of B vitamins allows for efficient energy metabolism from carbohydrates, fats, and proteins. A deficiency of B vitamins affects every cell, causing such symptoms as nausea or forgetfulness, to abnormal heart rhythms. However, consumption of excessive amounts of B vitamins over the recommended daily allowance has no benefit. Due to the fact that the B Vitamins are water soluble excess consumption beyond need results in excretion via urination. Many energy drink labels boast far more nutrients than is recommended by the DRI-RDA’s. If the Vitamins are water soluble consuming more than 100% of need doesn’t even make sense since anything not used is excreted. All mega-dosing the B Vitamins does is make expensive urine.

**Niacin B3**
Niacin is water soluble B vitamin that plays a role in energy metabolism. The protein tryptophan, is converted to niacin in the body. Consumption of protein rich foods provides appropriate amounts of niacin. Niacin is also used in the medical field to battle atherosclerosis. Some research has been shown that niacin slightly increases blood glucose levels and the positive affects of high density lipoproteins. Self medication with excessive amounts of niacin is not recommended as large doses of niacin may lead to liver injury or any number of adverse health conditions.

**B6**
B6 vitamin aids in the metabolism of amino acids, conversion of tryptophan to niacin, and the synthesis of hemoglobin. The consumption of B6 is directly related to the consumption of proteins, due to its role in protein synthesis. B6 also aids in the release of glycogen to aid in the regulation of blood glucose. Like other B vitamins, B6 decrease the efficiency of the immune system resulting in any number of illnesses. Excessive amounts are also associated with adverse effects.

**B12**
Vitamin B12 is necessary for new cell synthesis and the maintenance of nerve and red blood cells. B12 is found in natural animal sources high in protein and fortified breakfast cereals. Anemia, weakness, neurological ailments, and mental deficiencies are all symptoms associated with low levels of B12.

**Riboflavin B2**
Riboflavin as with other B vitamins is important nutrient for proper body homeostasis. Riboflavin aids in the breakdown of nutrients required for energy production. Some claims have been made that B2 boosts energy, however these findings are unfounded. The supplementation of Riboflavin to increase physical performance or boost energy is not necessary unless an
individual is deficient. Riboflavin is mostly consumed in milk or milk products. Whole grain breads, cereals, green leafy vegetables and some meats contain healthy amounts of riboflavin.

**Ginseng**
Ginseng is an adaptogen, or substance that increases the body’s resistance to stress. Athletes may consume ginseng in the hopes of reducing the affects of mental and physical fatigue. It is also touted as immune system booster, mind enhancer, and energy booster. There are several species, Panax Ginseng is the most regarded based on research. Results of ginseng research are mixed, but a study conducted by the government claimed it may aid in increasing quality of life. Ginseng does not seem to have any type of affect on hormones such as testosterone, cortisol, HGH, or IGF-1 as previously suspected. Prolong ginseng consumption may lead to increases in blood pressure and is also not recommended for pregnant women or individuals with high blood pressure.
Recommended dosage of ginseng extract are between 250mg to 500mg a day.

**Conclusion**
These drinks contain a variety of substances claim to increasing energy, performance, and even a feeling of well being. Most often the foundation of the energy boost is due to stimulation of the central nervous system rather than consumption of quality energy sources. The excessive amounts of caffeine, caffiene alternatives (like guarana), or supposed caffeine enhancers (such as taurine) create the nuero logical response. Any substance consumed in amounts greater than the dialy recommended intake does not necessarily increase its effectiveness. In most cases it simply produces greater amounts of flourescent urine due to the unabsorbed sustances.

The large amounts of simple sugars found in regular energy drinks wreak havoc on the body. It is true that carbohydrates, which are converted to glucose (sugar) are the predominate source of energy for activity. However, the best source is from the consumption of complex carbohydrates from natural sources like grains, whole wheats, and vegetables. Simple sugars dramatically increase blood sugar levels due to their speed and ease of absorption. This creates a sugar high which is combated with the release of insulin to control plasma glucose concentrations. This creates a viscious cycle of highs and lows often promoting lipogenic behavior and exposing the body cells to levels of insulin that may decrease sensitivity to the hormone.

Energy drinks may be a quick fix, but not the answer to fatigue. Proper diet, hydration and rest provide the remedy to fatigue. Consuming the appropriate amounts of nutrients from natural sources is the best choice. Plenty of rest allows the body to recover and rebuild, this will inturn increase performance. Athletes consuming large amounts of caffiene may experience and increased risk for dehydration. Dehydration decreases athletic performanc by as much as 7-10%. The side affects associated with high quantities of caffeine can cause increases in heart rate, increases in blood pressure, anxiety, upset stomach and jitters. The side affects that accompany energy drinks may actually decrease performance and/or feelings of well being that are marketed by energy drink manufacturers.


Quiz

1. Symptoms associated with the over consumption of caffeine includes all the following except:
   A. increased heart rate
   B. vasoconstriction
   C. nervousness
   D. stress

2. What is the purpose of glucuronolactone in energy drinks?
   A. increased heart rate
   B. reduced insulin response
   C. fight fatigue
   D. retains fluids

3. What is the primary energy nutrient found in energy drinks?
   A. protein
   B. sugar
   C. fiber
   D. fatty acids

4. The normal serving size for energy drinks is _________.
   A. 4 oz
   B. 8 oz
   C. 12 oz
   D. 16 oz

5. Consuming ________ of caffiene has been shown to have an ergogenic affect on aerobic activities.
   A. 50 mg
   B. 150 mg
   C. 175 mg
   D. 200 mg

6. ____________ is thought to increase the effects of caffiene, but no scientific evidence supports these findings.
   A. taurine
   B. guarana
   C. guarine
   D. milk thistle
7. Which of the following nutrients is found in “energy drinks” and used for energy production?
   A. B Vitamins
   B. Iron
   C. Calcium
   D. Vitamin D

8. Which of the B vitamins aids in the metabolism of amino acids?
   A. B1
   B. B2
   C. B3
   D. B6

9. What is the purported affects of ginseng?
   A. increase muscle mass
   B. resistance to stress
   C. increased aerobic metabolism
   D. increased production epinephrine

10. What is the purported effect of riboflavin in energy drinks?
    A. immune system booster
    B. energy booster
    C. memory enhancer
    D. increased fat oxidation
**Quiz Name** | **Member Price** | **Total**
--- | --- | ---
 | $15

☐ Discover  ☐ Visa  ☐ Mastercard  ☐ Amex  ☐ Check/Money Order

Account No. | Exp. Date | Security Code
--- | --- | ---

Signature | Date

**Quiz Answers**

1. _____  
2. _____  
3. _____  
4. _____  
5. _____

6. _____  
7. _____  
8. _____  
9. _____  
10. _____

Fill in each blank with the correct choice on the answer sheet. To receive 0.5 CEUs, you must answer 8 of the 10 questions correctly.

Please mail this Quiz answer form along with the proper enclosed payment to:

NCSF  
5915 Ponce de Leon Blvd., Suite 60  
Coral Gables, FL 33146  

Questions? 800-772-NCSF