

## Chapter 5

# Primary and Secondary Survey

### ◆ KNOWLEDGE OBJECTIVES

1. List the six emergency action principles.
2. Explain why you do a primary survey in every emergency situation.
3. Describe how to do a primary survey.
4. List seven important pieces of information that should be provided to an EMS dispatcher.
5. List ten conditions that require you to summon more advanced medical personnel.
6. Explain why you do a secondary survey.
7. Describe when to do a secondary survey.
8. Describe how to do a secondary survey.
9. Define the key terms for this chapter.

### ◆ SKILL OBJECTIVES

After reading this chapter and completing the class activities, you should be able to

1. Demonstrate a primary survey.
2. Demonstrate a secondary survey.
3. Make appropriate decisions about care when given an example of an emergency requiring you to do a primary and a secondary survey.

## ◆ **OUTLINE**

<b>Introduction</b>	<b>71</b>
<b>Emergency Action Principles</b>	<b>71</b>
Step One: Survey the Scene	71
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## ◆ **KEY POINTS**

### **Emergency Action Principles**

1. Survey the scene.
2. Check for responsiveness, and call EMS.
3. Do a primary survey, and care for lifethreatening conditions.
4. Do a secondary survey.
5. Keep monitoring the ABCs.
6. Help the casualty rest, and give reassurance.

### **Information to Provide to Dispatcher**

- ◆ Where the emergency is located.
- ◆ Telephone number from which the call is being made..
- ◆ Caller's name.
- ◆ What happened.
- ◆ The number of people involved.
- ◆ Condition of the casualty(s).
- ◆ Care being given.

### **Primary Survey**

- ◆ Check consciousness.
- ◆ Check ABCs
  - Airway/C-Spine.
  - Breathing.
  - Circulation.

### **Secondary Survey**

- ◆ Interview the casualty and bystanders.
- ◆ Check vital signs.
- ◆ Do a head-to-toe exam.

### **Interview the casualty**

- ◆ **A** = Allergies.
- ◆ **M** = Medications.
- ◆ **P** = Past medical history.
- ◆ **L** =Last meal.
- ◆ **E** = Event before the incident.

### **Ask about pain**

- ◆ **P** = Provoke.
- ◆ **Q** = Quality.
- ◆ **R** = Region.
- ◆ **S** = Severity.
- ◆ **T** = Time.

### **Vital Signs**

- ◆ Level of consciousness.
- ◆ Pulse.
- ◆ Breathing.
- ◆ Skin appearance and temperature.
- ◆ Blood pressure.

### **Levels of Consciousness-AVPU**

- ◆ **A** Alert.
- ◆ **V** Verbal.
- ◆ **P** Painful.
- ◆ **U** Unresponsive.

### **Measuring Blood Pressure**

#### ***Systolic***

- ◆ First number recorded.
- ◆ Reflects pressure in arteries when heart is at work/contracting.

#### ***Diastolic***

- ◆ Second number recorded.
- ◆ Reflects pressure in arteries when the heart is at rest/refilling.

#### ***Written***

- ◆ Systolic/Diastolic or S/D.

## ◆ LEARNING ACTIVITIES

### Matching

Match each term with its definition. Write its letter on the line in front of the definition.

#### Terms

- a. Emergency action principles
- b. Primary survey
- c. Vital signs
- d. Symptom
- e. Level of consciousness

#### Definitions

- 1. \_\_\_\_\_ A measure of the casualty's awareness of the surroundings
- 2. \_\_\_\_\_ The check for immediate life-threatening conditions
- 3. \_\_\_\_\_ Something the casualty tells you about how he or she is feeling
- 4. \_\_\_\_\_ The status of a casualty's breathing, pulse, and skin
- 5. \_\_\_\_\_ The steps that guide your actions as a first responder

### Short Answer

Read each statement or question and write the correct answer or answers in the space provided.

- 1. What are the three parts of the secondary survey?
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
  - 3. \_\_\_\_\_
- 2. What are the six emergency action principles?
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
  - 3. \_\_\_\_\_
  - 4. \_\_\_\_\_
  - 5. \_\_\_\_\_
  - 6. \_\_\_\_\_
- 3. What is the purpose of the secondary survey?  
\_\_\_\_\_
- 4. What seven necessary pieces of information would you provide to a dispatcher?
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
  - 3. \_\_\_\_\_
  - 4. \_\_\_\_\_
  - 5. \_\_\_\_\_
  - 6. \_\_\_\_\_
  - 7. \_\_\_\_\_

5. What five questions should you ask during the interview with the casualty?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

6. What equipment allows you to measure blood pressure by auscultation?

\_\_\_\_\_

7. How would you write a blood pressure that was 70 millimetres of mercury (mm Hg) diastolic and 110 mm Hg systolic.

\_\_\_\_\_

8. List at least six conditions in which you would summon more advanced medical personnel.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

## ◆ CASE STUDIES

Read the case studies below and answer the questions that follow.

### Case 5.1

You are summoned to the university swimming pool to care for an injured swimmer. You find a 21-year-old man lying beside the pool, not moving. You are unable to arouse him. You confirm that he is breathing and has a pulse.

1. What should you do next?
  - a. Check his pupils.
  - b. Do a secondary survey.
  - c. Look for severe bleeding.
  - d. Help the casualty to his feet.
2. What should you do next?
  - a. Cover him with a blanket to prevent heat loss.
  - b. Summon more advanced medical personnel.
  - c. Request a medical history from the office.
  - d. Perform a secondary survey.

3. You assess vital signs and find them as listed below. Place a check mark in front of those that are probably normal for this casualty.

