Chapter 01: Introduction to Pathophysiology

Banasik: Pathophysiology, 7th Edition

MULTIPLE CHOICE

1. C.Q. was recently exposed to group A hemolytic Streptococcus and subsequently developed a pharyngeal infection. His clinic examination reveals an oral temperature of 102.3°F, skin rash, dysphagia, and reddened throat mucosa with multiple pustules. He complains of sore throat, malaise, and joint stiffness. A throat culture is positive for Streptococcus, and antibiotics have been prescribed. The etiology of C.Q.'s disease is

a. a sore throat.

b. streptococcal infection.

c. genetic susceptibility.

d. pharyngitis.

ANS: B

Etiology refers to the proposed cause or causes of a particular disease process. A sore throat is the manifestation of the disease process. Genetic susceptibility refers to inherited tendency to develop a disease. Pharyngitis refers to inflammation of the throat and is also a clinical manifestation of the disease process.

2. A 17-year-old college-bound student receives a vaccine against an organism that causes meningitis. This is an example of

a. primary prevention.

b. secondary prevention.

c. tertiary prevention.

d. disease treatment.

ANS: A

Primary prevention is prevention of disease by altering susceptibility or reducing exposure for susceptible individuals by providing vaccination. Secondary prevention is the early detection, screening, and management of the disease. Tertiary prevention includes rehabilitative and supportive care and

attempts to alleviate disability and restore effective functioning. Disease treatment involves management of the disease once it has developed.

3. An obese but otherwise healthy teen is given a prescription for a low-calorie diet and exercise program. This is an example of

a. primary prevention.

b. secondary prevention.

c. tertiary prevention.

d. disease treatment.

ANS: B

Secondary prevention is the early detection, screening, and management of the disease such as prescribing diet and exercise for an individual who has already developed obesity.

Primary prevention is prevention of disease by altering susceptibility or reducing exposure for susceptible individuals. Tertiary prevention includes rehabilitative and supportive care and attempts to alleviate disability and restore effective functioning. Disease treatment involves management of the disease once it has developed.

4. A patient with high blood pressure who is otherwise healthy is counseled to restrict sodium intake. This is an example of

a. primary prevention.

b. secondary prevention.

c. tertiary prevention.

d. disease treatment.

ANS: B

Secondary prevention is the early detection, screening, and management of the disease, such as by prescribing sodium restriction for high blood pressure. Primary prevention is prevention of disease by altering susceptibility or reducing exposure for susceptible individuals. Tertiary prevention includes rehabilitative and supportive care and attempts to alleviate disability and restore effective functioning. Disease treatment involves management of the disease once it has developed.

5. After suffering a heart attack, a middle-aged man is counseled to take a cholesterol-lowering medication. This is an example of

a. primary prevention.

b. secondary prevention.

c. tertiary prevention.

d. disease treatment.

ANS: C

Tertiary prevention includes rehabilitative and supportive care and attempts to alleviate disability and restore effective functioning such as prescribing a cholesterol-lowering

medication following a heart attack. Primary prevention is prevention of disease by altering susceptibility or reducing expUosuSre fNor sTusceptibOle individuals. Secondary prevention is the

early detection, screening, and management of the disease. Disease treatment involves management of the disease once it has developed.

6. A patient has been exposed to meningococcal meningitis, but is not yet demonstrating signs of this disease. This stage of illness is called the stage.

a. prodromal

b. latent

c. sequela

d. convalescence

ANS: B

Incubation refers to the interval between exposure of a tissue to an injurious agent and the first appearance of signs and symptoms. In infectious diseases, this period is often called the incubation (latent) period. Prodromal refers to the appearance of the first signs and symptoms indicating the onset of a disease. These are often nonspecific, such as headache, malaise, anorexia, and nausea, which are associated with a number of different diseases.

Sequela refers to subsequent pathologic condition resulting from a disease. Convalescence is the stage of recovery after a disease, injury, or surgical operation.

7. A disease that is native to a particular region is called

a. epidemic.

b. endemic.

c. pandemic.

d. ethnographic.

ANS: B

A disease that is native to a particular region is called endemic. An epidemic is a disease that spreads to many individuals at the same time. Pandemics are epidemics that affect large geographic regions, perhaps spreading worldwide.

8. In general, with aging, organ size and function

a. increase.

b. decrease.

c. remain the same.

d. are unknown.

ANS: B

In general, with aging, organ size and function decrease.

9. The stage during which the patient functions normally, although the disease processes are well established, is referred to as

a. latent.

b. subclinical.

c. prodromal.

d. convalescence.

