

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.

Caffeine Consumption Among Children and Adolescents

Caffeine is the most widely utilized psychoactive substance among people of all age groups and cultural backgrounds. This is most likely due to the fact it is legal, easy to obtain, and socially acceptable to consume. It is classified as a stimulant drug, and is typically used to arouse the central nervous system for cognitive or physical endeavors. It is generally recognized as safe by the Food and Drug Administration (FDA), but when taken in excess can result in serious side effects, health hazards, or even in rare cases, death. Caffeine is produced by a variety of beans, leaves, and fruits; but is most commonly consumed in the forms of coffee (70%), soda (16%), and tea (12%). Approximately 9 out of 10 adults report regular use of caffeine, with an average daily intake of around 230mg.

Caffeine exerts perceived positive effects when taken in moderate dosages (200mg-300mg) through a few different mechanisms of action. First off, it activates adenosine receptors to promote stimulation of the sympathetic nervous system (SNS). Since the SNS initiates what is referred to as the “fight or flight response” caffeine causes an adrenaline-like energy response. This mechanism of SNS provocation has been shown to improve concentration, memory retention, auditory vigilance, and reaction time. Secondly, caffeine is known to

directly enhance dopamine neurotransmission, which provides for an endorphin-like pleasure response and resistance to pain. This mechanism of action is believed to be the reason that caffeine use in research has resulted in greater exercise workloads until fatigue – particularly workloads that are associated with a greater level of discomfort such as interval sprints or high-intensity hypertrophy training. Conversely, high dosages (>400mg) have been shown to produce negative effects such as anxiety, nausea, jitteriness, and nervousness.

In recent times, it appears that caffeine-containing beverages have become increasingly accepted within the diets of children. Current research attempts to decipher if this could be a major health concern for children as they age. Statistics demonstrate that caffeine intake among children and adolescents have increased by 70% in the last 30 years. In the Eighties, the average intake among children between the ages of 5 and 18 was reported to be 38mg per day (the equivalent of one soda). A study in 2005 showed increasing consumption within the age range of 12-17 to an average of 69.5mg per day. In updated figures, published in the December 2010 issue of the *Journal of Pediatrics* reveals children ages 8-12 consuming an average of 109mg per day. This trend may be reason for concern due to the following:

1. The overall physiological and psychological implications of caffeine use among children have not been adequately investigated and are poorly understood. No safe ‘minimal’ limit has been set for the population. In a few studies, positive subjective effects such as enhanced feelings of well-being, confidence, and sociability seen among adults who use caffeine are not replicated in children. It appears that caffeine does not act upon children or adolescents in the same manner as adults.
2. Caffeine has been shown to have a negative impact on sleeping patterns. Adequate sleep allows for proper growth and brain development. In a study published in 2007, 90% of middle and high school students sampled reported getting less than 8 hours of sleep on average each night; with a primary contributing factor to the lack of sleep being caffeine consumption.
3. Caffeine is thought to have the potential to cause long-lasting effects on brain function when utilized during the formative years (period when neural control center function is developed and refined). Specifically, areas such as the orbitofrontal cortex and temporal lobe, which appear to

develop beyond the teenage years, have the potential to be modified by caffeine due to their intrinsic adenosine receptors.

4. Childhood and adolescence are considered critical periods for establishing eating patterns and taste preferences. Consuming common caffeinated beverages such as sodas may enhance the preference for sweet foods throughout the lifespan when taken regularly during childhood. This can contribute to excess caloric intake and have a negative impact on proper nutrition. Specifically, caffeine in the form of sugar-sweetened carbonated beverages has been shown in research to be strongly associated with a greater incidence of obesity or being overweight in children. One particular study reported that for each additional serving of a soda-like beverage consumed daily during childhood, there is a 60% increase in the odds of becoming obese. Furthermore, studies have shown that children who consume more sodas each week will generally consume fewer servings of milk, fruits, and vegetables.
5. Studies have shown that caffeine use increases the response to any subsequent drug exposure, and children seem to have an additional vulnerability to this effect. This can potentially turn a ‘child’s dosage’ of a given medication into a dangerous or toxic dosage.
6. Research suggests that caffeine consumption during adolescence (approximately 220mg per day) is associated with increased impulsivity, sensation seeking, and risk-taking behaviors – such as is seen with illicit drug and tobacco use. One particular study revealed that consuming four or more caffeinated beverages a day during adolescence was associated with daily cigarette use, aggressive behavior, and attention and conduct problems.

