

## **Chapter 2. Examination of Vital Signs**

### **Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1. In which location of the cardiovascular system is the highest concentration of baroreceptors?
  - a. The aorta and carotid veins
  - b. The aorta and supraclavicular arteries
  - c. The aorta and carotid arteries
  - d. The aorta and femoral arteries
  
- \_\_\_\_\_ 2. Which one of the following positions is recommended for obtaining consistent blood pressure measurements?
  - a. Sitting with the arm in a horizontal, supported position at heart level
  - b. Supine position with arm resting comfortably on the chest
  - c. Sitting on the couch with arm resting comfortably by the side
  - d. Standing with arm by side and cuff positioned at heart level
  
- \_\_\_\_\_ 3. Which one of the following population groups should be consistently tested for underlying hypertension because of its higher incidence?
  - a. Caucasians
  - b. African Americans
  - c. Asians
  - d. Males over the age of 64
  
- \_\_\_\_\_ 4. When are the Korotkoff's sounds audible while measuring blood pressure?
  - a. Upon full inflation of the cuff
  - b. Upon placement of the stethoscope over the artery
  - c. Upon beginning to lower the pressure of the inflated cuff
  - d. During the diastolic phase of the reading
  
- \_\_\_\_\_ 5. A 67-year-old female smoker with a family history of high blood pressure and heart disease presents with acute onset neck pain, headache, and a blood pressure of 175/100 mm Hg. What should the physical therapist do **FIRST**?
  - a. Refer the patient for assessment by a physician.
  - b. Assume that this is a "white coat" effect and continue with the usual examination.
  - c. Continue the examination but modify the order and extent of the tests.
  - d. Modify the examination to avoid manual therapy and offer simple exercises.
  
- \_\_\_\_\_ 6. Upon taking the popliteal blood pressure of a patient with unilateral distal limb pain, the physical therapist notes that the popliteal pulse is easily palpable (compared to the nonsymptomatic side) and that the blood pressure is 95/65 mm Hg (upper limb reading 145/90 mm Hg). Which one of the following pathologies should be ruled out before proceeding with the rest of the physical examination?
  - a. Deep venous thrombosis
  - b. Restless leg syndrome
  - c. Popliteal aneurysm
  - d. Femoral artery occlusion

## Chapter 2. Examination of Vital Signs

### Answer Section

#### MULTIPLE CHOICE

1. ANS: C

Explanation: These receptors have a high concentration in the walls of the internal carotid arteries above the carotid bifurcation and in the walls of the arch of the aorta.

PTS: 1

REF: From: Chapter 2

TOP: Content: Examination

2. ANS: A

Explanation: Blood pressure may vary as much as 20 mm Hg by altering arm position. For consistency of measures, the patient should be sitting with the arm in a horizontal, supported position at heart level.

PTS: 1

REF: From: Chapter 2

TOP: Content: Blood Pressure

3. ANS: B

Explanation: African Americans are at greater risk for high blood pressure as compared to Caucasians. The rate of hypertension among this group is 44%, which is among the highest in the world. Between 45 and 64 years of age, the percentage of men and women is comparable; after that, a much higher percentage of women than men have high blood pressure.

PTS: 1

REF: From: Chapter 2

TOP: Content: Examination

4. ANS: C

Explanation: Initially, when pressure is applied through the cuff around the patient's arm, the blood flow is occluded and no sound is heard through the stethoscope. As the pressure is gradually released, a series of five phases of sounds can be identified. These sounds are present from the first systolic reading to the end-diastolic reading.

PTS: 1

REF: From: Chapter 2

TOP: Content: Examination

5. ANS: A

Explanation: This patient is at risk for a vascular event (i.e., stroke), based on the following: A larger percentage of females than males over the age of 64 are known to have hypertension. Heredity (parental history of high BP) also places the individual at greater risk. Globally, high systolic BP is seen in 51% of stroke victims and 45% of those with ischemic heart disease. Having a family history and being a smoker are also risk factors to consider in this decision-making process.

PTS: 1

REF: From: Chapter 2

TOP: Content: Evaluation, Differential Diagnosis, and Prognosis

6. ANS: C

Explanation: Popliteal aneurysm is the only one of the options consistent with the findings of easily palpable pulse and low lower extremity blood pressure

PTS: 1

REF: From: Chapter 2

TOP: Content: Evaluation, Differential Diagnosis, and Prognosis

## Chapter 2 - PTA: Examination of Vital Signs

### Multiple Choice

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_ 1. Patient-related instruction regarding maintenance of blood pressure for health promotion should ideally focus on all of the following **EXCEPT**:
  - a. Gender
  - b. Diet
  - c. Physical activity level
  - d. Stress response
  
- \_\_\_\_ 2. Skin color should be noted during examination of vital signs. The term *cyanosis* infers which of the following?
  - a. Bleeding under the skin, bruising
  - b. Yellow-orange hue of the skin, which infers possible liver involvement
  - c. Bluish-gray discoloration of the skin and mucous membranes
  - d. Reddened area of the skin caused by increased blood flow
  
- \_\_\_\_ 3. You are treating a hospital patient following a femoral–popliteal bypass surgery (behind the knee) to improve circulation. As a part of your routine assessment, you would monitor pulse at which of the following peripheral sites?
  - a. Temporal
  - b. Carotid
  - c. Pedal
  - d. Brachial
  
- \_\_\_\_ 4. You are entering a room to work with a patient as the CNA is finishing taking vital signs and a pulse oximetry reading. Which of the following oximetry reading would trigger a consultation with the PT prior to beginning your exercise session with the patient?
  - a. 94
  - b. 90
  - c. 85
  - d. 82
  
- \_\_\_\_ 5. A normal blood pressure for adults is:
  - a. 140/90 mm Hg
  - b. 120/80 mm Hg
  - c. 160/100 mm Hg
  - d. 95/70 mm Hg
  
- \_\_\_\_ 6. What is a cause of orthostatic or postural hypotension?
  - a. A sudden drop in blood pressure as the patient moves into an upright posture
  - b. A sudden rise in blood pressure as the patient moves into an upright posture
  - c. A sudden drop in blood pressure as the patient moves into a recumbent posture
  - d. A sudden rise in blood pressure as the patient moves into a recumbent posture

**Chapter 2 - PTA: Examination of Vital Signs**  
**Answer Section**

**MULTIPLE CHOICE**

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|-----------|--------|
| 1. ANS: A | PTS: 1 |
| 2. ANS: C | PTS: 1 |
| 3. ANS: C | PTS: 1 |
| 4. ANS: B | PTS: 1 |
| 5. ANS: B | PTS: 1 |
| 6. ANS: A | PTS: 1 |