- Pulse: 60 and regular
- Respirations: 14
- Blood pressure: 190/105
- Level of consciousness:
- Unable to respond to questions
- Capillary refill: pink only after several seconds

### Case 5.2

You are called to a scene where a 13-year-old boy has fallen out of a tree. When you arrive, he is lying on the ground crying and holding his left arm. He appears to be very upset and wants to get up.

1. In which circumstance should you move this casualty before providing care?
  - a. When the casualty is complaining of being in an uncomfortable position
  - b. When it is impossible to splint fractures or bandage wounds without moving the casualty
  - c. When the casualty is situated so that more advanced medical personnel will have difficulty providing care
  - d. When there is danger such as from fire, poisonous fumes, or an unstable structure

2. Which of the following information should you obtain in your interview of this casualty during the secondary survey?
  - a. Pain sites, allergies, current medications
  - b. Name, age, religion
  - c. Age, address, where his parents are
  - d. What happened, medical conditions, vital signs
  
3. When performing the secondary survey, what five items will you check when assessing this casualty's vital signs?
  1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
  4. \_\_\_\_\_
  5. \_\_\_\_\_
  
4. T F While you are performing your secondary survey, the casualty becomes unconscious and stops breathing. You should continue with the secondary survey.

## ◆ SELF-ASSESSMENT

Circle the letter of the best answer.

1. Which one of these casualties should receive some form of care before you perform a secondary survey?
  - a. A conscious, cooperative casualty
  - b. A casualty with an obvious head injury
  - c. A casualty bleeding severely from an arm
  - d. A casualty complaining of pain in an ankle
2. Which of the following techniques would you use in performing a head-to-toe examination?
  - a. Visually inspect the entire body, starting with the head.
  - b. Gently run your hands over each arm and leg to feel for possible fractures.
  - c. Ask the casualty to take a deep breath and exhale, unless he or she complains of chest pain.
  - d. All of the above.
3. The purpose of the secondary survey is to
  - a. Find injuries or conditions that are not immediately life-threatening.
  - b. Determine if the casualty is bleeding severely.
  - c. Survey the scene for hazardous conditions.
  - d. Find out if the casualty has medical insurance.
4. Why should you do a primary survey in every emergency situation?
  - a. Because it will protect you from legal liability
  - b. Because it identifies conditions that are an immediate threat to life or that could become life-threatening
  - c. Because it will enable you to protect the casualty and bystanders from dangers at the scene
  - d. All of the above
5. For which of the following individuals should you immediately summon more advanced medical personnel?
  - a. A 22-year-old man who, since last night, has had a fever and has vomited four times
  - b. A 70-year-old jogger experiencing severe knee pain after her morning run
  - c. A 40-year-old executive complaining that he has felt nauseated, sweaty, weak, and has had difficulty breathing for at least an hour
  - d. An 8-year-old who was hit on the leg by a baseball and now has a large bruise



6. In surveying the scene of an emergency, you must ask yourself four key questions. Three of the questions are: Is the scene safe?, What happened?, and How many casualties are there? Which is the fourth key question?
  - a. Can bystanders help?
  - b. Is the casualty breathing?
  - c. When did the emergency occur?
  - d. Are any of the casualty's relatives present?
7. Which question is an EMS dispatcher likely to ask when you call for help?
  - a. Who is the casualty's doctor?
  - b. Is care being given?
  - c. Does the casualty have allergies?
  - d. Has the casualty been drinking?
8. When should you perform a secondary survey?
  - a. When caring for a conscious, cooperative casualty
  - b. When caring for a casualty who has an obvious head injury
  - c. When caring for a casualty bleeding severely from one arm
  - d. a and b
9. Which of the following steps should you include in the secondary survey?
  - a. Interviewing the casualty and surveying the scene
  - b. Doing a head-to-toe examination and interviewing bystanders
  - c. Doing a head-to-toe examination and sending a bystander to call for more advanced medical personnel
  - d. Looking for hazards around the casualty and checking for changes in the casualty's breathing
10. You are walking with a neighbour when he steps off a curb and turns his ankle. He appears injured but does not want you to call for help. After a few minutes, he wants to stand up. What should you do?
  - a. Call EMS personnel; he may have a broken ankle.
  - b. Get your car and drive him to the hospital.
  - c. Help him stand up and reassess his condition.
  - d. Call his doctor for advice.

11. Which of the following should you give special attention to during a secondary survey?
  - a. The type of medical coverage the casualty has.
  - b. A medical-alert bracelet or wallet card.
  - c. The name and address of the casualty's nearest relative.
  - d. Identification cards found in the casualty's wallet.
12. Which of the following is the pulse point most frequently used to determine pulse rate and quality during the secondary survey?
  - a. Radial artery.
  - b. Temporal artery.
  - c. Carotid artery.
  - d. Popliteal artery.
13. The normal breathing rate for an adult at rest is
  - a. 5 to 10 breaths per minute.
  - b. 12 to 20 breaths per minute.
  - c. 16 to 24 breaths per minute.
  - d. 20 to 32 breaths per minute.
14. Why should you do a primary survey in every emergency situation?
  - a. Because it protects you from legal liability.
  - b. Because it identifies conditions that are an immediate threat to life.
  - c. Because it identifies conditions that could become life threatening if not cared for.
  - d. Because it enables you to protect the casualty and bystanders from dangers at the scene.
15. Before beginning a primary survey, you should first
  - a. Position the casualty so that you can open the airway.
  - b. Survey the scene.
  - c. Check for responsiveness.
  - d. Call more advanced medical professionals for help.
16. Which of the following conditions would you discover in a secondary survey?
  - a. Cardiac arrest.
  - b. Open fracture with severe bleeding.
  - c. Allergies to bee stings and penicillin.
  - d. All of the above.

