

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.

POST-TRAINING NUTRITION

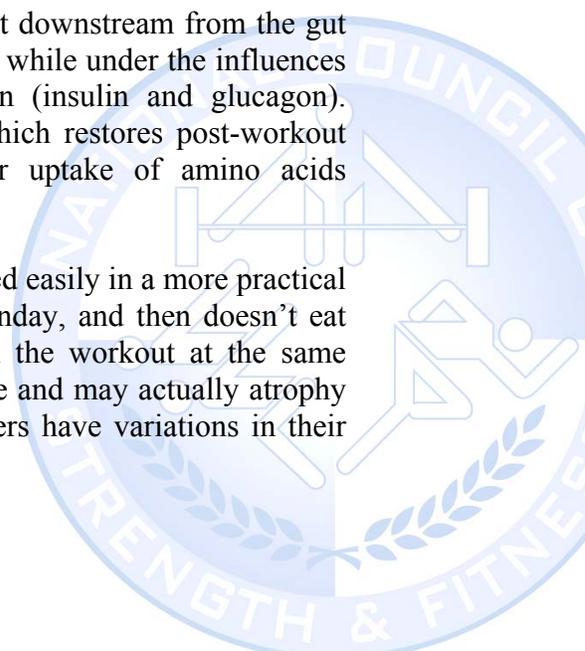
Most athletes and coaches do not realize the benefit of proper nutrition between training sessions. All forms of exercise are body stressors. Stress from a strict interpretation of response, is a mechanism of energy preparation; chemical primers facilitate response to “fight or flight”. Unlike distress induced by a serious injury or emotional stress, exercise is a positive stress (eustress) which means that the acute damaging “stressor” results in a positive adaptation. For example, after lifting weights your muscle proteins are being damaged and disposed of via cellular protein degradation, inflammatory mediators and proteolytic enzymes which digest these proteins. In response the inflammation leads to muscle remodeling through protein synthesis and the myofilaments are repaired. Prolonged exposure to appropriate doses of stress with proper recovery leads to physiological enhancements specific to the training.



When the body is placed under the demands of physical stress calories are consumed at a rate equal to the work demand. Protein degradation and glycogen depletion is highest immediately following the workout. Glycogen needs to be replenished quickly, especially in the liver so that blood glucose can be maintained within the physiological homeostatic limits. If an athlete or exerciser neglects to eat carbohydrates soon after a workout, protein degradation increases. This occurs because the deficit created by glycogen depletion is met by the production of glucose from amino acids through a mechanism called gluconeogenesis in the liver. The body’s demand for sugar is met by the conversion of metabolic remnants of the degraded proteins (amino acids) which are sent to the liver and converted to sugar.

In contrast, eating carbohydrate and some protein soon after the workout (within 30 minutes) will reduce muscle protein degradation because the hormonal response (insulin) to carbohydrates will facilitate muscle and liver uptake of carbohydrates via increased glucose uptake and glycogen re-synthesis. The anatomical position of the liver is ideal for its role in the regulation of blood glucose. It is positioned just downstream from the gut and pancreas so that it can efficiently extract digested glucose while under the influences of pancreatic hormones involved in blood sugar regulation (insulin and glucagon). Glycogen is stored with approximately 3 grams of water which restores post-workout cellular volume (osmotic pressure), and increases cellular uptake of amino acids potentially leading to increased protein synthesis.

Although it sounds very scientific, these effects can be analyzed easily in a more practical scenario....If an athlete performs an intense workout on Monday, and then doesn’t eat soon after the workout, he/she will not be able to perform the workout at the same intensity the next day. Similarly, muscle size will not increase and may actually atrophy in response to the training. This explains why many exercisers have variations in their



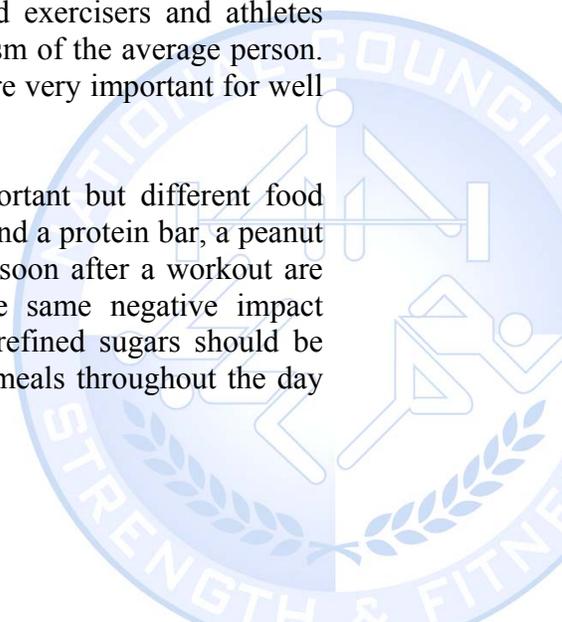
workouts related to total Watts produced. They simply do not have the energy stores to meet the intended demand. It would be like driving a car 100 miles on 10 gallons of fuel and only getting 8 gallons of fuel for your ride back. The same distance would not be accomplished and you would come up short on your return. Essentially the same thing happens with subsequent exercise bouts. Granted sleep and hydration play a role but energy is the primary determinant of output capabilities when the rest of the body is homeostatically balanced.

