

## **Chapter 1, Introduction to Pathophysiology**

1. Which term is defined as the study of the mechanisms of human body functioning?
  - a. Pathology
  - b. Physiology
  - c. Anatomy
  - d. Pathophysiology

ANS: B

Feedback: Physiology is the study of the mechanisms of human body functioning. Pathology is the study of changes in cells and tissues as a result of injury or disease. Anatomy is the study of body structures. Pathophysiology is the study of mechanisms of disease.

PTS: 1

REF: Page and Header: 2,

Defining Pathophysiology OBJ: 1

NAT: Client Needs: Physiological Integrity: Physiological

Adaptation TOP: Chapter: 1 KEY: Integrated

Process: Teaching/Learning BLM: Cognitive Level: Remember

NOT: Multiple Choice

2. Which statement **best** describes the health–illness continuum?
  - a. It is a dynamic entity.
  - b. It is based on objective data.
  - c. It represents two exclusive categories.
  - d. It is focused on physical well-being.

ANS: A

Feedback: Health and illness are part of a dynamic continuum. It is based on one's perceptions and is subjective. There are a variety of descriptions one can use along the continuum to describe their current state. These range from "extremely healthy" to "extremely ill." Because it is a dynamic continuum, it represents more than two exclusive categories. The health–illness continuum includes the body, mind, and spirit, not just physical well-being.

PTS: 1

REF: Page and Header: 4, Individual Health

OBJ: 1

NAT: Client Needs: Health Promotion and Maintenance

TOP: Chapter: 1

KEY: Integrated Process: Teaching/Learning

BLM: Cognitive Level: Remember

NOT: Multiple Choice

3. Which concept is often equated with health?
  - a. Homeostasis
  - b. Disease
  - c. Objectivity
  - d. An uneventful physical examination

ANS: A

Feedback: Homeostasis is an important body goal and is often reflected in the client's perception of the health–illness continuum. Disease is the functional impairment of cells, tissues, organs, or organ systems. Because health is reflected in the client's perception of the health–illness continuum, it is subjective, not objective. An uneventful physical examination would only be on aspect of health. The health–illness continuum includes the body, mind, and spirit.

PTS: 1 REF: Page and Header: 4, Individual Health  
OBJ: 1 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

4. Which term is defined as the functional impairment of cells, tissues, organs, or organ systems?
- Injury
  - Pathophysiology
  - Disease
  - Syndrome

ANS: C

Feedback: Disease is defined as the functional impairment of cells, tissues, organs, or organ systems. Injury causes changes to cells, pathophysiology refers to the study of mechanisms of disease, and syndrome is used to describe specific conditions with predictive patterns.

PTS: 1 REF: Page and Header: 5, Population Health  
OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

5. The nurse is planning education on the importance of wearing a helmet when riding a bike. What level of prevention is the nurse describing?
- Primary
  - Secondary
  - Tertiary
  - Quaternary

ANS: A

Feedback: Primary prevention, such as wearing a bike helmet focuses on protecting people from developing a disease or injury. Secondary prevention is the early detection of disease through screening and early treatment. Tertiary prevention focuses on rehabilitation after diagnosis of a disease or injury. Quaternary prevention relates to overmedicalization.

PTS: 1 REF: Page and Header: 5, Disease Prevention  
OBJ: 4 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Apply NOT: Multiple Choice

6. A nurse in a rehabilitation unit is assisting a client who has had a stroke with relearning how to perform activities of daily living. What level of prevention is the nurse implementing?

- a. Primary
- b. Secondary
- c. Tertiary
- d. Quaternary

ANS: C

Feedback: Tertiary prevention focuses on rehabilitation after diagnosis of a disease or injury, such as rehabilitation following a stroke. Primary prevention focuses on protecting people from developing a disease or injury. Secondary prevention is the early detection of disease through screening and early treatment. Quaternary prevention relates to overmedicalization.

PTS: 1 REF: Page and Header: 5, Disease Prevention  
OBJ: 2 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Apply NOT: Multiple Choice

7. What term describes how a disease starts and develops, from onset to the point when the disease presents itself?
- a. Etiology
  - b. Pathophysiology
  - c. Pathogenesis
  - d. Pathology

ANS: C

Feedback: Pathogenesis is the term to describe how a disease starts and develops, from onset to the point when the disease presents itself. Etiology refers to the precise cause of a disease. Pathophysiology is the term used to define the mechanisms of human body functioning. Pathology refers to studying the causes and effects of disease.

