

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?

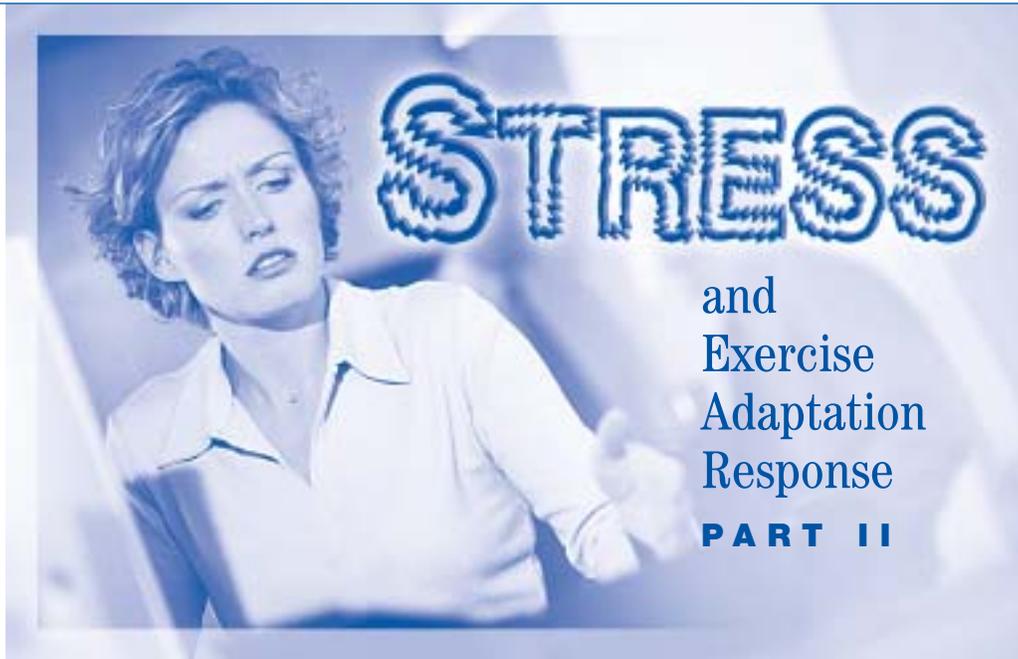
Each quiz costs the student \$15.00.

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.



Everyday the human body functions to remain homeostatic under varying conditions of psychophysiological distress. Translation: the body tries to remain in control when dealing with different emotional and physical agitators. An encompassing definition describes stress as “any disturbing physical event or any cognitive thought process that is of sufficient magnitude and duration to elicit a psychological and physiological reaction from the body”. The degree of homeostatic disruption experienced by the body from psychosocial or emotional stressors may be dependent or independent of state of mind. Basically, sometimes specific conditions or situations bother you more than other times a similar stress is experienced. When the hassles and challenges of daily living intensify, the body will react in the same way it has for thousands of years – by engaging the stress response.

In Part I of this article we reviewed acute stress response and looked at the dynamics of the orchestrated interplay of several neurotransmitter systems in the brain. This examination of the detailed interactions of chemicals and system specific reactions identified the fact that the stress response is biologically global and affects the entire organism. The swift but coordinated response includes mobilization of stored energy with inhibition of subsequent energy storage, increased gluconeogenesis, sharpened focused attention on the perceived threat, increased cerebral perfusion rates and cerebral glucose use, enhanced cardiovascular output and respiration, enhanced delivery of energy substrates to the muscles, inhibition of reproductive physiology and behavior, modulation of immune function, and suppressed feeding and appetite.

Acute stress response suggests that the body experienced temporary interruption, but managed to regain homeostasis through a state of recovery. When the homeostatic disruption is excessive or prolonged it places the cardiovascular system under high demands referred to as “cardiac strain.” This expression of cardiac stress is not comparable to routine training in the target zone, but more so, excessive overload or continuous strain, which in exercise would be equated to

severe overtraining due to the magnitude and high frequency of the exposure. When this occurs there are pathophysiological consequences and commonly subsequent chronic pathology, which will be examined later in the text.