17. When taking a blood pressure, the point at which the pulse is first heard as the pressure in the cuff is released indicates the
- Diastolic pressure.
  - Arterial pressure.
  - Systolic pressure.
  - Venous pressure.
18. If a casualty is unconscious, you can still gather information about what may have happened by
- Asking bystanders.
  - Checking medical alert identification.
  - Waiting for the casualty to regain consciousness.
  - a and b.
19. Which of the following emergency action principles should you implement first at the scene of an emergency?
- Survey the scene.
  - Do a primary survey.
  - Do a secondary survey.
  - Call more advanced medical personnel for help.
20. Why should you follow the emergency action principles in every emergency?
- They ensure that necessary care is provided for life-threatening emergencies.
  - They provide you with a detailed medical history for the casualty.
  - They lead you to a diagnosis of the casualty's illness or injury.
  - All of the above.
21. Which of the following should you give special attention to during a secondary survey?
- The type of medical coverage the casualty has.
  - A medical-alert bracelet or wallet card.
  - The name and address of the casualty's nearest relative.
  - Identification cards found in the casualty's wallet.
22. Which of the following measuring methods will give you both a systolic and a diastolic blood pressure reading?
- Palpation.
  - Auscultation.
  - Oscillation.
  - All of the above.

23. The normal breathing rate for an adult at rest is-
- 5 to 10 breaths per minute,
  - 12 to 20 breaths per minute.
  - 16 to 24 breaths per minute.
  - 20 to 32 breaths per minute.
24. How should you determine if a casualty is conscious?
- Slap the casualty's face and ask, "Are you awake?"
  - Pinch the muscle at the top of the casualty's shoulder and ask, "Is this painful?"
  - Gently tap the casualty and ask, "Are you O.K.?"
  - Rub your knuckles across the casualty's sternum and ask, "Do you feel this?"
25. Which steps should you include in the secondary survey?
- Interview the casualty and, survey the scene.
  - Send a bystander to call more advanced medical personnel, and do a head-to-toe examination.
  - Look for hazards around the casualty, and check for changes in the casualty's breathing.
  - Do a head-to-toe examination, and interview bystanders.
26. If you decide to transport a casualty to the hospital yourself, what precautions should you take?
- Have a bystander call the hospital and report the casualty's condition.
  - Make certain that the casualty is transported lying down.
  - Take a second person with you to ensure that the casualty is constantly observed.
  - Have a bystander notify the police to ask an officer to meet you at the hospital.
27. When checking a person's eyes, you notice larger than normal pupils. The pupils are said to be
- Constricted.
  - Dilated.
  - Unequal.
  - Unresponsive.
28. What is your main concern during the primary survey?
- Identifying life-threatening problems.
  - Identifying all injuries or medical problems.
  - Monitoring changes in the casualty's condition.
  - Establishing baseline vital signs.

## Answers to Exercises

### Unit 5-Primary and Secondary Survey

#### Matching: (Pg. 70)

1. e
2. b
3. d
4. c
5. a.

#### Short Answer:

1. Interview of casualty and bystanders; vital signs assessment; head-to-toe exam. (Pg. 77)
2. Survey the scene check for responsiveness and call EMS if necessary; do a primary survey and care for life-threatening conditions; do a secondary survey; continue to monitor the ABCs; help casualty rest and give reassurance. (Pg. 71)
3. To systematically gather additional information about injuries or conditions that may need care. (Pg. 77)
4. Where the emergency is located; telephone number from which the call is being made; caller's name; what happened; the number of people involved; condition of the casualty(s); care being given. (Pg. 73)
5. What happened?; Do you feel pain anywhere?; Do you have any medical conditions?; Do you take any medications?; Do you have any allergies, particularly to medications? (Pg. 78)
6. Stethoscope and blood pressure cuff. (Pg. 83)
7. 110/70 (Pg. 83)
8. Unconsciousness or altered level of consciousness; breathing problems (difficulty breathing or no breathing); persistent chest or abdominal pain or pressure; no pulse; severe bleeding; vomiting blood or passing blood; suspected poisoning; seizures; severe headache; slurred speech; suspected or obvious injuries to head or spine; suspected broken bones. (Pg. 74)

#### Case Study 5.1:

1. c (Pg. 76)
2. b (Pg. 77)
3. Pulse; Respirations. (Pg. 79 - 84)

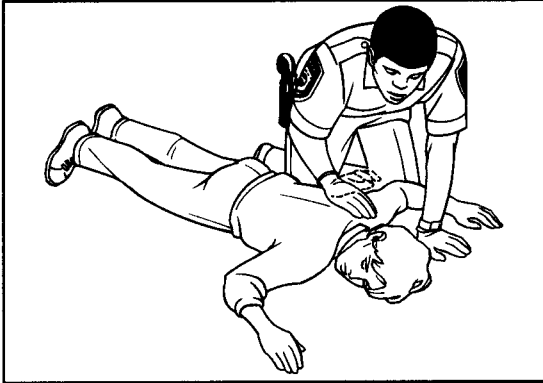
#### Case Study 5.2:

1. d (Pg. 72)
2. a (Pg. 77)
3. Level of consciousness; pulse rate and quality; breathing rate and quality; skin characteristics; blood pressure. (Pg. 79 - 84)
4. F. (Pg. 77)

**Self-Assessment:**

1. c (Pg. 74)
2. d (Pg. 85)
3. a (Pg. 78)
4. b (Pg. 74)
5. c (Pg. 74)
6. a (Pg. 71)
7. b (Pg. 73)
8. d (Pg. 77)
9. b (Pg. 78)
10. c. (Pg. ??)
11. b (Pg. 78)
12. a (Pg. 79)
13. b (Pg. 80)
14. b (Pg. 74)
15. b (Pg. 71)
16. c (Pg. 77)
17. c (Pg. 82)
18. d (Pg. 78)
19. a (Pg. ??)
20. a (Pg. ??)
21. b (Pg. ??)
22. b (Pg. ??)
23. b (Pg. ??)
24. c (Pg. ??)
25. d (Pg. ??)
26. c (Pg. ??)
27. b (Pg. ??)
28. a (Pg. ??)

