

## Chapter 01: Mechanisms of Disease, Diagnosis, and Treatment

### Frazier and Fuqua: Essentials of Human Diseases and Conditions, 7th Edition

#### MULTIPLE CHOICE

1. Signs of disease
  - a. always cause symptoms.
  - b. rarely correlate with symptoms.
  - c. include abnormal objective findings.
  - d. are always described by the patient.

ANS: C

Signs, or abnormal objective findings, are the evidence of disease found by physical examination and diagnostic testing. Signs of disease often correlate with the symptoms.

REF: p. 2                      OBJ: 2

2. Predisposing factors of disease
  - a. precisely predict the occurrence of disease.
  - b. make a person or group more vulnerable to disease.
  - c. never overlap or occur in combination.
  - d. can all be controlled by prevention.

ANS: B

A person may be susceptible to a greater or lesser degree, because of one or more risk factors that overlap or occur in combination. Predisposing factors include age, gender, lifestyle, environment, heredity, and *immunodeficiency*.

REF: p. 2                      OBJ: 3

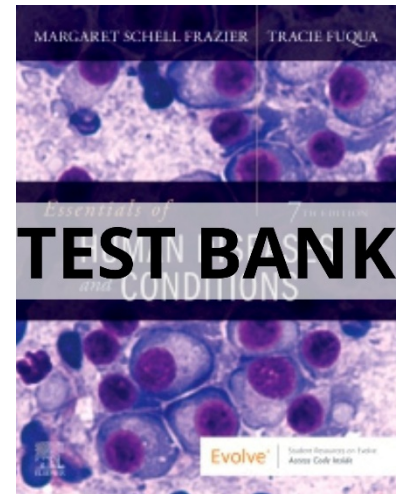
3. Genetic diseases may be
  - a. produced by an abnormality in or mutation of the genetic code in a single gene.
  - b. caused by several abnormal genes.
  - c. caused by the abnormal presence or absence of a chromosome or an alteration of the structure of chromosomes.
  - d. All of the answer options

ANS: D

Genetic predisposition (inheritance) currently is considered a major risk factor. Hereditary factors in disease that appear regularly in successive generations are likely to affect males and females equally. Hereditary or genetic diseases often develop as a result of the combined effects of inheritance and environmental factors.

REF: p. 6                      OBJ: 8

4. Which statement is true of benign tumors?
  - a. Tend to remain encapsulated
  - b. Infiltrate surrounding tissue
  - c. Do not compress surrounding tissue or obstruct organs
  - d. Do not resemble the tissue of origin



ANS: A

*Benign* tumors usually develop slowly and can arise from any tissue. They tend to remain encapsulated and do not infiltrate surrounding tissue.

REF: p. 7                      OBJ: 7

5. Which statement is true of malignant tumors?
- Tend to infiltrate other tissue.
  - Tend to bleed, ulcerate, and become infected.
  - May spread to distant sites in the body.
  - All of the answer options

ANS: D

Malignant tumors can represent a serious threat to the health and life of a person. Cancer cells are variable in appearance and disorderly (anaplastic) and tend to bleed, ulcerate, and become infected. Malignant tumors have the ability to infiltrate and invade the surrounding tissue. Often malignant cells enter the bloodstream or the lymphatic vessels and spread to distant sites in the body leading to tumor growth in other areas of the body.

REF: p. 8                      OBJ: 7

6. Which statement is true regarding the TNM (tumor, nodes, metastasis) cancer staging system?
- Assesses the size and extent of the spread of the primary tumor.
  - Is a grading system based on the degree of differentiation of tumor cells.
  - Both answer options are true.
  - Neither answer options are true.

ANS: A

Although a number of different staging systems exist, the majority of cancers use a TNM system. TNM staging assesses the neoplasm in three different areas: the size or extent of the primary tumor (T), the extent of regional lymph node involvement by the tumor (N), and the number of distant metastases (M).

REF: p. 10                      OBJ: 10

7. The tumor Gleason grade reflects which information about the tumor?
- Stage
  - Degree of abnormal microscopic appearance of the cells
  - Location
  - None of the answer options

ANS: B

The Gleason grade correlates with extent of disease throughout the body and with prognosis. Analysis of prostate tumor histology is performed, and the two predominant patterns are recorded and scored from 1 to 5 (1 represents a well-differentiated histology; 5 is the most poorly differentiated).

REF: p. 12                      OBJ: 10

8. Which statement correctly states the sequence of an allergic response within the body?
- Immunoglobulin E (IgE) antibodies enter the body and produce an allergen.
  - The release of histamine sensitizes mast cells and produces symptoms.

- c. Exposure to allergen stimulates production of IgE antibodies that can subsequently trigger symptoms of allergy.
- d. Histamine produces mast cells, which stimulate plasma cells.

ANS: C

Initial exposure to an allergen, which acts as an antigen (a substance that causes the allergic response), stimulates the production of IgE antibodies, and the person thus is sensitized.

