

Assessment of the Trauma Patient

Covers Lesson 3-3 and portions of Lesson 3-9 of the 1994 U.S. Department of Transportation's EMT-Basic National Standard Curriculum

DOT OBJECTIVES

Page numbers in parentheses refer to pages in the textbook.

Knowledge and Attitude

1. Discuss the reasons for reconsideration concerning the mechanism of injury. (pp. 233, 245)
2. State the reasons for performing a rapid trauma assessment. (pp. 246–247)
3. Recite examples and explain why patients should receive a rapid trauma assessment. (pp. 246–247)
4. Describe the areas included in the rapid trauma assessment and discuss what should be evaluated. (pp. 246–253)
5. Differentiate when the rapid assessment may be altered in order to provide patient care. (pp. 246–247, 253–254)
6. Discuss the reason for performing a focused history and physical exam. (p. 232)
7. Recognize and respect the feelings that patients might experience during assessment. (pp. 235, 237, 248, 253)
8. Discuss the components of the detailed physical exam. (pp. 254–255, 258–261)
9. State the areas of the body that are evaluated during the detailed physical exam. (p. 254)
10. Explain what additional care should be provided while performing the detailed physical exam. (pp. 254–255, 258–261)
11. Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient. (p. 000)
12. Explain the rationale for the feelings that these patients might be experiencing. (pp. 235, 237, 248, 253)



Total Teaching Time: 6 hours

The total teaching time being recommended is only a guideline. Instructors should take into consideration such factors as: the pace at which students learn, the size of the class, and breaks. The actual time devoted to teaching objectives is the responsibility of the instructor.



Resources Needed

- Scored Chapter 9 quizzes
- 2 nonstudent volunteers to serve as patients
- 2 EMTs to serve as teaching assistants
- At least 2 trauma jump kits with BSI equipment and a selection of airways

Skills

1. Demonstrate the rapid trauma assessment that should be used to treat a patient based on mechanism of injury.
2. Demonstrate the skills involved in performing the detailed physical exam.

REVIEW

In the last lesson, “Vital Signs and SAMPLE History,” students learned why and how to go about obtaining a patient’s vital signs—pulse; respiration; skin color, temperature, and condition; pupils; and blood pressure. They learned the importance of obtaining baseline vital signs as a standard against which a patient’s improvement or deterioration can be gauged when vital signs are later reassessed and recorded. They also discovered how to gain basic information about the patient’s present problem and prior history by taking a SAMPLE history.

Distribute the scored quizzes from the last class. Review each of the questions on the quiz and clarify or address any concerns students may have about the answers.

INTRODUCTION TO CHAPTER 10

Chapter 10, “Assessment of the Trauma Patient,” is the third lesson in Module 3 of the DOT curriculum. Thus far, students have covered two steps in the patient assessment process: scene size-up and initial assessment. After the initial assessment, they will begin a focused history and physical exam. Students in the last lesson learned about parts of the focused history and physical exam—the vital signs and the SAMPLE history. In this lesson, they will see how the focused history and physical exam should be carried out for trauma patients. For these patients, the key to providing what the patients need is focus—honing in on what is important to these patients and striking a balance between time for assessment and emergency care and the need for as rapid transport as possible.

Distribute copies of the Chapter 10 Objectives Checklist to students and ask them to look it over while you briefly paraphrase the objectives in your own words.

LECTURE

The following suggested lecture outline is based on the 1994 Department of Transportation’s EMT-Basic National Standard Curriculum. In some places, topics in that outline have been rearranged or expanded upon to enhance student understanding. The page numbers in parentheses in the outline refer to pages in the textbook. The parenthetical references in dark, heavy type are to figures, scans, and tables in the textbook.

► ASSESSMENT OF THE TRAUMA PATIENT

I. Reconsider Mechanism of Injury (pp. 232–233)

- A. Significant mechanism of injury (**Table 10-1, p. 232; Table 10-2, p. 233**)
 1. Ejection from vehicle
 2. Death in same passenger compartment



Evaluation Handout 10-1

Chapter 10 Objectives Checklist



Teaching Tip

You might wish to start the class by demonstrating a complete trauma assessment to give students an idea of how the sequence of steps is carried out in real time.