# PRACTICE SESSION: *Primary Survey*



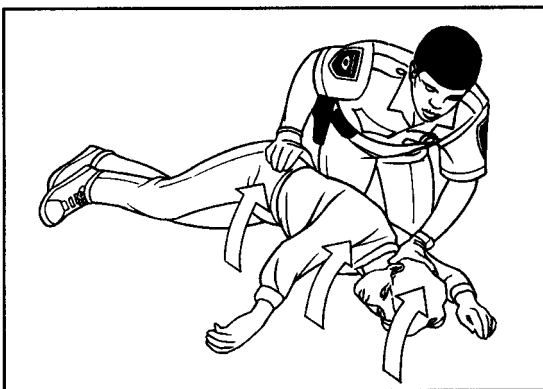
- **Check for consciousness**
  - ◆ Tap and gently shake person.
  - ◆ Shout, "Are you OK?"

**If person does not respond...**

- ◆ Call for advanced medical help



- **Check for breathing**
  - ◆ Look, listen, and feel for about 10 seconds.



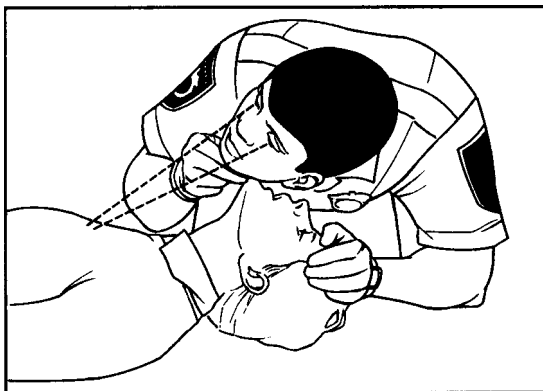
**If not breathing or you cannot tell...**

- ◆ Position casualty onto back.
- ◆ Roll person as a single unit, while supporting the head and neck.



□ **Open the airway.**

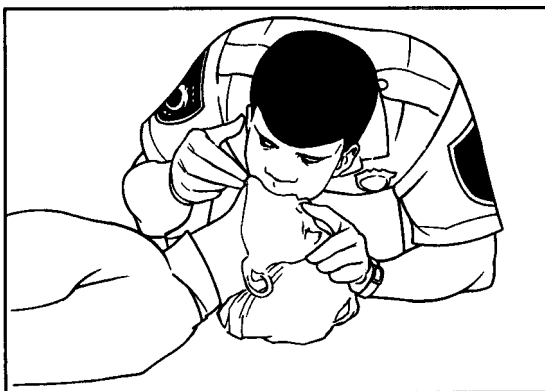
- ◆ If a c-spine injury is not suspected, tilt head back and lift chin.



□ **Recheck breathing.**

- ◆ Look, listen, and feel for about 10 seconds.

**If person is not breathing...**



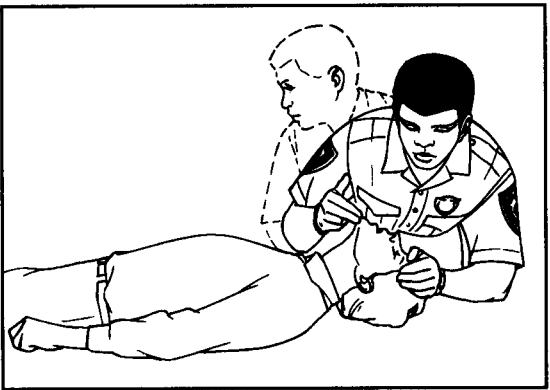
- ◆ Keep head tilted back.
- ◆ Pinch nose shut.
- ◆ Seal your lips tightly around person's mouth.
- ◆ Give 2 slow breaths, each lasting about 1 1/2 seconds.
- ◆ Watch to see that the breaths go in.





□ **Check for pulse**

- ◆ Locate Adam's apple.
- ◆ Slide fingers down into groove of neck on side closer to you.
- ◆ Feel for pulse for 10 seconds.



□ **Check for severe bleeding**

- ◆ Look from head to toe for severe bleeding.

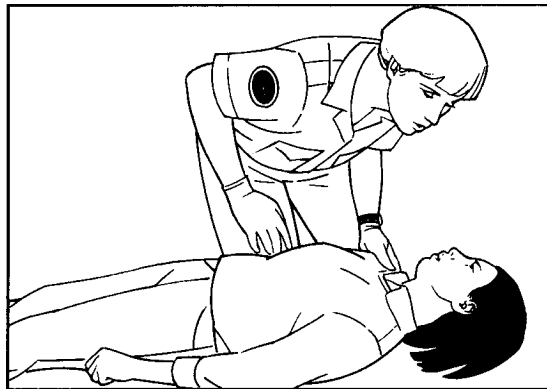
**If person has a pulse and is not breathing...**

- ◆ Do rescue breathing.

**If person does not have a pulse...**

- ◆ Begin CPR.

