

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.

Variations to Exercise Programs

Variations to exercise programs are an integral part to maintaining a continued level of adaptation response. Although motor pattern development varies among people, generally it takes 7-12 exposures to the stress for adaptations to accommodate the physiological challenge. If the stress is simply a new movement the nervous system will begin learning immediately and with subsequent rehearsal develop a motor pattern through muscle synchronization. In most cases the body has adequate potential in the musculature for appropriate force management, it though needs to figure out how to access the motor units properly which comes from practice. Once the nervous system figures out the situation the demands are reduced. This is easily exemplified with the act of swimming. Asking a person relatively unfamiliar with fitness swimming to perform a 100 meter free stroke distance and they will likely have a high perceived exertion with the activity. But after repeat bouts over a one week period will likely consider it a relatively easy task to perform. This is not due to some newly developed muscle or exaggerated improvement in VO₂ but rather an improvement in economy.

When considering adaptations there are three unique but intimately related environments to manage and each is related to system augmentation. The first to respond is always the nervous system. Changes in motor unit recruitment, firing rate and synchronicity accommodate immediate adjustments via assistance of the proprioceptors. Next the metabolic system migrates to the environment and soon better serves the activity allowing for longer and harder bouts. Lastly, the muscular system changes by adding protein and lengthening myofiliament chains when load and movement range demand it. The adaptations explain why, over the first two or three months

of training, individuals see significant improvements but become stale in response to the program. Once the body adapts to a stress it will not continue to improve. Actually it may even burn less calories as its economy reduces the effort needed to perform the activity. This suggests modifications to the exercise are necessary for a new outcome. The common error at this point is simply adding resistance but this is a narrow thought process for new stress.

Depending on the desired response an exercise program may need to change in whole or in part. This means an exercise may be modified or swapped out for another, changes to the set and rest intervals may be needed, or additional stress may be added by requiring more musculature per activity. The first step is defining the desired outcome: larger muscles, weight management, more stability, faster speed or greater strength may all warrant unique adjustments to secure the appropriate response. The next step is identifying how current movements can be manipulated to better serve the intended purpose. Basic exercise theory at least supports the foundations or mechanism by which an exercise can be manipulated to serve a specific purpose. Therefore programming components must be viewed for dose stress appropriateness. For hypertrophy, the activity must isolate movements to ensure adequate time under tension with moderately heavy loading and short rest intervals at enough volume to promote anabolic hormone release. Strength requires synchronized joint action, high levels of stability, with near maximal loading of the largest muscle groups. Speed or power development suggests using rapid ballistic and plyometric based movements using varied loads over the appropriate energy systems (i.e., CP for power cleans, glycolytic pathway for rebounding). Whereas functional based training

requires muscle synergy across unilateral and asymmetrical loaded environments with moderate to low loads to enhance stability, movement efficiency and range of motion.

Exercises and programs therefore should reflect these programmatic conditions to ensure they better serve the desired outcome.

Consider the adjustments and variations employed in the work segment of the following workout.

Strength

Power

Hypertrophy

Deadlift

High Pull

Romanian Deadlift

Front squat to press

Front squat to Push press

Front squat s/s seated DB press

Straight Bar Walking Lunges

Weighted Lunge Rebounds

Smith machine Split Squats

DB Bent-Over Row

Barbell Row

T-Bar Row

Incline Bench Press

Incline MB throws

Incline Bench s/s chest flyes

Pull-ups

Jump Pull-ups

Lat pull down

Weighted Dips

Plyo-push-ups

Close grip bench s/s bench dips

Function

Suitcase deadlift (asymmetrical deadlit)

DB Front squat to alternate press

Front bar lunges with press

Split stance cable one arm row

Single arm standing cable incline press

Physioball pull-ups

Bench push-ups to rotational reach

Each exercise represents a change that becomes a new stress from the previous environment and these represent a minute few of many options. In addition, to the exercise selection sets and repetition schemes can be adjusted as well as the rest interval. These changes should be consistent with other changes so the desired affect is attained without too much stress being applied at one time. Changing an exercise, increasing the resistance and adding a dynamic component all at once would certainly be excessive. The body's ability to adapt is based on physiological

adjustments in several systems. Even when the stress is applied to the nervous system, inexperience requires some level of skill acquisition which explains why weekly changes are too aggressive. Sticking with an exercise or emphasis for three weeks is usually adequate for most personal training clients, athletes may progress faster but anytime progressions are accelerated beyond physical capabilities the only two outcomes are sloppy compensated movements or overtraining.

Variations to Exercise Programs CEU Quiz

1. Which system has the most rapid adaptation response _____.
 - a. Nervous system
 - b. Hepatic system
 - c. Digestive system
 - d. Cardiovascular system

2. It generally takes approximately _____ exposures to a new stress for the nervous system to adapt properly to accommodate the physiological demand.
 - a. 1-3
 - b. 4-6
 - c. 7-12
 - d. 15-17

3. Once the nervous system figures out what is needed to manage a new stress, the physiological demand of the new movement will _____.
 - a. Level off
 - b. Continue to increase
 - c. Decrease due to improved economy

4. Which of the following represents a change in the nervous system that, along with assistance of the proprioceptors, will accommodate immediate adjustments?
 - a. Firing rate
 - b. Synchronicity
 - c. Motor unit recruitment patterns
 - d. All of the above are correct

5. Load and movement range will require the muscular system to undergo which of the following changes?
 - a. Decreased protein
 - b. Increased protein
 - c. Lengthening myofilament chains
 - d. Both b & c are correct

6. True or False. After a couple months of training, the body will adapt to a new stress and may actually burn fewer calories during the performance of the exercise due to improved movement economy.
 - a. True
 - b. False

7. The first step prior to program modification is _____.
 - a. Identifying the desired outcome
 - b. Testing VO_2max
 - c. Calculating 1RM
 - d. Determining body composition

8. If the adaptation response involves improvements in hypertrophy, the correct program modifications should focus on _____.
 - a. Ballistic and plyometric movements
 - b. Stability and flexibility
 - c. Isolated movements that require moderately heavy loads and short rest intervals
 - d. Sport specific exercises

9. Modifying an exercise program to include more unilateral and asymmetrically loaded movements that focus on stability and movement efficiency would most likely be for _____.
 - a. Hypertrophy training
 - b. Functional training
 - c. Speed training
 - d. Power training

10. _____ is the recommended time frame of an exercise emphasis before adding a progression in a program for personal training clients that will adequately result in positive adaptations from appropriate neural rehearsal.
 - a. 1 week
 - b. 3 weeks
 - c. 1 month
 - d. 3 months

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	



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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