REF: p. 14            OBJ: 14

9. Systemic manifestation(s) of severe allergic responses include which problem?
- a. Arthralgia
  - b. Status asthmaticus
  - c. Anaphylaxis
  - d. All of the answer options

ANS: D

Severe systemic manifestations of allergic responses include anaphylaxis, serum sickness, arthralgia, and status asthmaticus. For example, anaphylaxis (anaphylactic shock), the result of a severe systemic allergic reaction, calls for emergency life-saving intervention.

REF: p. 14            OBJ: 14

10. Which order of steps is most accurate when making a diagnosis?
- a. Medical history, physical examination, diagnostic tests, diagnosis, integration of results, treatment
  - b. Medical history, diagnostic tests, physical examination, treatment plan
  - c. Physical examination, medical history, radiographs, prognosis, integration of all information
  - d. Comparison of normals, physical examination, history, treatment plan, prognosis

ANS: A

Establishing a diagnosis is a decision-making process in which data collected from the medical history, physical examination, and diagnostic tests are analyzed, integrated, and interpreted. A diagnosis provides a logical basis for determining treatment and prognosis.

REF: p. 16            OBJ: 16

11. Mechanical and chemical barriers, the inflammatory response, and the immune response are
- a. risk factors for disease.
  - b. the combined effects of inheritance and environmental factors.
  - c. included in the body's natural defense system against infection.
  - d. agents that damage deoxyribonucleic acid.

ANS: C

The body's natural defense systems against infection include (1) natural mechanical and chemical barriers, such as skin, the cilia, body pH, and normal body flora; (2) the inflammatory response; and (3) the immune response.

REF: p. 3            OBJ: 4

12. Immune disorders are the result of a breakdown in the body's defense system that may generate which problems?

- a. Allergies
- b. Autoimmune diseases
- c. Immunodeficiency disorders
- d. All of the answer options

ANS: D

The immune system is a complex network of specialized cells and organs that has evolved to defend the body against attacks by foreign organisms.

REF: p. 14            OBJ: 13

13. Immunodeficiency disorders result from
- a. an exudative response.
  - b. physical trauma.
  - c. motor vehicle accidents.
  - d. a depressed or absent immune response.

ANS: D

Causative factors can be primary, manifested by a characteristic decrease in the number of T cells and B cells, leaving the body unable to adequately defend itself against infection and tumors.

REF: p. 15            OBJ: 13

14. Which statement(s) is/are correct regarding autoimmune diseases?
- a. The diseases allow the immune system to become self-destructive.
  - b. Many serious diseases have a strong autoimmune component.
  - c. Both answer options are correct.
  - d. Both answer options are incorrect.

ANS: C

In autoimmune diseases, antibodies are formed against self-antigens mistakenly identified as foreign.

REF: p. 15            OBJ: 15

15. *Homeostasis* refers to
- a. disease related to age.
  - b. internal stability of the body.
  - c. a chronic disease process.
  - d. genetic predisposition to disease.

ANS: B

Pathologic conditions involve measurable changes in normal structure and function that threaten the internal stability, or homeostasis, of the body.

REF: p. 2            OBJ: 1

16. Pathogens cause disease by
- a. invasion of living tissue.
  - b. destruction of living tissue.
  - c. intoxication.
  - d. All of the answer options

ANS: D

Infectious diseases are caused by pathogens. The result is tissue damage that has the potential for producing systemic involvement.

REF: p. 3                    OBJ: 6

17. The normal protective physiologic response(s) to tissue injury and disease is/are
- infection.
  - acute inflammation.
  - cachexia.
  - All of the answer options

ANS: B

Acute inflammation, a normal protective physiologic response to tissue injury and disease, is accompanied by redness, heat, swelling, pain, and loss of function. Widespread inflammation is marked by systemic symptoms, such as fever, malaise, and loss of appetite.

REF: p. 3                    OBJ: 4

18. *MRSA* refers to a “superbug” that is
- methicillin-resistant *Staphylococcus aureus*.
  - a common cold virus.
  - a noninfectious, noncontagious skin condition.
  - All of the answer options

ANS: A

In addition to skin infections, *MRSA* can cause fatal pneumonia, bone infections, and septicemia. Many *MRSA* strains of bacteria are currently resistant to several different antibiotics.

REF: p. 4                    OBJ: 5

19. The spread of “superbugs” can be controlled by
- frequent, thorough hand washing.
  - stricter infection control in all health care facilities.
  - considering everyone a risk for infection, especially in hospitals.
  - All of the answer options

ANS: D

Participating medical facilities have implemented active surveillance testing such as nasal swab tests on patient admission. Public education stresses thorough and frequent hand washing across the board as an effective practice of infection control in the community as well.

REF: p. 6                    OBJ: 5

20. Anaphylaxis, serum sickness, arthralgia, and status asthmaticus are
- part of aging.
  - systemic manifestations of severe allergic responses.
  - immunodeficiency disorders.
  - mild allergic conditions.

ANS: B

Severe systemic manifestations of allergic responses include anaphylaxis, serum sickness, arthralgia, and status asthmaticus. For example, anaphylaxis (anaphylactic shock), the result of a severe systemic allergic reaction, calls for emergency life-saving intervention.