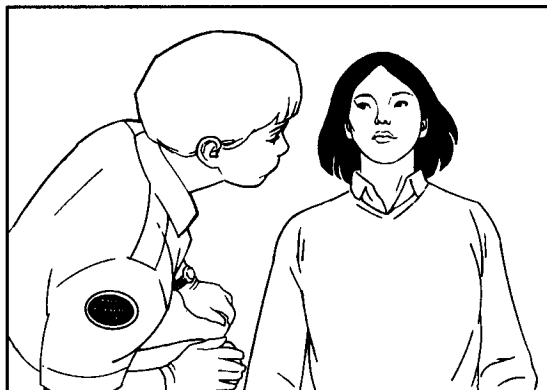
# PRACTICE SESSION: *Secondary Survey*



## □ Interview casualty

Ask-

- ◆ His or her name.
- ◆ What happened (mechanism of injury).
- ◆ If he or she feels pain anywhere.
- ◆ AMPLE (allergies, medications, past medical history, last meal, events preceding).
- ◆ About pain-PQRST (provokes, quality, region/radiates, severity, time).



## □ Check vital signs

Level of consciousness

*Note whether...*

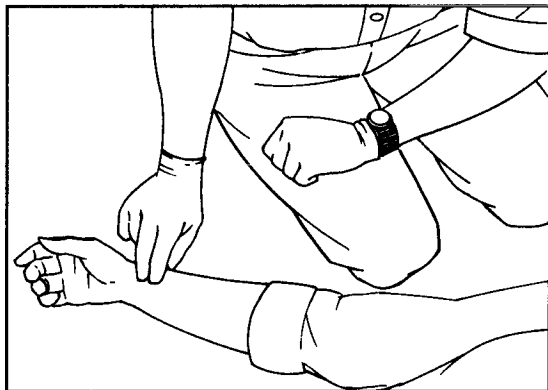
- Person is alert (**A**).
- Responds to verbal stimuli (**V**).
- Responds to painful stimuli (**P**).
- Is unconscious (**U**).

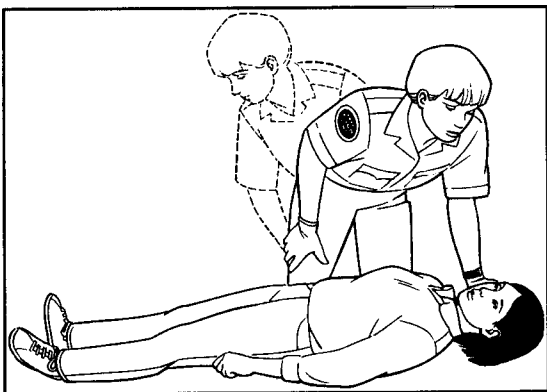
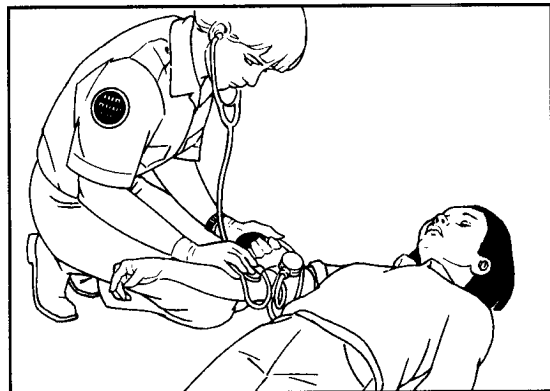
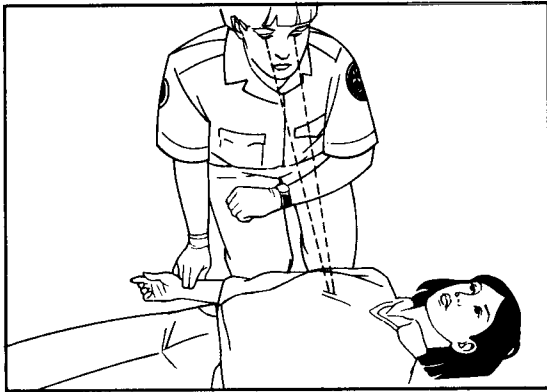
Pulse

- ◆ Locate pulse site.
- ◆ Determine pulse rate.

*Note...*

- Pulse rate.
- If pulse is regular or irregular.
- If pulse is hard to find.





## □ Breathing

### Determine breathing rate.

- ◆ Note breathing rate or whether the person is
- ◆ Gaspng for air.
- ◆ Making unusual noises as he or she breathes.
- ◆ Breathing excessively fast or slow.
- ◆ Experiencing pain when breathing.

## □ Skin characteristics

- ◆ Feel person's forehead with back of your hand.
- ◆ Look at person's face and lips.

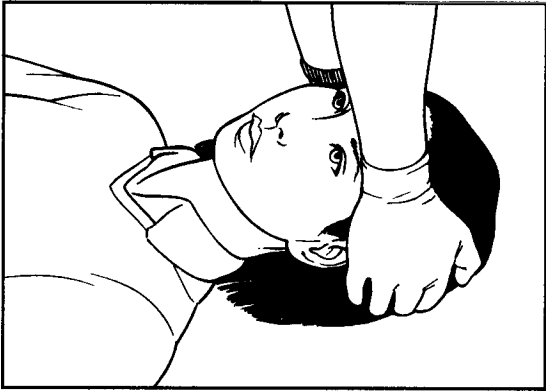
### *Note if skin is*

- Cold or hot.
- Unusually wet or dry.
- Pale, bluish, or flushed.
- ◆ Check capillary refill.
- ◆ Blood pressure

*(Note: Blood pressure skill sheets follow.)*

## □ Do head-to-toe examination

- ◆ Look carefully for bleeding, cuts, bruises, and obvious deformities.
- ◆ Ask if person has pain or discomfort.
- ◆ Note any abnormalities.