PTS: 1 REF: Page and Header: 2, Pathogenesis OBJ: 1  
NAT: Client Needs: Health Promotion and Maintenance TOP: Chapter: 1  
KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

8. A client has been diagnosed with an illness and no one is sure of the cause. What term describes this condition?
- a. Idiopathic
  - b. Iatrogenic
  - c. Nosocomial
  - d. Etiologic

ANS: A

Feedback: Idiopathic is the term used to describe disease with an unknown etiology. Iatrogenic disease is inadvertently caused by medical treatment. Nosocomial disease results from exposure in the healthcare environment. Etiologic disease has a precise cause.

PTS: 1 REF: Page and Header: 2, Etiology OBJ: 1  
NAT: Client Needs: Health Promotion and Maintenance TOP: Chapter: 1  
KEY: Integrated Process: Teaching/Learning

BLM: Cognitive Level: Remember

NOT: Multiple Choice

9. The nurse is caring for a client with a family history of cardiovascular disease. Which finding would the nurse document as a symptom of cardiovascular disease?
- Chest pain
  - Elevated heart rate
  - Fever
  - Obesity

ANS: A

Feedback: Symptoms are indicators that are reported by the ill individual and are considered the subjective manifestations because they cannot be directly observed by the practitioner. Heart rate, fever, and weight can all be measured by the provider. Chest pain is subjective and would be described by the client.

PTS: 1

REF: Page and Header: 2, Clinical Manifestations

OBJ: 1

NAT: Client Needs: Health Promotion and Maintenance

TOP: Chapter: 1

KEY: Integrated Process: Teaching/Learning

BLM: Cognitive Level: Apply

NOT: Multiple Choice

10. What term describes the signs and symptoms associated with disease?
- Clinical manifestations
  - Precipitating factors
  - Insidious
  - Subacute

ANS: A

Feedback: Clinical manifestations include signs and symptoms associated with disease. Precipitating factors, also called triggers, promote the onset of clinical manifestations. Insidious is used to describe clinical manifestations that do not have a clear onset. Subacute refers to diseases with severity and duration that falls between acute and chronic.

PTS: 1

REF: Page and Header: 2, Clinical Manifestations

OBJ: 1

NAT: Client Needs: Physiological Integrity: Physiological Adaptation

TOP: Chapter: 1

KEY: Integrated Process: Teaching/Learning

BLM: Cognitive Level: Remember

NOT: Multiple Choice

11. Which assessment is effective in detecting asymptomatic disease?
- Client history
  - Screening tests
  - Family pedigree
  - Observation

ANS: B

Feedback: Screening tests are often used to identify disease that does not present with signs and symptoms. Family pedigree, observation, and eliciting client history are not used to identify asymptomatic disease. They may be used to collect data and determine the need for further screening but alone are not effective in detecting disease.

PTS: 1 REF: Page and Header: 2, Clinical Manifestations  
OBJ: 1 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

12. Which symptom is considered a local manifestation associated with a paper cut?
- a. Fever
  - b. Pain
  - c. Headache
  - d. Hypertension

ANS: B

Feedback: Local refers to those manifestations that are found directly at the site of disease and are confined to that specific area. Pain would be considered a local manifestation associated with a paper cut. The other signs and symptoms listed refer to systemic manifestations.

PTS: 1 REF: Page and Header: 2, Clinical Manifestations  
OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Apply NOT: Multiple Choice

13. Which symptom is a systemic manifestation of influenza?
- a. Fever
  - b. Chest pain
  - c. Cough
  - d. Runny nose

ANS: A

Feedback: Systemic manifestations present throughout the body and are not confined to one area. Fever would be an example of a systemic manifestation. The other options are manifestations that occur directly at the site; these are considered local manifestations.

PTS: 1 REF: Page and Header: 2, Clinical Manifestations  
OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Apply NOT: Multiple Choice

14. Which term indicates the forecast or prediction of how an individual will proceed through the disease process?
- a. Morbidity
  - b. Prognosis
  - c. Metastasis
  - d. Remission

ANS: B

Feedback: The prognosis for a client is the forecast or prediction of how the individual will proceed through the disease process. Morbidity is a negative outcome of disease that affects quality of life. Metastasis refers to the spread of disease from one part of the body to another. Remission refers to the reduction or disappearance of signs and symptoms associated with a disease.

