

Chapter 03: Physiologic Changes Test Bank

MULTIPLE CHOICE

1. Why does the nurse modify the environment to keep it warmer for the older adult?
 - a. A change in the metabolic rate
 - b. Decreased subcutaneous tissue
 - c. Changes in the musculoskeletal system
 - d. A weakened peripheral vascular system

ANS: B

The reduction of subcutaneous tissue as an age-related change causes sensitivity to cold because it is the main insulator of the body.

DIF: Cognitive Level: Application REF: pp. 32-33 OBJ: 1
TOP: Sensitivity to Cold KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

2. A 75-year-old male is worried that his wartlike dark macules with distinct borders are melanomas. What would be the most likely cause for the macules?
 - a. Senile lentigo
 - b. Cutaneous papillomas
 - c. Seborrheic keratoses
 - d. Xerosis

ANS: C

Dark, slightly raised macules are seborrheic keratoses, which may be mistaken for melanomas.

DIF: Cognitive Level: Comprehension REF: p. 32 OBJ: 1
TOP: Seborrheic Keratosis KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

3. The nurse is accompanying a group of older adults on a July 4th outing to monitor heat prostration. What factor is related to heat intolerance in the older adult?
 - a. An increase in melanin
 - b. A reduction of perspiration
 - c. A reduction in body temperature
 - d. Increased capillary fragility

ANS: B

Reduction in perspiration related to reduced sweat gland function results in possible heat intolerance from an inability to cool the body by evaporation.

DIF: Cognitive Level: Analysis REF: p. 33 OBJ: 2
TOP: Heat Intolerance KEY: Nursing Process Step: Assessment
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

4. The nurse cautions the Certified Nursing Assistants (CNAs) to use care when transferring or handling older adults. The nurse understands that the vascular fragility of the older adult can result in which of the following conditions?
- Altered blood pressure
 - Pressure ulcers
 - Pruritus
 - Senile purpura

ANS: D

Increased capillary fragility results in subcutaneous hemorrhage or senile purpura from careless handling by caregivers.

DIF: Cognitive Level: Comprehension REF: p. 33 OBJ: 7
TOP: Senile Purpura KEY: Nursing Process Step: Planning
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

5. Which symptom would be a characteristic of a stage I pressure ulcer on an older adult's coccyx?
- Clear blister
 - Nonblanchable area of erythema
 - Scaly abraded area
 - Painful reddened area

ANS: B

A red nonblanchable area is indicative of a stage I pressure ulcer.

DIF: Cognitive Level: Analysis REF: p. 34 OBJ: 5
TOP: Pressure Ulcers KEY: Nursing Process Step: Assessment
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

6. The Certified Nursing Assistant (CNA) caring for an older adult asks if the yellow, waxy, crusty lesions on the patient's axilla and groin are contagious. Which response shows the nurse's understanding for the cause of the lesions?
- "Yes. It is cellulitis caused by bacteria."
 - "No. It is seborrheic dermatitis caused by excessive sebum."
 - "Yes. It is an indication of scabies."
 - "No. It is the lesion seen with basal cell carcinoma."

ANS: B

Seborrheic dermatitis is a bothersome skin condition resulting from an excess of sebum.

DIF: Cognitive Level: Application REF: p. 35 OBJ: 5
TOP: Seborrheic Dermatitis KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

7. Why would a nurse lead a group of postmenopausal women on a daily 15-minute "walking tour" through the long-term care facility?
- To improve bone strength
 - To orient them to their surroundings
 - To improve their socialization
 - To increase their appetite

ANS: A

Stress to long bones by weight-bearing and walking will increase bone strength.

DIF: Cognitive Level: Analysis

REF: p. 35

OBJ: 7

TOP: Bone Strength

KEY: Nursing Process Step: Implementation

MSC: NCLEX: Physiological Integrity: Physiological Adaptation

8. A 70-year-old woman asks, "How in the world can my bones be brittle when I eat all the right foods?" Which response by the nurse would be the most informative?
- "Calcium loss is expected in the older adult."
 - "Calcium is continuously withdrawn from bone for nerve and muscle function."
 - "Smoking and alcohol consumption speed calcium loss from the bones."
 - "Walking and standing increase calcium loss from the bone."

ANS: B

Calcium is constantly withdrawn from the bone for nerve and muscle function and clotting needs.