PowerPoint Presentation

Chapter 10, Slides 2–15

3. Falls of more than 15 feet or 3 times patient's height
 4. Rollover of vehicle
 5. High-speed vehicle collision
 6. Vehicle-pedestrian collision
 7. Motorcycle crash
 8. Unresponsive or altered mental status
 9. Penetrations of the head, chest, or abdomen
 10. Hidden injuries
 - a. Seat belts
 - (1) If buckled, may have produced injuries.
 - (2) If patients had seat belts on, it does not mean they do not have injuries.
 - b. Airbags
 - (1) May not be effective without seat belt.
 - (2) Patient can hit wheel after deflation.
 - (3) Lift the deployed airbag and look at the steering wheel for deformation.
 - (a) "Lift and look" under the bag after the patient has been removed.
 - (b) Any visible deformation of the steering wheel should be regarded as an indicator of potentially serious internal injury, and appropriate action should be taken.
- B. Infant and child considerations (p. 233)**
1. Falls > 10 feet
 2. Bicycle collision
 3. Vehicle in medium-speed collision
- C. Apply a cervical collar to any patient suspected of having injury to the spine based on mechanism of injury, history, or signs and symptoms. (pp. 236–241) (Scan 10-2, pp. 238–241)**
- II. For Patients with No Significant Mechanism of Injury; e.g., cut finger (pp. 233–237) (Table 10-1, p. 233)**
- A. Reconsider mechanism of injury. (p. 233)
 - B. Determine chief complaint. (p. 233)
 - C. Perform focused history and physical exam of injuries based on the components of the rapid assessment. The focused assessment is performed on the specific injury site. (pp. 234–236) **(Scan 10-1, pp. 234–235)**
 - D. Assess baseline vital signs. (p. 236)
 1. Use pulse oximeter per local protocols.
 - E. Obtain SAMPLE history. **(Fig. 10-1, p. 236)**
- III. Perform Rapid Trauma Assessment on Patients with Significant Mechanism of Injury to Determine Life-Threatening Injuries**
- In the responsive patient, symptoms should be sought before and during the trauma assessment. (pp. 232, 236, 242–243) **(Table 10-1, p. 232; Table 10-3, p. 236) (Scan 10-3, pp. 242–243)**
- A. Reconsider mechanism of injury. **(Fig. 10-2, p. 245; Fig. 10-3, p. 246)**
 - B. Continue spinal stabilization. (p. 246)
 - C. Consider ALS request. (p. 246)
 - D. Reconsider transport decision. (p. 246)
 - E. Assess mental status. (p. 246)
 - F. Perform rapid assessment. As you inspect and palpate, look and feel for the following examples of injuries or signs of injury (pp. 246–247) **(Scan 10-1, p. 234–235)**
 1. Deformities
 2. Contusions
 3. Abrasions
 4. Punctures/penetrations
 5. Burns



Point to Emphasize

Stress that patients must be treated based on mechanism of injury as well as assessment findings.



Slides/Videos

Pulse, "Kinetics of Trauma," Jan. 1996.



Slides/Videos

Pulse, "Air Bag Injuries," Jan. 1996.



Reading Reference

Colwell, C. MD, et. al. "Detecting Mechanism of Injury," *Emergency Medical Services*, May 2003, Vol. 32, No. 5.



PowerPoint Presentation

Chapter 10, Slides 3, 38–42



PowerPoint Presentation

Chapter 10, Slides 16–37



Point to Emphasize

The rapid trauma assessment is helpful in finding life-threatening injuries.



Teaching Tip

At first, don't allow students to use the short form "DCAP-BTLS." Making them say what each letter stands for helps to ingrain the terms in the students' memory.



Slides/Videos

Pulse—Emergency Medical Update, “Prehospital Assessment, Treatment, and Transportation.” (Pulse Plus) July 2003. (AHVP #464–0703)



Point of Interest

Patients with an epidural brain injury may present initially as unconscious, then become conscious, and then go unconscious again. Be alert!



Point to Emphasize

Assume a possible spinal cord injury if indicated by the mechanism of injury.



Slides/Videos

“Issues in Spinal Care.” Laerdal Medical Corp., One Labriola Ct., Armonk, NY 10504.



Teaching Tip

Have students listen to each other’s lung sounds frequently.



Point to Emphasize

Late assessment of blunt abdominal trauma is one of the leading factors in the deaths of patients with abdominal injuries.