Each person has a different capacity for stress based upon experience, personality and personal coping methods. Since Personal Training is individual specific it is important to assemble a stress risk profile for each client. This requires examining psychosocial factors and determining individual vulnerability based on personality traits and routine environmental conditions, which include job challenges, daily obstacles (i.e. traffic), positive or negative family/friend influences, level of support system, and economic stability. Once the profile has been created it is important to ascertain, to the best of your ability, the perception of the stressor. Experience and personality traits serve to assist in determining cognitive appraisal or the degree at which the threat is perceived by the individual. The severity of the reaction to the stress will be different between two people and may even vary within the individual, dependent upon other concurrent situations or environmental stimulus. This may be a single experience or come in the form of recurring low grade hassles. For instance, a family member dying after years of cigarette smoking and inactivity may be devastating for one sibling, while another sibling experiences distress to a lesser degree because they had conditioned themselves to expect the outcome, due to the knowledge of the impact from the negative behaviors. Likewise, daily job stress from a superior may be ignored by one employee while another takes every criticism personally, making their work day overwhelming and exhaustive.

It should not be expected to ascertain an exact measure of stress significance due to the number of variables within each situation, but it should provide a general estimate of an individual's daily stress level. This should take into account the quantity of stress and the individual's perceptions of stress. For some people stress presents a challenge which they overcome and grow from, while others are even sensitive to modest levels

of stress exposures, which manifest into chronic physiological adjustment that precipitate stress-related disorders such as hypertension.

Once constructed, this risk profile will present a predisposition for stress-related illness. Personal Trainers should track daily variables to identify different stress reaction clues. In table 1. factors related to the client's unique profile are listed under the four categories of response. In most cases the stress response includes some combination of physiological, cognitive, emotional and behavior factors. Physical clues are generally the easiest to identify: difficulty speaking, nervousness, elevated heart rate or interruptions to daily activities such as restlessness or inability to sleep. Asking your client questions about their recovery may indicate stress responses. Cognitive and emotional stress responses are more difficult to recognize, as there is little observational data associated with either. Conversational assessments may help identify signs and symptoms associated with the more mental stress responses. Listening is an important skill the personal trainer can employ to collect data and spot obstacles and pitfalls to health.

TABLE 1.

Behavioral Stress Response	Emotional Stress Response
Irritability	Withdrawal
Increased substance use	Feelings of hopelessness
Nervous laughter	Emotional responses (crying)
Impatience	Frequent bad dreams
Compulsiveness	Mistrusting others
Cognitive Stress Response	Physiological Stress Response
Mental disorganization	Increased heart rate
Inability to concentrate	Upset stomach
Forgetting important tasks	Irritable bowel
Mind goes blank	Restlessness, insomnia
Frequent frustration	Muscle tension

Since enough epidemiological evidence exist to link stress with heart disease it is important to trouble shoot stress with the same vigor as we do high cholesterol and hypertension. In fact, the first has been linked with the latter. In multiple population meta-analysis, stress has been linked with both hypertension and high cholesterol. Studies have linked higher mortality rates with: severe anxiety; conflict with hostility; socioeconomic difficulties without social support; frequent outburst of anger; and diagnosed depression. Additionally, individuals that suffer chronic job stress are at elevated risk. Job related stressors include monotonous work, high paced work, job burnout and high levels of responsibility. All of which are correlated with an increased incidence of heart disease.

The mechanism for heart disease from stress is just as complex as the stress response itself. The combination of sympathetic arousal, hypothalamic stimulation, and adrenergic and neurohormonal responses lead to an increase in heart rate,

blood pressure, circulating catecholamines, and platelet activity. All of which contribute to an increase in shearing forces of blood on the endothelial lining of the arterial wall. When this scenario is commonly applied, the endothelial lining becomes injured and the arterial wall damaged, which leads to the development of atherosclerosis. Chronic exposure to emotional stress, much like cigarette smoking, may result in coronary artery occlusion, myocardial ischemia and infarction, vasospasm and increased incidence of ventricular arrhythmias.