ANS: B

The stage during which the patient functions normally, although the disease processes are well established, is called the subclinical stage. The interval between exposure of a tissue to an injurious agent and the fNirUstRapSpIeaNraGnTceBo.f CsigOnMs and symptoms may be called a latent

period or, in the case of infectious diseases, an incubation period. The prodromal period, or

prodrome, refers to the appearance of the first signs and symptoms indicating the onset of a disease. Convalescence is the stage of recovery after a disease, injury, or surgical operation.

MULTIPLE RESPONSE

1. Your patient's red blood cell is slightly elevated today. This might be explained by (Select all that apply.)

a. gender difference.

b. situational factors.

c. normal variation.

d. cultural variation.

e. illness.

ANS: A, B, C, E

Gender, situations (e.g., altitude), normal variations, and illness may all determine red blood cell count. Culture affects how manifestations are perceived (normal versus abnormal).

2. Socioeconomic factors influence disease development because of (Select all that apply.)

a. genetics.

b. environmental toxins.

c. overcrowding.

d. nutrition.

e. hygiene.

ANS: B, C, D, E

Socioeconomic factors influence disease development via exposure to environmental toxins (occupational) and overcrowding, nutrition (over- or undernutrition), and hygiene (e.g., in developing countries). Genetics is not influenced by socioeconomic factors.

TRUE/FALSE

1. When the cause is unknown, a condition is said to be idiopathic ANS: T

Many diseases are idiopathic in nature.

2. The nurse is swabbing a patient's throat to test for streptococcal pharyngitis. The nurse must understand that tests such as this differ in the probability that they will be positive for a condition when applied to a person with the condition; this probability is termed sensitivity.

ANS: T

The sensitivity of any test refers to the probability that the test will be positive when applied to a person with the condition and will not provide a false negative result. In contrast, specificity is the probability that a test will be negative when applied to a person who does not have a given condition.

Chapter 02: Homeostasis, Allostasis, and Adaptive Responses to Stressors Banasik: Pathophysiology, 6th Edition

MULTIPLE CHOICE

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

a. tachycardia.

b. diaphoresis.

c. increased peripheral resistance.

d. pupil constriction.

ANS: D

Pupils dilate during stress from the effects of catecholamines. Tachycardia, diaphoresis, and increased peripheral resistance are indicators of stress and also occur because of catecholamine release.

2. Which is not normally secreted in response to stress?

a. Norepinephrine

b. Cortisol

c. Epinephrine

d. Insulin

ANS: D

Insulin secretion is impaired during stress to promote energy from increased blood glucose. Norepinephrine is secreted during stress as a mediator of stress and adaptation. Cortisol is secreted during stress as a mediator of stress and adaptation and stimulates gluconeogenesis

in the liver to supply the bodUy wSith gNlucTose. EpiOnephrine is secreted during stress as a

mediator of stress and adaptation and increases glycogenolysis and the release of glucose from the liver.

3. Selye's three phases of the stress response include all the following except

a. allostasis.

b. resistance.

c. alarm.

d. exhaustion.

ANS: A

Allostasis is defined as the ability to successfully adapt to challenges. Allostasis may/may not occur in response to stress. Alarm, resistance, and exhaustion are the three phases of the stress response as described by Selye in the general adaptation syndrome.

4. 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

Norepinephrine is secreted in response to activation of the sympathetic nervous system during stress by the adrenal medulla. Cortisol is secreted by the adrenal cortex. Glucagon is secreted by the pancreas. ACTH is secreted by the pituitary gland.

5. The effects of excessive cortisol production include

a. immune suppression.

b. hypoglycemia.

c. anorexia.

d. inflammatory reactions.

ANS: A

Cortisol suppresses immune function and inflammation and stimulates appetite. Cortisol leads to hyperglycemia by stimulating gluconeogenesis in the liver.

6. All the following stress-induced hormones increase blood glucose except

a. aldosterone.

b. cortisol.

c. norepinephrine.

d. epinephrine.

ANS: A

Aldosterone results in water and sodium retention and potassium loss in the urine. It does not affect blood glucose. Cortisol is a glucocorticoid secreted by the adrenal cortex. Cortisol stimulates gluconeogenesis in the liver, thus increasing blood glucose. Norepinephrine inhibits insulin secretion, thus increasing blood sugar. Epinephrine increases glucose release from the liver and inhibits insulin secretion, thus increasing blood glucose.

7. Allostasis is best defined as

a. steady-state.

b. a state of equilibrium, of balance within the organism.

c. the process by which the body heals following disease.

d. the overall process of adaptive change necessary to maintain survival and well-being.

ANS: D

Allostasis refers to the overall process of adaptive change necessary to maintain survival and well-being.

8. The primary adaptive purpose of the substances produced in the alarm stage is

a. energy and repair.