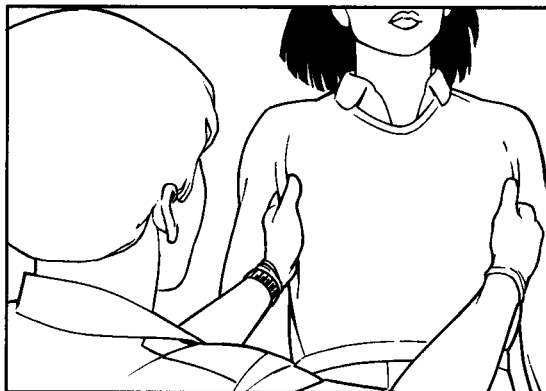
□ **Check head**

- ◆ Feel the skull for blood, lumps, or depressions.
- ◆ Look for fluid or blood in the ears, nose, or mouth.
- ◆ See if pupils respond to light.
- ◆ Note any changes in level of consciousness.



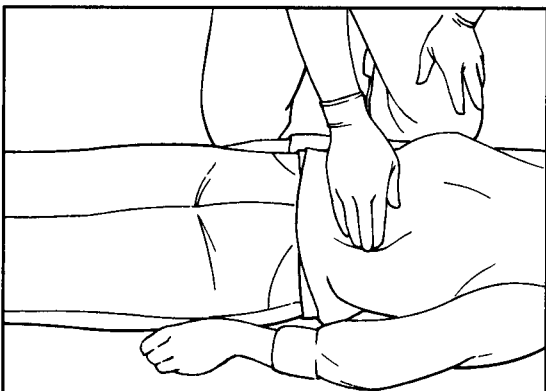
□ **Check neck**

- ◆ Feel sides and back of the neck.
- ◆ Feel shoulders and collarbone.
- ◆ Ask person to shrug shoulders.



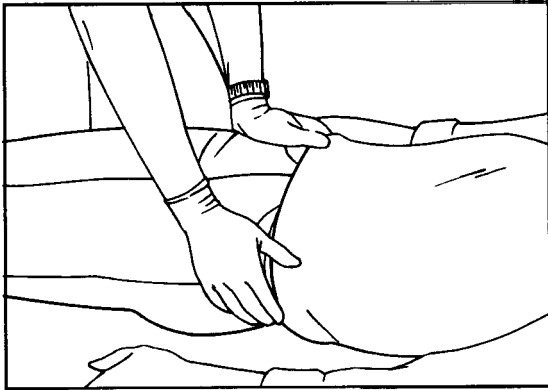
□ **Check chest**

- ◆ Feel ribs and sternum.
- ◆ Ask person to take deep breath and blow air out.



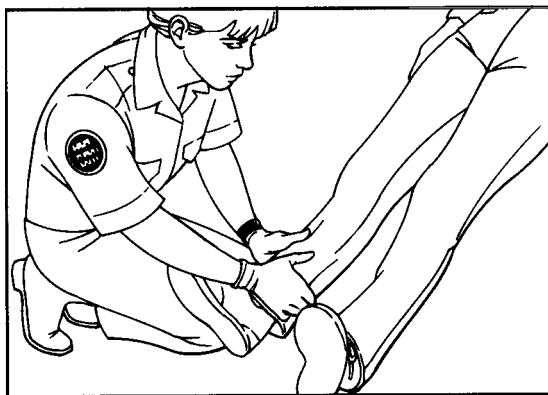
□ **Check abdomen**

- ◆ Apply slight pressure to each side of abdomen, high and low.



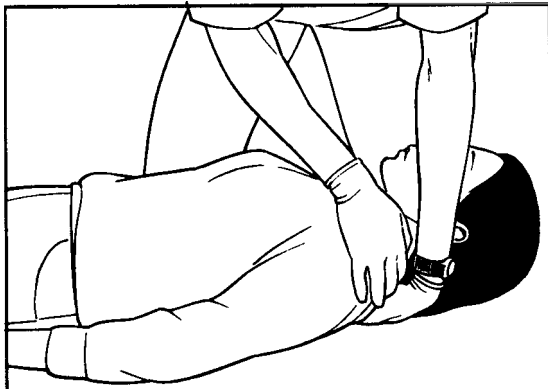
□ **Check hips/pelvis**

- ◆ Push down and in on both sides of hips with your hands.



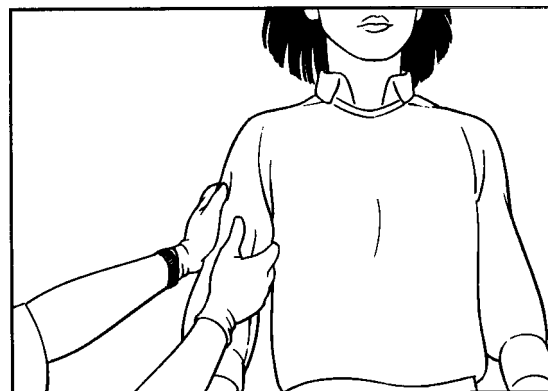
□ **Check legs**

- ◆ Feel both sides of each leg and foot, one at a time.
- ◆ Ask person to try to
  - Move toes, foot, ankle.
  - Bend leg.



□ **Check back**

- ◆ Gently reach under person and feel the back.



□ **Check arms**

- ◆ Feel both sides of each arm and hand, one at a time.
- ◆ Ask person to try to move fingers, hands, and arms.