If a high carbohydrate diet with some protein is consumed, especially within the half hour following a workout, a workout of similar intensity can be performed on consecutive days. It has been recommended that 1.2 grams of carbohydrate per kilogram of body weight be ingested immediately following heavy or prolonged training. The same amount should be consumed each hour for the next four hours (1.2g/kg/hr). When this amount of carbohydrate is consumed, the muscle glycogen synthesis rate is maximal and does not require the increased insulin that is associated with combined protein intake. However, the increased insulin activity in response to protein ingestion may increase the rate of hepatic glycogen synthesis. Additionally, if some protein is consumed with carbohydrate during the hours after training, only 0.8g/kg/hr of carbohydrate is required in the immediate post exercise meal and subsequent feedings over the next 4 hours post-exercise.

The protein with carbohydrate combination has also been shown to reduce soreness following exercise greater than carbohydrate alone. Athletes engaged in heavy training who risk overtraining and compromised immune systems may benefit from protein and carbohydrate combinations in order to increase glutamine levels, an amino acid which is a source of fuel for immune cells, and to restore nitrogen balance which can decrease in response to high levels of the stress hormone cortisol.

Inadequate caloric intake during training is one of the most common mistakes weight lifters commit when attempting to increase muscle mass. Just like reducing caloric intake leads to weight loss, increasing caloric intake is required to gain weight. Training for a hypertrophic response requires adequate caloric intake to build muscle. In endurance athletes, reduced caloric intake can actually increase their body fat percentage. This paradox may be due, in part, to increased muscle degradation following training to restore blood glucose. It is essentially an inverted relationship because a loss of muscle equals a greater percentage of body fat. In vigorously trained exercisers and athletes contributions to energy can be three times the protein metabolism of the average person. This suggests not only adequate calories but the right calories are very important for well trained individuals.

Carbohydrate and protein after a workout are obviously important but different food choices can affect the absorption rate. For example: an orange and a protein bar, a peanut butter and jelly sandwich, or glass of milk and a banana, etc. soon after a workout are easy combinations. Higher glycemic foods do not have the same negative impact following exercise as they do during the rest of the day, but refined sugars should be avoided. Also, be sure to eat complex carbohydrates in small meals throughout the day



during periods of heavy training to maximize glycogen storage and prevent the blood glucose surges associated with refined carbohydrates. It is usually a good idea to consume some protein every time you eat carbohydrates. Carrying some food with you during the day, like peanuts, trail mix, cherries or cranberries, etc...is an easy way to achieve this. Hunger, especially in the hours after exercise, often correlates with the release of amino acids and lactate from muscle (unexercised-resting muscle) to restore glycogen stores in the liver and stores of depleted muscles post-exercise. Thus, grazing throughout the day will prevent you from over-using muscle as a fuel reservoir.



Quiz

1. _____ is a type of stress which causes positive adaptation responses when routinely applied in appropriate dosages.

- A. distress
- B. eustress
- C. biostress
- D. endostress

2. _____ is the breakdown of muscle protein into amino acids in the body.

- A. Aminodosis
- B. Hydrolysis
- C. Degradation
- D. Atrophy

3. _____ is the form of carbohydrates stored in the liver and muscle.

- A. Glucose
- B. Maltose
- C. Glycerin
- D. Glycogen

4. The conversion of amino acids to glucose in the liver is called _____.

- A. Gluconeogenesis
- B. Acidosis
- C. Krebs cycle
- D. Nitrosis

5. Energy nutrients should be consumed within _____ post exercise to maximize cellular permeability.

- A. 30 minutes
- B. 60 minutes
- C. 90 minutes
- D. 120 minutes

6. What is the best choice of energy to consume following vigorous physical activity?

- A. Carbohydrates only
- B. Protein only
- C. Protein and carbohydrate mixture
- D. Vitamin and mineral mixture



7. Which of the following factors contribute to exercise performance accounting for variations in daily power output?

- A. glycogen storage
- B. recovery time
- C. hydration status
- D. All of the above

8. How much carbohydrate should be consumed post exercise per kilogram of body weight per hour?

- A. 0.5
- B. 0.8
- C. 1.2
- D. 2.0

9. What affect does protein intake have on energy requirements in post exercise meal consumption?

- A. increases carbohydrate requirements
- B. increases lipid requirements
- C. decreases carbohydrate requirement
- D. decreases water requiremnts

10. Which of the following types of carbohydrate provides the highest glycemic response when consumed independently?

- A. orange
- B. rye toast
- C. oatmeal
- D. honey



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