6. Tenderness
 7. Lacerations
 8. Swelling
- G.** Assess the head, inspect and palpate for injuries or signs of injury. (p. 247)
1. Deformities
 2. Contusions
 3. Abrasions
 4. Punctures/penetrations
 5. Burns
 6. Tenderness
 7. Lacerations
 8. Swelling
 9. Crepitation
- H.** Assess the neck, inspect and palpate for injuries or signs of injury. (pp. 247–248)
1. Deformities
 2. Contusions
 3. Abrasions
 4. Punctures/penetrations
 5. Burns
 6. Tenderness
 7. Lacerations
 8. Swelling
 9. Jugular vein distension (JVD)
 10. Crepitation
 11. Stoma/tracheostomy
- I.** Apply cervical spinal immobilization collar (CSIC). May use information from the head injury lesson at this time. (p. 248) **(Scan 10-2, pp. 238–241)**
- J.** Assess the chest, inspect and palpate for injuries or signs of injury. (pp. 248–249)
1. Deformities
 2. Contusions
 3. Abrasions
 4. Punctures/penetrations
 5. Burns
 6. Tenderness
 7. Lacerations
 8. Swelling
 9. Paradoxical motion **(Fig. 10-4, p. 248)**
 10. Crepitation
 11. Breath sounds in the apices, midclavicular line, bilaterally and at the bases, midaxillary line, bilaterally **(Scan 10-4, p. 249)**
 - a. Present
 - b. Absent
 - c. Equal
- K.** Assess the abdomen, inspect and palpate for injuries or signs of injury. (pp. 248–250)
1. Deformities
 2. Contusions
 3. Abrasions
 4. Punctures/penetrations
 5. Burns
 6. Tenderness
 7. Lacerations
 8. Swelling
 9. Firm

10. Soft
11. Distended
- L. Assess the pelvis, inspect and palpate for injuries or signs of injury. (pp. 250–251)
 1. Deformities
 2. Contusions
 3. Abrasions
 4. Punctures/penetrations
 5. Burns
 6. Tenderness
 7. Lacerations
 8. Swelling
 9. If no pain is noted, gently compress the pelvis to determine tenderness or motion.
- M. Assess all four extremities, inspect and palpate injuries or signs of injury. (pp. 251–252) (**Scan 10-5, pp. 250–252**)
 1. Deformities
 2. Contusions
 3. Abrasions
 4. Punctures/penetrations
 5. Burns
 6. Tenderness
 7. Lacerations
 8. Swelling
 9. Distal pulse
 10. Sensation
 11. Motor function
- N. Roll patient with spinal precautions and assess posterior body, inspect and palpate, examining for injuries or signs of injury. (pp. 252–253)
- O. Assess baseline vital signs. (p. 253)
 1. Use pulse oximeter per local protocol.
- P. Assess SAMPLE history. (p.253)
- Q. Perform interventions and transport. (pp. 253–254)
- IV. **Detailed Physical Exam** (pp. 254–261) (**Table 10-4, p. 255; Table 10-5, p. 255**) (**Scan 10-6, pp. 256–258**)
 - A. Perform en route to hospital if time and patient conditions permit. (p. 254)
 - B. Patient and injury specific (e.g., cut finger would not require the detailed physical exam). (pp. 254–255)
 - C. Perform a detailed physical examination on the patient to gather additional information. (pp. 255–261)
 1. As you inspect and palpate, look and/or feel for injuries or signs of injury.
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns
 - f. Tenderness
 - g. Lacerations
 - h. Swelling
 2. Assess the head, inspect and palpate for injuries or signs of injury. (**Fig. 10-5, p. 259**)
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations



Point to Emphasize

Do NOT let students rock the pelvis to check stability.



Teaching Tip

Point out to students that they should not be distracted by dramatic extremity injuries—these are rarely life threatening.



PowerPoint Presentation

Chapter 10, Slides 58–74



Point of Interest

The detailed physical exam is similar to the old secondary survey.



Teaching Tip

Remind students to talk to the patient, explaining what is going on as the exam is carried out. Doing so will make the exam easier for both patient and EMT-B.



Point to Emphasize

What is not exposed cannot be evaluated. Students should expose patients appropriately, bearing in mind considerations of privacy and potential heat loss.