PTS: 1 REF: Page and Header: 3, Diagnosis and Treatment  
OBJ: 1 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Apply NOT: Multiple Choice

15. While reviewing the history of a new client to the clinic, the nurse notes a strong family history of cardiac disease. To focus on minimizing this disease, which topic(s)/factor(s) will the nurse's educational focus be during this visit? Select all that apply.
- Analyzing typical dietary intake
  - Controlling weight
  - Encouraging activity
  - Having the client discuss genetics with family
  - Maintaining blood pressure within normal limits
  - Focusing on a high-protein diet with minimal carbohydrates

ANS: A, B, C, E

Feedback: The presence of select risk factors increases a person's chances of developing coronary heart disease. Modifiable (therefore teachable topics) factors include elevated blood cholesterol level, elevated blood pressure, cigarette smoking, obesity, and sedentary lifestyle. Nonmodifiable factors that cannot be changed by behavior include one's genetic predisposition, family history, and gender. A high-protein with low-carbohydrate diet does not necessarily align with dietary approaches to stop hypertension (DASH), because many sources of protein are also high in fat and calories.

PTS: 1 REF: Page and Header: 2, Understanding Pathophysiology  
OBJ: 3 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Apply NOT: Multiple Select

16. Which nurse's statement **best** demonstrates understanding of the phrase, "People should not be defined by their pathophysiology?"
- "My fractured tibia client in room 702."
  - "The skull fracture child in room number 4."
  - "The client admitted with uncontrolled hypertension."
  - "The alcoholic client who has cirrhosis."

ANS: C

Feedback: An important thing to keep in mind when caring for individual clients is that people should not be defined by their pathophysiology. Calling a client by their disease state ignores the holistic physical, spiritual, emotional, and psychological components that comprise all of us. Health professionals should avoid calling clients "alcoholics" or "fractured tibia client in room 702" and replace these labels with "the client with alcohol use disorder" or "the client in room 702 with a fractured tibia."

PTS: 1 REF: Page and Header: 4, Applying Pathophysiology  
OBJ: 3  
NAT: Client Needs: Safe and Effective Care Environment: Management of Care  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Apply NOT: Multiple Choice

17. The current statistics show that a U.S. state has 8,746 cases of an acute disease per 100,000 people. This number represents which epidemiologic finding?
- Incidence
  - Morbidity
  - Prevalence
  - Homeostasis

ANS: A

Feedback: Health statistics are an important aspect of population-focused healthcare. Incidence is the number of new cases within a given time. Incidence represents the probability that a disease will occur in a certain population. Prevalence is the number or percentage of a population living with a particular disease at a given time. Morbidity refers to having a disease or a symptom of disease, or to the amount of disease within a population. Homeostasis is the tendency toward a relatively stable equilibrium between interdependent elements, especially as maintained by physiologic processes.

PTS: 1 REF: Page and Header: 4, Applying Pathophysiology  
OBJ: 5 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Understand NOT: Multiple Choice

18. The community health nurse provides a community clinic to provide education on proper infant car seat installation. Which type of disease prevention is the nurse practicing?
- Primary
  - Secondary
  - Tertiary
  - Mandatory

ANS: A

Feedback: Disease prevention may be described as primary, secondary, or tertiary. Primary prevention prohibits a disease from occurring (i.e., proper installation of an infant car seat to prevent injury in case of a vehicle accident). Secondary prevention is the early detection of disease through screening and early treatment (i.e., annual screening for breast cancer). Tertiary prevention is rehabilitation of a client after detection of disease (i.e., physical therapy after stroke). Disease prevention is not mandatory; however, reporting of specific diseases is mandated by law for the purpose of preventing spread of those diseases.

PTS: 1 REF: Page and Header: 4, Applying Pathophysiology  
OBJ: 4 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Understand NOT: Multiple Choice

19. What is epigenetics?
- The study of how genetics began

- b. The study of epidemiology and genetics
- c. The study of genetic control by factors other than DNA sequencing
- d. The study of DNA sequencing and its impact on genetic control

ANS: C

Feedback: Epigenetics is the study of genetic control by factors other than DNA sequencing. Epigenetics controls the “on” and “off” switch of genes and which proteins are transcribed. The other answer choices do not reflect the definition of epigenetics.