REF: p. 14            OBJ: 14

21. Which predisposing factor is related to smoking, excessive drinking, poor nutrition, and lack of exercise?
- Age
  - Environment
  - Heredity
  - Lifestyle

ANS: D

Smoking, excessive drinking, poor nutrition, and lack of exercise are predisposing factors associated with a person's lifestyle.

REF: pp. 2-3            OBJ: 3

22. In preventive health care, the emphasis is on
- accident intervention.
  - freedom of lifestyle.
  - prophylactic medical services.
  - personal rights.

ANS: C

Current statistical evidence indicates that positive personal health behavior, in conjunction with prophylactic medical services, may reduce the mortality rate associated with certain diseases, such as cardiovascular disease.

REF: p. 24            OBJ: 20

23. The single greatest avoidable cause of death and disease is
- smoking tobacco and exposure to secondhand smoke.
  - insufficient exercise.
  - a diet high in sodium.
  - poor personal hygiene.

ANS: A

Of particular concern is scientific evidence that smoking tobacco and exposure to secondhand smoke is the *single greatest avoidable cause of death and disease*. Public education in this regard has led to laws that prohibit smoking in many restaurants and other public arenas.

REF: p. 24            OBJ: 20

24. Vaccines that may be given to prevent cancer include
- human papilloma virus (HPV) vaccine to protect against cervical cancer.
  - hepatitis B vaccine that helps prevent liver cancer.
  - Both answer options
  - Neither answer options

ANS: C

There are currently some vaccines that may be given to prevent cancer, such as the HPV vaccine that protects against cervical cancer and the hepatitis B vaccine that helps to protect against liver cancer.

REF: p. 12            OBJ: 9

25. Which statement(s) is/are true about understanding a patient's pain?
- Pain is subjective.
  - Pain has individualized effects.
  - Pain is a necessary entity in life.
  - All of the answer options are true.

ANS: D

Pain is subjective, individualized, and perceived only by the individual experiencing it. It can be physiologic or psychologic. A variety of pain rating scales, using numbers and figures, are sometimes used to help measure an individual's perception of pain intensity and quality.

REF: p. 21            OBJ: 19

26. Osteopathy
- is not practiced by trained medical physicians.
  - emphasizes the body's natural process to heal and provide well-being.
  - does not use manipulation techniques.
  - All of the answer options

ANS: B

Osteopathy is probably the most widely accepted form of alternative medicine. In the United States, osteopathic physicians (Doctors of Osteopathy) are trained medical doctors who emphasize stimulation of the body's natural processes as a means to promote healing and well-being. In addition to traditional medical and surgical concepts, osteopathic physicians use manipulation techniques to realign body structure, thereby restoring balance and promoting healing.

REF: p. 25            OBJ: 21

27. Pain may be described as
- dull and aching, burning, or throbbing.
  - shooting, dull, stabbing.
  - frightening, intense, tiring.
  - All of the answer options

ANS: D

The way a patient describes his or her pain is taken seriously. In the clinical setting, assessment of a patient's pain is noted when vital signs are taken. This information is helpful in tracking the patient's response to treatment.

REF: p. 21            OBJ: 19

28. The holistic concept of medical care focuses on
- the needs of the whole person: spiritual, cognitive, social, physical, and emotional.
  - narrowly defining physical pathologic changes.
  - discounting the needs of a patient as a whole to expedite healing.
  - All of the answer options

ANS: A

The physical and psychologic well-beings of the individual are dependent on each other. It is this established mind-and-body interaction that compels the holistic health care provider to consider the patient as a whole person.

REF: p. 19            OBJ: 17

29. Which statement(s) is/are correct concerning chemotherapy treatment for cancer?
- Chemotherapy is most effective against the rapidly developing cells of cancer.
  - Many of the side effects of chemotherapy are caused by destruction of some normal cells in the body.
  - Both answer options
  - Neither answer options

ANS: C

Chemotherapy involves the use of medicines to destroy cancer cells. Most of the drugs affect cell replication, so chemotherapy is most effective against rapidly dividing cells such as cancer cells. Normal cells in other parts of the body that are known to divide rapidly also are often destroyed, and this accounts for many of the classic side effects of chemotherapy.

REF: p. 12            OBJ: 11

30. Recognizing the aspects of the cultural diversity of patients includes
- language, religious beliefs, views about health issues, and life experiences.
  - dietary preferences.
  - death rituals and other traditions.
  - All of the answer options

ANS: D

One important aspect of holistic medicine is recognition of the cultural diversity of patients. The United States continues to grow more culturally diverse. Health care providers must be aware of the challenges of caring for such a diverse population.

REF: p. 20            OBJ: 18

31. Patient education
- helps improve patient and family coping.
  - is interactive.
  - is based on the patient's plan of care.
  - All of the answer options

ANS: D

The concept of patient teaching is based on patient-centered care, with the patient being a partner in the process of learning skills, solving problems, and preventing complications. Patient education should give an individual the confidence needed to take responsibility for his or her health or recovery.

REF: p. 28            OBJ: 23

**TRUE/FALSE**