Teaching Tip

Remind students that they can easily practice these exams at home on spouses, other family members—even the family dog or cat!



Teaching Tip

Remind the student that the dispatch information and chief complaint may not match the findings of the detailed assessment. The EMT *must* do a thorough detailed assessment in order not to miss any problems/injuries.



Point to Emphasize

While doing the detailed assessment the EMT should pay attention to level of consciousness and breathing in case the patient status changes.



Point to Emphasize

Drive home to students the need to be alert to potential airway obstructions when assessing the nose and mouth.

- e. Burns
 - f. Tenderness
 - g. Lacerations
 - h. Swelling
 3. Assess the face, inspect and palpate for injuries or signs of injury.
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns
 - f. Tenderness
 - g. Lacerations
 - h. Swelling
 4. Assess the ears, inspect and palpate for injuries or signs of injury.
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns
 - f. Tenderness
 - g. Lacerations
 - h. Swelling
 - i. Drainage
 5. Assess the eyes, inspect and palpate for injuries or signs of injury.
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns
 - f. Tenderness
 - g. Lacerations
 - h. Swelling
 - i. Discoloration
 - j. Unequal pupils
 - k. Foreign bodies
 - l. Blood in anterior chamber (**Fig. 10-7, p. 260**) (p. 259)
 6. Assess the nose, inspect and palpate for injuries or signs of injury.
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns
 - f. Tenderness
 - g. Lacerations
 - h. Swelling
 - i. Drainage
 - j. Bleeding
 7. Assess the mouth, inspect and palpate for injuries or signs of injury.
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns

- f.** Tenderness
 - g.** Lacerations
 - h.** Swelling
 - i.** Teeth
 - j.** Obstructions
 - k.** Swollen or lacerated tongue
 - l.** Odors
 - m.** Discoloration
- 8.** Assess the neck, inspect and palpate for injuries or signs of injury.
- a.** Deformities
 - b.** Contusions
 - c.** Abrasions
 - d.** Punctures/penetrations
 - e.** Burns
 - f.** Tenderness
 - g.** Lacerations
 - h.** Swelling
 - i.** Jugular vein distention
 - j.** Crepitation
- 9.** Assess the chest, inspect and palpate for injuries or signs of injury.
- a.** Deformities
 - b.** Contusions
 - c.** Abrasions
 - d.** Punctures/penetrations
 - e.** Burns
 - f.** Tenderness
 - g.** Lacerations
 - h.** Swelling
 - i.** Crepitation
 - j.** Paradoxical motion
 - k.** Breath sounds in the apices, midclavicular line, bilaterally and the bases, midaxillary line, bilaterally.
 - (1)** Present
 - (2)** Absent
 - (3)** Equal
- 10.** Assess the abdomen, inspect and palpate for injuries or signs of injury.
- a.** Deformities
 - b.** Contusions
 - c.** Abrasions
 - d.** Punctures/penetrations
 - e.** Burns
 - f.** Tenderness
 - g.** Lacerations
 - h.** Swelling
 - i.** Firm
 - j.** Soft
 - k.** Distended
- 11.** Assess the pelvis, inspect and palpate for injuries or signs of injury.
- a.** Deformities
 - b.** Contusions
 - c.** Abrasions
 - d.** Punctures/penetrations
 - e.** Burns
 - f.** Tenderness



Reading/Reference

De Lorenzo, R. "Sneezes, Wheezes, and Breezes—Listening to the Chest," *JEMS*, Oct. 1995.

Q4: List the steps of the rapid trauma assessment and describe the kind of patient for whom the rapid trauma assessment is appropriate.

A4: *The steps are: head, neck, chest, abdomen, pelvis, extremities, and posterior. A patient with a significant mechanism of injury needs a rapid trauma assessment.*

Q5: What are the additional areas that you assess in the detailed physical exam that you did not evaluate in the rapid trauma assessment?

A5: *The scalp and cranium, face, ears, nose, and mouth.*

Q6: List the areas covered in the detailed physical exam. What do you look and feel for in each of these areas?

A6: *Refer to pp. 251–261 and to Table 10-5 on p. 255 of the textbook.*

[Note: Application questions are covered in the Practice Scenarios and Running a Call later in this lesson.]

STREET SCENES

Ask a student to volunteer to read aloud to the class the case study on page 268 of the textbook. Discuss answers to questions at appropriate points within the scenario.