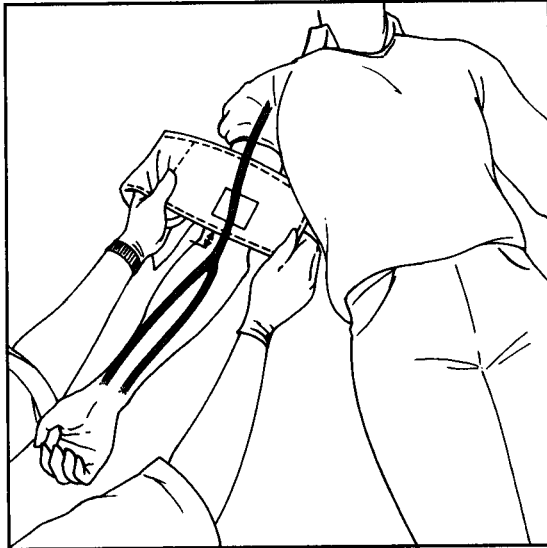
**If there are no signs or symptoms of injury or illness, and the person can move body parts without pain or discomfort...**

- ◆ Have person sit up and rest for a few minutes.
- ◆ If no further difficulty, have person stand slowly.
- ◆ Determine if further care is needed.

**If person is unable to move a body part, is experiencing pain on movement, or level of consciousness is not normal...**

- ◆ Summon more advanced medical personnel if not already done.
- ◆ Recheck ABCs.
- ◆ Help person rest in most comfortable position.
- ◆ Maintain normal body temperature.
- ◆ Reassure person

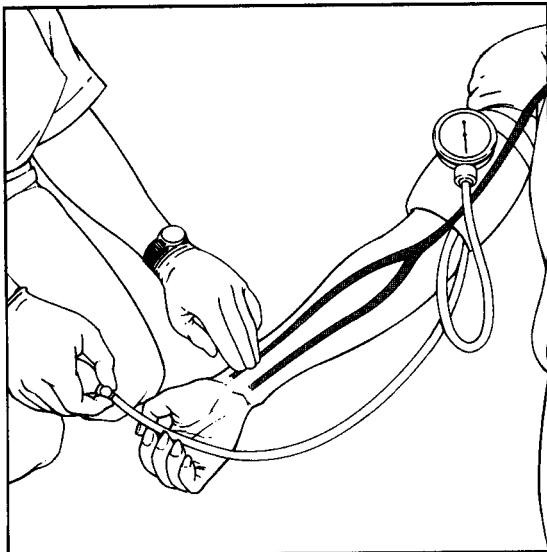
## PRACTICE SESSION: *Blood Pressure Measurement*



### *(Palpation)*

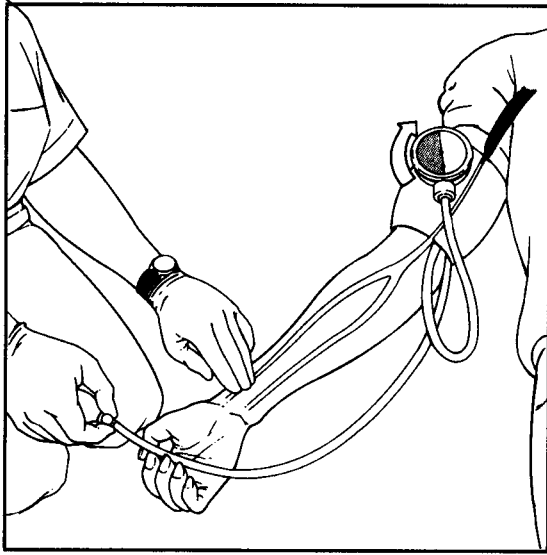
#### □ **Position cuff**

- ◆ Place cuff 2,5 cm (1 inch) above crease in elbow.
- ◆ Center cuff over brachial artery.



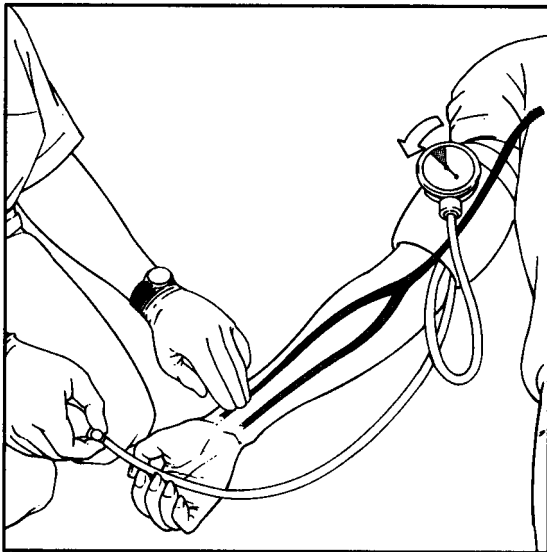
#### □ **Locate radial pulse**

- ◆ Feel for pulse on thumb side of wrist.



□ **Inflate cuff beyond point where pulse disappears**

- ◆ Inflate 20 mm Hg beyond point where pulse disappears.