Common Caffeinated Beverages		
Caffeinated Beverage	Serving Size (oz)	Caffeine (mg)
Coca-Cola Classic	12	35
Pepsi	12	38
Green Tea, Brewed	8	30-50
Dr. Pepper, Diet Dr. Pepper	12	41
Sunkist Orange Soda	12	41
Diet Coke	12	47
Mountain Dew	12	54
Instant Coffee	8	62
Starbucks Chai Tea Latte	12	75
Red Bull	8.1	76
Amp Eneary Drink	16	143
Full Throttle	16	144
Starbucks Coffee Latte	16	150
SoBe Adrenaline Rush	16	152
Monster Energy Drink	16	160
Rockstar Energy Drink	16	160
SoBe No Fear	16	174
Starbucks Coffee Grande	16	320

A novel issue related to this seen among children is the consumption of energy drinks. These beverages, such as Red Bull™ or Rockstar™, represent the fastest growing component of the beverage industry. In many cases, they have significant quantities of caffeine (up to 500% of the content seen in soft drinks) as well as high levels of sugar, herbal stimulants, and other energy metabolites. These drinks can place children at high risk for caffeine intoxication. Alarming, many energy drink marketing campaigns explicitly target youth with advertisements featuring extreme sports, cartoon characters, and catchy sayings such as “Red Bull gives you wings.” In fact, some energy drinks such as Spark™ are recommended by the company for use in children four years and older; while others such as XS™ go to the extent of making sure the can is sized (8.4oz) so that it is comfortable for children to hold, and claims that it is recommended by health professionals as a nutritionally superior ‘treat’ when compared to soda or juice. Unfortunately, excessive consumption of energy drinks has been associated with high risk behaviors such as smoking, drinking, illicit drug use, risky sexual behavior, and fighting. Relatively small quantities may be needed to be considered ‘excessive’ in children due to low body weight and tolerance levels.

There is no question that caffeine use is on the rise among children and adolescents. This may be a reason for concern as little empirical data exists on the physiological, psychological or behavioral effects of habitual caffeine use within the population. It appears that there are many potentially negative effects of high usage during youth, and some of them may have lasting repercussions. Consuming caffeinated beverages can have an effect on optimal sleep, overall growth and development, healthy nutritional habits, and the risk for engaging in risky behaviors.

Caffeine Consumption Among Children and Adolescents

CEU Quiz

1. Caffeine is classified as a _____ drug.
 - a. Depressant
 - b. Stimulant
 - c. Narcotic
 - d. Prescription
2. Recent reports indicate that approximately _____ of adults regularly consume caffeine.
 - a. 40%
 - b. 50%
 - c. 75%
 - d. 90%
3. The average daily consumption of caffeine is approximately _____.
 - a. 50mg
 - b. 150mg
 - c. 230mg
 - d. 350mg
4. When consumed, the first effect of caffeine on the body is _____.
 - a. An activation of adenosine receptors to promote stimulation of the sympathetic nervous system (SNS).
 - b. A deactivation of the “fight or flight” response
 - c. A release of insulin-like growth factor, thereby facilitating a hypertrophic response in resistance trained muscle
 - d. All of the above
5. Which of the following responses has been observed in individuals after activation of their SNS via caffeine?
 - a. Improved concentration
 - b. Improved reaction time
 - c. Improved memory retention
 - d. All of the above

6. True or False. Caffeine intake is known to directly enhance dopamine neurotransmission, thereby producing an endorphin-like pleasure response and resistance to pain.
 - a. True
 - b. False

7. Caffeine doses greater than _____ have been shown to cause negative effects such as anxiety, nausea, and nervousness.
 - a. 100mg
 - b. 200mg
 - c. 300mg
 - d. 400mg

8. According to a 2010 published report in *Journal of Pediatrics* the average caffeine consumption of children ages 8-12 is approximately _____.
 - a. 30mg/day
 - b. 70mg/day
 - c. 110mg/day
 - d. 250mg/day

9. Of particular concern for childhood consumption of caffeine is the link between carbonated, soda-like beverages and obesity. At least one study has shown that for each additional soda-like beverage consumed, children have _____ increased likelihood of becoming obese.
 - a. 25%
 - b. 45%
 - c. 60%
 - d. 75%

10. Adolescents who consumed more than _____ caffeinated beverages per day showed an increased likelihood of cigarette use, aggressive behavior, and attention/conduct problems.
 - a. 1
 - b. 2
 - c. 3
 - d. 4

Quiz Answer Form

FIRST NAME _____ LAST NAME _____ M.I. _____

TITLE _____

ADDRESS _____ APT. _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____ POSTAL CODE _____

CERTIFICATION NO. _____ CERTIFICATION EXP. ____/____/____

MEMBERSHIP NO. _____ MEMBERSHIP EXP. ____/____/____

Quiz Name	Member Price	Total
	\$15	



Discover



Visa



Mastercard



Amex



Check/Money Order

Account No. _____

Exp. Date _____

Security Code _____

Signature _____

Date _____

Quiz Answers

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 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