PTS: 1 REF: Page and Header: 4, Applying Pathophysiology  
OBJ: 1 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

20. Which example **best** represents pathogenesis of disease?
- a. Venous thrombosis leading to myocardial infarction
  - b. Increased rates of stroke in those with hypertension
  - c. The rate of influenza spread at any given time
  - d. Liver cell destruction occurring long before cirrhosis of the liver

ANS: D

Feedback: Pathogenesis is best defined as the beginning of disease. It encompasses the time of when the disease process begins to the point of manifestation of the disease. Destruction of the liver cells long before cirrhosis is an example of pathogenesis. Incidence is the rate of occurrence of a disease at any given time. Etiology is the cause of a particular disease. Risk factors are those factors which increase the chance of a client having a disease.

PTS: 1 REF: Page and Header: 2, Understanding Pathophysiology  
OBJ: 1 NAT: Client Needs: Health Promotion and Maintenance  
TOP: Chapter: 1 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Understand NOT: Multiple Choice



## **Chapter 2, Altered Cells and Tissues**

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1. Which term indicates a fully differentiated body part with specialized functions?
  - a. Cell
  - b. Organ
  - c. Tissue
  - d. Organ system

ANS: B

Feedback: Organs are defined as fully differentiated body parts with specialized functions. Organ systems are groups of organs working together for a specific function. Cells are the smallest structural and functional units of the human organism. Tissues are groups of similar cell types that combine to form a specific function.

PTS: 1 REF: Page and Header: 9, Introduction OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 2 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

2. The charge nurse is educating a group of staff nurses about plasma membranes. Which description of the plasma membrane is accurate?
  - a. Contains a single layer of lipids with polar heads
  - b. Contains a single layer of lipids with nonpolar heads
  - c. Contains a bilayer of lipids with polar heads
  - d. Contains a bilayer of lipids with nonpolar heads

ANS: C

Feedback: The plasma membrane represents an organized structure composed of lipids, carbohydrates, and proteins arranged in a bilayer. The lipid bilayers are mainly made up of phospholipids. The phosphate connected to the lipid structure is known as the “head.” The heads are polar or hydrophilic (having an affinity to water).

PTS: 1 REF: Page and Header: 10, Plasma (Cell) Membrane  
OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 2 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Understand NOT: Multiple Choice

3. Which proteins in the plasma membrane project into either the intracellular or the extracellular environment?
  - a. Transmembrane proteins
  - b. Integral proteins
  - c. Peripheral proteins
  - d. Channel proteins

ANS: C

Feedback: Peripheral proteins do not pass through the entire membrane, projecting into either the intracellular or the extracellular environment. Proteins that pass through the entire membrane are known as transmembrane proteins, allowing communication and transport between the extracellular and intracellular environments. Integral proteins are a specific type of transmembrane protein that, because of the tight binding to lipid tails, becomes part of the membrane itself. Integral proteins often form channels that allow for the transport of ions (atoms with an electrical charge) across the plasma membrane.

PTS: 1 REF: Page and Header: 10, Plasma (Cell) Membrane  
OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 2 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

4. Which organelle is responsible for synthesis of proteins by bound ribosomes?
- Rough endoplasmic reticulum
  - Smooth endoplasmic reticulum
  - Golgi apparatus
  - Lysosome

ANS: A

Feedback: The rough endoplasmic reticulum contains ribosomes bound to its membrane that synthesize protein and produces lysosomal enzymes (acid hydrolyses). Smooth endoplasmic reticulum is responsible for the synthesis of lipids, lipoproteins, and steroid hormones, and the regulation of intracellular calcium. The Golgi apparatus prepares substances produced by the endoplasmic reticulum for secretion out of the cell. Lysosomes digest cellular debris with hydrolytic enzymes.

PTS: 1 REF: Page and Header: 11, Cytoplasm and Organelles  
OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 2 KEY: Integrated Process: Teaching/Learning  
BLM: Cognitive Level: Remember NOT: Multiple Choice

5. Which component is part of the cellular cytoskeleton?
- Mitochondria
  - Gene
  - Cytoplasm
  - Actin

ANS: D

Feedback: The main cytoskeleton components include microtubules (thin protein structures composed of tubulin) and microfilaments. Thin microfilaments comprise the protein actin. Intermediate microfilaments comprise filaments with a diameter sized between thin and thick filaments. Thick microfilaments comprise the protein myosin. The cellular cytoskeleton does not include mitochondria, cytoplasm, or genes.

PTS: 1 REF: Page and Header: 12, Cytoskeleton OBJ: 1  
NAT: Client Needs: Physiological Integrity: Physiological Adaptation  
TOP: Chapter: 2 KEY: Integrated Process: Teaching/Learning