Q1: What is the priority of this patient?

A1: *The patient is suffering from multi-trauma. The ABCs are the first priority, while protecting the cervical spine. The first treatment priority is securing the airway and assuring adequate respirations (breathing). Due to facial injuries, the EMT-Bs must make sure that mucous, blood, and/or teeth are not causing airway obstructions. After applying a cervical collar and placing the patient on a backboard, the EMT-Bs should suction as needed and, if necessary, turn the patient on his side to allow for drainage. Next, the EMT-Bs should apply occlusive dressing over the stab wound. They should also provide the patient with high-concentration oxygen and, if necessary, assist ventilation. (Note to Instructor: Stress to students that in this scenario the EMT-Bs should remain alert to the possibility of tension pneumothorax throughout the call. Explain this condition and/or refer students to the appropriate information and diagrams in Chapter 27, “Soft-Tissue Injuries.”)*

Q2: What should be done next?

A2: *The patient requires rapid transport to a trauma center. After managing the airway and breathing, and controlling any external bleeding, the EMT-Bs should package the patient for immediate transport.*

Q3: When should vital signs be taken?

A3: *A baseline set of vital signs should be taken as soon as possible. Because the patient has a serious mechanism of injury, vitals should be retaken every 5–10 minutes.*

Q4: What should you do next?

A4: *The patient seems to have developed difficulty breathing until the EMT-B lifts part of the occlusive dressing and allows some air to escape. Point out that this is suggestive of tension pneumothorax (see Question 1). In this situation, a corner of the occlusive dressing should be raised, which provides some relief. If this is successful, the EMT-Bs should then continue to monitor the patient. They should*



Online Test Preparation

Send your students to <http://www.prenhall.com/EMTachieve>.

remain prepared to assist ventilations and, if time allows, consider requesting ALS intercept. (*Note to Instructor:* Intercept, however, should not delay transport time significantly.)

Q5: What should be done for the detailed assessment if there is time before reaching the trauma center?

A5: *The ABCs remain the first priority. However, as time and patient conditions permit, the detailed assessment should include the head-to-toe survey suggested on pages 000–000 of the textbook. In the case of this scenario, you might stress these points: 1. If the EMT-Bs did not check the posterior when they backboarded the patient, they should do so now. 2. They should also pay special attention to facial injuries and parts of the body that made contact with the ground when the patient was first thrown down.*

Q6: How will DCAP-BTLS help with the assessment?

A6: *Deformities—injuries from being thrown on the ground or beaten; Contusions—facial cuts/wounds; Abrasions from mugging or from falling; Penetrations—the EMT-Bs would have already identified the penetrating knife wound; Burns—unlikely; Tenderness—areas hit or impacted with great force (from mugging or from hitting the ground); Lacerations—may be evident from causes already mentioned; Swelling—should be anticipated to any part of the body that received an injury due to great force.*

PRACTICE SCENARIOS

Arrange for two vacant classrooms or other private areas to serve as practice scenario stations. Then set up the following two scenarios:

► SCENARIO STATION ONE

Set up the station with one nonstudent acting the part of a trauma patient with a nonsignificant mechanism of injury. Before class, brief the patient on his or her role, explaining that he or she is an adult patient who has accidentally cut his or her finger at home with a kitchen knife. When the EMT-B students arrive, the cut is bleeding profusely. You may moulage the patient if desired. Assign a volunteer EMT to the station as a teaching assistant.

► SCENARIO STATION TWO

Set up the station with one nonstudent acting the part of a trauma patient with a significant mechanism of injury. Before class, brief the patient on his or her role, explaining that he or she is a teenager who has been shot at school by a member of a rival gang. When the EMT-B students arrive, the patient is lying in a pool of blood, but is able to speak. You may moulage the patient if desired. Assign a volunteer EMT to the station as a teaching assistant.

Divide the class into groups of two. If you have an odd number of students, one team of three is acceptable. Explain that you have set up two practice scenarios, one dealing with a patient with minor trauma and one dealing with a patient with major trauma. Instruct each team to visit each station and act appropriately on what it finds there. Point out that, although the emphasis of the scenarios is on the focused history and physical exam, students should also utilize other appropriate information and skills they have learned to date. However, they should not worry about administering patient care. Inform them that at both stations there will be an EMT who will observe the teams' performance and provide feedback.