DIF: Cognitive Level: Comprehension

REF: p. 35

OBJ: 3

TOP: Calcium Loss

KEY: Nursing Process Step: Implementation

MSC: NCLEX: Physiological Integrity: Physiological Adaptation

9. A 70-year-old woman complains, "I weigh exactly the same as I did when I wore a size 10 and now I can barely squeeze into a size 16." Which statement by the nurse would most correctly explain the size change to the woman?
- "Metabolism in the older adult creates increased adipose tissue."
 - "Postmenopausal women gain adipose tissue related to loss of calcium."
 - "Decrease in muscle mass is replaced with adipose tissue."
 - "Kyphosis causes a redistribution of weight."

ANS: C

Decrease in muscle mass is replaced with adipose tissue, which frequently changes the appearance of the body, but not the weight.

DIF: Cognitive Level: Application

REF: p. 38

OBJ: 4

TOP: Loss of Muscle Mass

KEY: Nursing Process Step: Implementation

MSC: NCLEX: Physiological Integrity: Physiological Adaptation

10. What would be the most helpful response to a 70-year-old postmenopausal woman who asks whether her hormone replacement therapy (HRT) will prevent bone loss?
- "No. HRT is not helpful after the age of 60."
 - "Yes. HRT will prevent bone loss but can cause a stroke, heart attack, or breast cancer."
 - "No. HRT is reliant on some natural estrogen production from the ovaries."
 - "Yes. HRT is a widely accepted therapy for prevention of bone loss."

ANS: B

HRT is helpful to prevent bone loss, but the risks of cardiovascular complications and cancer have made the choice of HRT controversial.

DIF: Cognitive Level: Analysis

REF: p. 38

OBJ: 4

TOP: Hormone Replacement Therapy

KEY: Nursing Process Step: Implementation

MSC: NCLEX: Physiological Integrity: Physiological Adaptation

11. What are Heberden nodes?
- Yellow longitudinal lines in the nails
 - Thickened discolored fingernails
 - Darkened areas under the fingernail
 - Bony enlargements of distal joints of the fingers

ANS: D

Heberden nodes are bony enlargements of the distal joints of the fingers associated with osteoarthritis.

DIF: Cognitive Level: Knowledge REF: p. 39 OBJ: 5
TOP: Heberden Nodes KEY: Nursing Process Step: N/A
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

12. Which care plan modification would be the most beneficial for a 62-year-old woman who is suffering from a flare in her rheumatoid arthritis?
- Increase fluid intake
 - Schedule several rest periods to balance activity
 - Reduce salt in the diet
 - Assist with rigorous finger extension exercises

ANS: B

Balancing rest and activity allows the resident to remain relatively flexible. Joints may be splinted to reduce contracture.

DIF: Cognitive Level: Application REF: p. 39 OBJ: 5
TOP: Rheumatoid Arthritis KEY: Nursing Process Step: Planning
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

13. What is the pathophysiology of emphysema?
- Constriction of the bronchial tree, excessive mucus, and nonproductive cough
 - Calcification of the alveoli and a dry cough
 - Overinflation of the alveoli, making them ineffective for gas exchange
 - Inflammation of the trachea and bronchioles, excessive mucus, and productive cough

ANS: C

Emphysema causes overinflation of the nonelastic alveoli, which disallows gas exchange in the affected alveoli and results in reduced oxygenation.

DIF: Cognitive Level: Comprehension REF: p. 41 OBJ: 5
TOP: Emphysema KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

14. What is the pathophysiology of a myocardial infarct?
- A portion of the myocardium necroses and scars over.
 - The coronary vessels are narrowed during the attack.
 - The ischemic myocardium causes pain during the attack but is able to regenerate.
 - There is damage to the myocardium but no serious alteration of cardiac output.

ANS: A

The myocardium necroses and scars and does not regenerate. The degree of heart damage is related to the amount of necrosis.

DIF: Cognitive Level: Comprehension REF: p. 45 OBJ: 5
TOP: Myocardial Infarct KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

15. Which of the following assessments are the cardinal signs and symptoms of congestive heart failure?
- Dyspnea and edema
 - Myocardial pain and hypotension
 - Ventricular arrhythmias and cyanosis
 - Atrial arrhythmias and polycythemia

ANS: A

Dyspnea and generalized edema are the cardinal signs and symptoms of congestive heart failure.

DIF: Cognitive Level: Application REF: p. 46 OBJ: 5
TOP: Congestive Heart Failure KEY: Nursing Process Step: Assessment
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

16. What is a cause of pernicious anemia?
- An iron deficiency
 - A deficiency of vitamin B₁₂
 - Low serum potassium level
 - Blood loss

ANS: B

Pernicious anemia results from a deficiency of vitamin B₁₂.