□ **Deflate cuff until pulse returns**

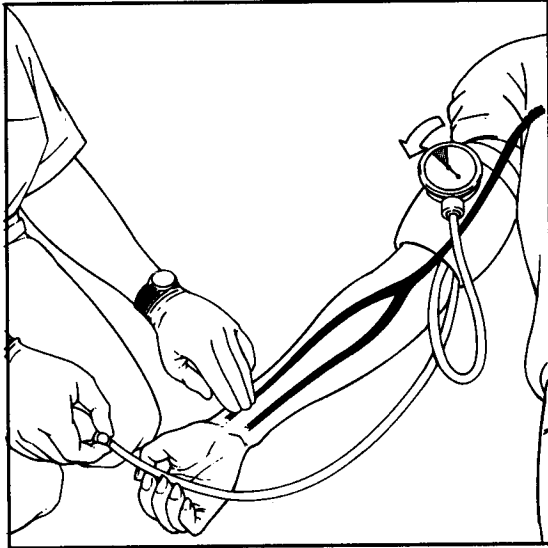
- ◆ Deflate slowly-2 mm Hg/sec until pulse returns.
- ◆ Note point at which pulse returns.
- ◆ Quickly deflate cuff completely by opening the valve.



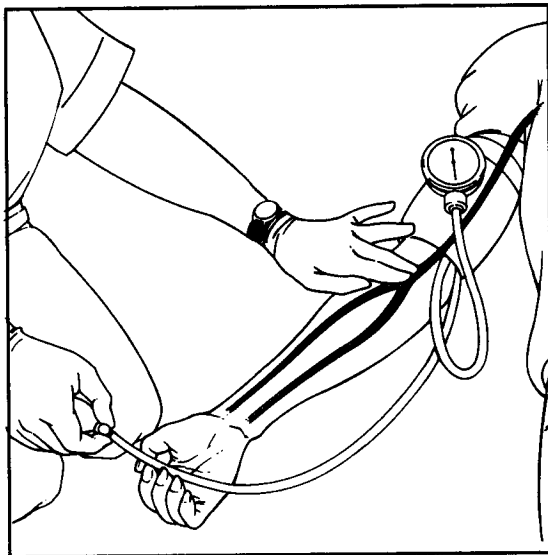
□ **Record approximate systolic pressure**



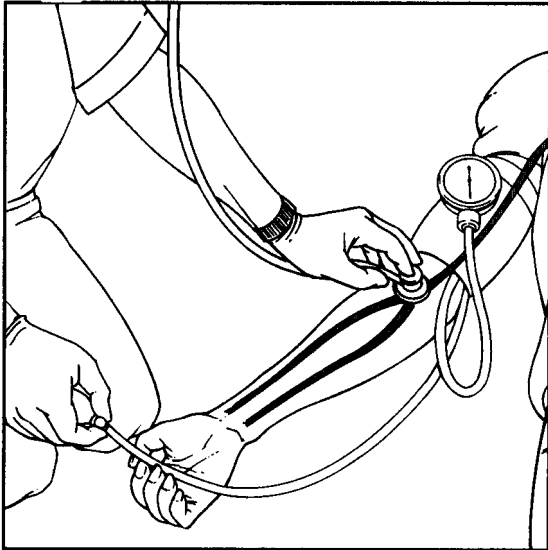
## **PRACTICE SESSION: *Blood Pressure Measurement*** **(*Auscultation*)**



- **Determine approximate' systolic blood pressure**

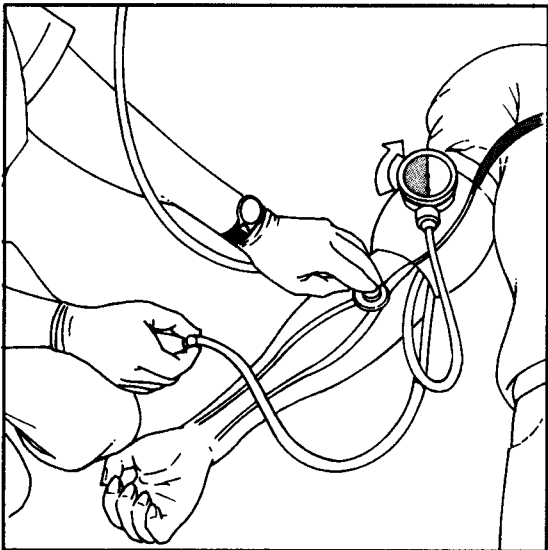


- **Locate brachial pulse**
  - ◆ **Feel for pulse at crease in elbow.**



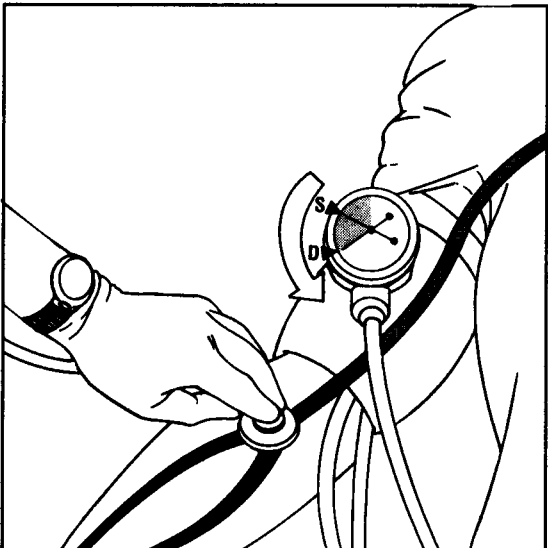
□ **Position stethoscope**

- ◆ Place diaphragm over brachial pulse.



□ **Inflate cuff beyond approximate systolic pressure**

- ◆ Inflate 20 mm Hg beyond approximate systolic pressure.



□ **Deflate cuff until pulse is heard**

- ◆ Deflate slowly - 2 mm Hg/sec. Note point at which pulse is first heard (systolic pressure).

□ **Continue deflating cuff until pulse is no longer heard**

- ◆ Note point at which pulse disappears (diastolic pressure).
- ◆ Quickly deflate cuff.



- **Record systolic and diastolic pressures**

