

Chapter 2: Homeostasis and Adaptive Responses to Stressors

TRUE/FALSE

1. Stress can be defined as a threat to homeostasis.

ANS: T

2. Most of the hormones released with stress serve to increase blood glucose.

ANS: T

3. Cortisol is a stress hormone released from the adrenal medulla.

ANS: F

4. Cortisol decreases the inflammatory response.

ANS: T

5. Selye called the “fight-or-flight” response an “alarm reaction” to stress.

ANS: T

6. A coping method is functional if it reduces emotional pain.

ANS: T

7. Both positive and negative life events can produce stress.

ANS: T

8. Stress rarely causes long-term physiologic disorders.

ANS: F

9. High-stress situations are always physiologically harmful.

ANS: F

10. Norepinephrine and epinephrine are the primary mediators of the alarm phase of the stress response.

ANS: T

MULTIPLE CHOICE

1. Indicators that an individual is experiencing stress include all of the following *except*

- a. tachycardia.
- b. diaphoresis.
- c. peripheral vasoconstriction.
- d. pupil constriction.

ANS: D

2. Which of the following normally is *not* secreted in response to stress?
- a. Norepinephrine
 - b. Cortisol
 - c. Epinephrine
 - d. Insulin

ANS: D

3. Allostatic adaptation in response to stress may be considered successful when
- a. stress hormones are no longer secreted.
 - b. heart rate falls below 100 beats/min.
 - c. homeostasis is restored.
 - d. the stress is no longer present.

ANS: C

4. Selye's three phases of the stress response include all of the following *except*
- a. initiation.
 - b. resistance.
 - c. alarm.
 - d. exhaustion.

ANS: A

5. Many of the responses to stress are attributed to activation of the sympathetic nervous system and are mediated by
- a. norepinephrine.
 - b. cortisol.
 - c. glucagon.
 - d. ACTH.

ANS: A

6. Antidiuretic hormone secretion may increase during physiologic stress leading to an increase in
- a. blood sugar.
 - b. urine output.
 - c. serum sodium.
 - d. body fluid volume.

ANS: D

7. The effects of excessive cortisol production include
- a. immune suppression.
 - b. hypoglycemia.

- c. hypovolemia.
- d. inflammatory reactions.

ANS: A

8. All of the following stress-induced hormones increase blood glucose *except*
- a. antidiuretic hormone.
 - b. cortisol.
 - c. growth hormone.
 - d. norepinephrine.

ANS: A

9. In stressful circumstances, the brain releases _____, which may improve mood, reduce pain, and induce sleep.
- a. prolactins
 - b. oxytocins
 - c. dopamines
 - d. endorphins

ANS: D

10. The process of change in an individual in response to altered conditions is called
- a. coping.
 - b. allostasis.
 - c. evolution.
 - d. resistance.

ANS: B