DIF: Cognitive Level: Knowledge REF: p. 49 OBJ: 5
TOP: Pernicious Anemia KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

17. What would be an acceptable alteration in the plan of care for a patient with a hiatal hernia who is experiencing gastrointestinal reflux?
- Encouraging the patient to lie down after meals
 - Drinking two full glasses of liquid after the evening meal
 - Eating smaller, more frequent meals
 - Using caffeine drinks to assist with digestion

ANS: C

Eating smaller and more frequent meals does not enlarge the stomach.

DIF: Cognitive Level: Analysis REF: p. 52 OBJ: 5
TOP: Hiatal Hernia KEY: Nursing Process Step: Planning
MSC: NCLEX: Physiological Integrity: Reduction of Risk

18. The nurse assesses a diabetic patient and finds the patient to be pale, edematous, and listless with a blood urea nitrogen (BUN) level of 35 mg/dL and a creatinine level of 4 mg/dL. What would the results of the nursing assessment indicate?
- Diverticulitis
 - Congestive heart failure
 - Chronic renal failure
 - Benign prostatic hypertrophy

ANS: C

The increased BUN and creatinine levels indicate renal failure.

DIF: Cognitive Level: Application REF: p. 55 OBJ: 6
TOP: Renal Failure KEY: Nursing Process Step: Assessment
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

19. A person with Parkinsons disease has a nursing diagnosis of “nutrition, less than body requirements related to difficulty swallowing.” What change would the nurse make in the nursing care plan?
- Feed the patient at each meal.
 - Place the patient in a semi-Fowler position for mealtime.
 - Offer a thick, high-nutrition shake as a snack.
 - Encourage the patient to drink a sip of water after each bite of solid food.

ANS: C

Thick shakes are easier to swallow without aspiration and will also improve nutrition.

DIF: Cognitive Level: Application REF: p. 57 OBJ: 5
TOP: Parkinson Disease KEY: Nursing Process Step: Planning
MSC: NCLEX: Physiological Integrity: Reduction of Risk

20. A person who experienced a hemorrhagic cardiac vascular accident (CVA) to the left hemisphere would demonstrate which type of symptoms?
- Language disturbances
 - Poor impulse control
 - Inappropriate affect
 - Confabulation

ANS: A

A left hemisphere CVA would most likely cause language disturbances such as aphasia, agraphia, or alexia.

DIF: Cognitive Level: Application REF: p. 60 OBJ: 5
TOP: Cerebrovascular Accident KEY: Nursing Process Step: Planning
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

21. How should the nurse provide written discharge instructions for a patient with macular degeneration?
- Write the instructions in bold print.
 - Adjust the table and light to assist the patient to use peripheral vision to read.
 - Place written document directly in front of the patient to read.
 - Read the document to the patient.

ANS: B

Assist the patient to use peripheral vision because central vision is lost in macular degeneration.

DIF: Cognitive Level: Application REF: p. 63 OBJ: 5
TOP: Macular Degeneration KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

22. What is a symptom of inadequate insulin coverage in a patient with diabetes mellitus type I?
- Diminished urine output
 - Ketones in the urine
 - Shallow and slow respirations
 - Extreme diaphoresis

ANS: B

When there is inadequate insulin coverage for the type 1 diabetic, the diabetic lacks the glycogen to use as energy and attempts to use fat, which creates an acid in the form of ketones.

DIF: Cognitive Level: Comprehension REF: pp. 68-69 OBJ: 5
TOP: Diabetes Mellitus Type 1 KEY: Nursing Process Step: Assessment
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

23. An 80-year-old extended-care resident comes to the nurse asking for a bandage for a bleeding, dark pigmented mole with irregular shape and border. What does the nurse suspect?
- Melanoma
 - Basal cell carcinoma
 - Cutaneous papilloma
 - Senile lentigo

ANS: A

Melanomas are dark, irregularly shaped lesions that may cause itching or bleeding. These are potentially deadly and should be reported to obtain quick treatment.

DIF: Cognitive Level: Comprehension REF: pp. 33-34 OBJ: 5
TOP: Melanoma KEY: Nursing Process Step: Assessment
MSC: NCLEX: Health Promotion and Maintenance: Prevention and Early Detection of Disease

MULTIPLE RESPONSE

24. What factors influence the timing and extent of age-related changes? (*Select all that apply.*)
- Health maintenance
 - Ethnicity
 - Heredity
 - Attitude
 - Environment

ANS: A, C, E

Heredity, environment, and health maintenance affect the timing and magnitude of age-related changes.