Although the arterial wall damage is from chronic stress and not related to specific incidence, there are studies that suggest acute exposure and subsequent emotional responses should not be ignored either. In fact, acute emotional stress, particularly with anger outburst, is clearly associated with angina, silent ischemia, ventricular arrhythmias, and other electrocardiogram abnormalities, all of which can cause sudden cardiovascular event, or death.

In all cases the affect stress has on risk for heart disease and cardiovascular incident makes stress reduction an important component in a health and wellness program. This is of particular importance when working with clients that have risk factors for heart disease. Personal trainers can provide some positive influence on the client by assisting in identifying stressors, initiating dialogue about the stress and working with the client to help resolve the conflict. This may be done through cognitive restructuring, or by employing more physical relaxation techniques during the training, such as autogenic training and related breathing strategies.

In addition to specific stress reduction techniques, accounting for stress within the training program can offer added benefit. Acute exercise can have a positive impact on the body's stress response by reducing state anxiety and increasing muscle relaxation. Distraction from the stress, perceptions of personal control, release of endorphins, interaction with others and physiological changes associated with the training can all assist in stress reduction. Generally during times of higher client stress trainers should avoid heavy resistance training as it can contribute to vessel damage due to the elevated blood pressure responses. Aerobic training and circuit training may be better choices. Trainers should attempt to match the appropriate training mode and intensity with the location of individual along stress continuum. For instance, when training an accountant during tax season, exercise selections within the overall prescription may vary with the perception of stress by the individual. By accounting for external variables trainers can better serve their clients, and make adjustments within the training to accommodate specific training factors.

Stress has an obvious impact on the body in both acute and chronic dosage. To best enhance physical performance and overall wellbeing it is important to put effort into thwarting off its negative effects. Physical activity can contribute positively, but identifying the stressors and attempting to avoid or reduce the source of conflict may best serve to ultimately prevent the consequences of the stress response. The first step is evaluating the quantity and severity of stress in a person's life and then taking the appropriate steps to reduce it. ●

CEU Quiz

Acute Stress

1. Which of the following is an expected physiological response to acute stress?
 - A. Suppressed appetite
 - B. Increased cardiac output
 - C. Sharpened focus
 - D. Increased energy metabolism
 - E. All of the above
2. When the body experiences extensive homeostatic disruption the high demand placed on the cardiovascular system is referred to as:
 - A. Cardiac load
 - B. Cardiac strain
 - C. Myocardial sprain
 - D. Myocardial tension
3. Which of the following factors contribute to a person's capacity for stress?
 - A. Personality traits
 - B. Personal experiences
 - C. Personal coping methods
 - D. All of the above
4. Which of the following is a Physiological Stress Response?
 - A. Withdrawal
 - B. Nervous laughter
 - C. Mental disorganization
 - D. Insomnia
5. Which is not a listed disease associated with chronic stress?
 - A. Hypertension
 - B. High cholesterol
 - C. Obesity
 - D. Atherosclerosis
6. True or False. A single stress related outburst can lead to a sudden cardiovascular event.
 - A. True
 - B. False
7. Which of the following is not a positive effect on the body's stress response associated with acute exercise?
 - A. Increases catecholamine release
 - B. Reduces state anxiety
 - C. Increases muscle relaxation
 - D. Release of endorphins
8. Which of the following exercise selections would not be recommended when a client is experiencing elevated stress levels?
 - A. Moderate aerobic intensity
 - B. Circuit training
 - C. Yoga
 - D. Heavy resistance training
9. What is meant by cognitive appraisal?
 - A. Level of perceived threat to a stressor
 - B. How many stressful events a person can recall
 - C. The identification of situations that have a potential for stress
 - D. All of the above
10. Which of the following is not listed as a general category of stress response?
 - A. Behavioral
 - B. Cognitive
 - C. Emotional
 - D. Social
 - E. Physiological

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



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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