DIF: Cognitive Level: Comprehension REF: pp. 31-32 OBJ: 1

TOP: Influences on Age-Related Changes
KEY: Nursing Process Step: Planning
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

25. What should be avoided by an 82-year-old man with rosacea? (*Select all that apply.*)
- Stress
 - Dairy products
 - Sun exposure
 - Spicy foods
 - Alcohol consumption

ANS: A, C, D, E

The patient who has rosacea should avoid stress, sun exposure, spicy foods, and alcohol consumption.

DIF: Cognitive Level: Comprehension REF: p. 34 OBJ: 5
TOP: Rosacea KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Reduction of Risk

26. What vitamins are necessary to support ossification? (*Select all that apply.*)
- A
 - B₆
 - C
 - D
 - E

ANS: A, C, D

Vitamins A, C, and D are necessary for bone matrix formation and replenishment.

DIF: Cognitive Level: Knowledge REF: p. 35 OBJ: 7
TOP: Ossification KEY: Nursing Process Step: Planning
MSC: NCLEX: Health Promotion and Maintenance: Prevention and Early Detection of Disease

27. What are risk factors for osteoporosis? (*Select all that apply.*)
- Menopause
 - Smoking
 - White female
 - Excessive high-impact exercise
 - Long-term use of phenytoin (Dilantin)

ANS: A, B, C, E

Menopausal white women who smoke and have had long-term administration of phenytoin (Dilantin), heparin, or corticosteroids are at risk for osteoporosis.

DIF: Cognitive Level: Comprehension REF: p. 38 OBJ: 5
TOP: Risk Factors for Osteoporosis KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

28. What age-related changes in the respiratory system explain why the older adult is at risk for infection? (*Select all that apply.*)
- Reduced ciliary movement
 - Decrease in alveolar elasticity

- c. Pooling of secretions
- d. Flattened diaphragm
- e. Calcification of costal cartilage

ANS: A, B, C

The flattening of the diaphragm and the calcification of cartilages decrease respiratory effectiveness but do not support pathogen growth as do ciliary and alveolar changes.

DIF: Cognitive Level: Comprehension REF: pp. 40-41 OBJ: 1
TOP: Age-Related Changes in the Respiratory System
KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

COMPLETION

29. The nurse is aware that children with _____ have the treatment and care needs of persons of advanced age.

ANS:
progeria

A rare condition called progeria causes severe premature aging. When they are only 8 or 9 years of age, children with progeria have the physiology and appearance of 70-year-olds.

DIF: Cognitive Level: Knowledge REF: p. 31 OBJ: 6
TOP: Progeria KEY: Nursing Process Step: Planning
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

30. The 75-year-old resident in a long-term care facility complains of muscle pain while riding a stationary bicycle. The nurse explains that the discomfort is related to the buildup of _____ in the muscle.

ANS:
lactic acid

Elevated levels of lactic acid may result in muscle fatigue and soreness.

DIF: Cognitive Level: Comprehension REF: p. 37 OBJ: 7
TOP: Lactic Acid Buildup KEY: Nursing Process Step: Implementation
MSC: NCLEX: Physiological Integrity: Physiological Adaptation

31. When a 75-year-old male resident in an extended-care facility tells the nurse he wants to build up the muscles in his arms, the nurse recommends a(n) _____ exercise program.

ANS:
isotonic

Isotonic exercises such as flexing and extending the arms while holding hand weights build tone and muscle mass.

DIF: Cognitive Level: Comprehension REF: p. 37 OBJ: 4

TOP: Isotonic Exercises

KEY: Nursing Process Step: Implementation

MSC: NCLEX: Physiological Integrity: Physiological Adaptation

32. Arrange these common diseases of the older adult in order of their mortality rate. (*Separate letters by a comma and space as follows: A, B, C, D*)

a. Cancer

b. Pneumonia

c. Stroke

d. Chronic obstructive pulmonary disease (COPD)

e. Heart disease

ANS:

E, A, C, B, D

The five leading causes of death in older adults are heart disease, cancer, stroke, pneumonia, and COPD.

DIF: Cognitive Level: Comprehension

REF: p. 32

OBJ: 5

TOP: Diseases Rated by Mortality

KEY: Nursing Process Step: N/A

MSC: NCLEX: N/A