Call pairs at random, give each pair a complete trauma jump kit, and direct them to the location of the scenario. Periodically visit each station to monitor progress. Provide assistance to the EMTs if necessary. Make sure that each team visits both stations. Help students who are waiting to practice their focused history and physical skills.

When each pair has completed both stations, make sure that they return to the main classroom.

RUNNING A CALL

Ask the student team that is on call for this session or two volunteers to play the role of EMT-Basics who are responding to a 9-1-1 call. Ask for two more volunteers, one to be a police officer and one to be the patient. Take the two EMT-B players outside of the classroom and provide them with a complete trauma jump kit containing BSI equipment, assorted cervical collars, stethoscopes, BP cuffs, and penlights. Describe the following situation to them:

You are called by the police, who found a man unconscious. You should act appropriately on what you find there. The emphasis of the scene is on the detailed medical history. However, you should utilize all the skills you have learned to date.

Have the patient and police officer come to the front of the classroom. Describe the following situation to them and the class:

The patient is a middle-age adult who was mugged in the middle of the night while walking home from a local bar. The patient is unconscious on a sidewalk and has a large contusion on the back of the head. The police officer found the patient during a routine foot patrol of the neighborhood. The police officer administered First-Responder-level aid and requested an ambulance. No witnesses are present to explain what happened to the patient.

Tell the patient and the police officer to take their places and to start acting. Call the EMT-Bs back into the classroom. Allow the role play to progress naturally. Intervene only if the players seem to be at a loss for what to do. If the EMT-Bs fail to put on the proper BSI equipment, remind them to do so. If the EMT-Bs decide to call their on-line medical director, direct them to transport the patient.

End the role play when the detailed physical exam has been completed. (The EMT-Bs should not be asked to treat the patient further because they have not yet reached this point in training.)

With the entire class, discuss the following:

- Did the EMT-Bs do well?
- What, if anything, should they have done differently?

ASSIGNMENTS

Have students read Chapter 11, “Assessment of the Medical Patient,” before the next class. Also ask them to complete Chapter 11 of the Workbook and Brady’s *Active Learning Manual*.



Critical Thinking

Review and discuss students’ responses to questions on p. 267 of the student text.



Reading/Reference

Textbook, pp. 230-268.




Workbook


Chapter 11 Activities





Active Learning Manual

Chapter 11

 **Evaluation Handout 10-2**
Chapter 10 Quiz


 **TestGen**
Chapter 10 Test

 **Online Test Preparation**
Send your students to
<http://www.prenhall.com/EMTAchieve>.

 **Reinforcement Handouts 10-3 to 10-6**
Reinforcement Activities


 **Brady Skills Series**


- Patient Assessment, Part 2 (Trauma Patient)


 **PowerPoint Presentation**
Chapter 10, PowerPoint

 **Student CD**
Chapter 10

 **Companion Website**
<http://www.prenhall.com/limmer>

 **EC 360**
Chapter 10

 **Medical Emergency Response Simulator (MERS)**
Chapter 10 Scenario

 **Brady Pocket Reference for the EMT-B**

- Assessment Skills (Focused History and Physical Exam) Trauma Patient

EVALUATION

Chapter Quiz Distribute copies of the Chapter Quiz provided in Handout 10-2 to evaluate student understanding of this chapter. Remind students not to use their notes or textbooks while taking the quiz.

TestGen You may wish to create a custom-tailored test using *Prentice Hall TestGen for Emergency Care*, 10th Edition to evaluate student understanding of this chapter.

Online Test Preparation (for students and instructors) Additional test preparation is available through Brady's new online product, EMT Achieve: Basic Test Preparation at <http://prenhall.com/EMTAchieve>. Instructors can also monitor student mastery online.

REINFORCEMENT (See pp. xi–xiii for further information.)

Handouts If classroom discussion or performance on the quiz indicates that some students have not fully mastered the chapter content, you may wish to assign some or all of the Reinforcement Handouts for this chapter.

Brady Skills Series EMT-B Video/CD Have your students watch the skills come to life on either VHS or CD-ROM.

PowerPoint Presentation (for instructors) The PowerPoint material developed for this chapter offers useful reinforcement of chapter content.

Student CD (for students) A wide variety of material on this CD-ROM will reinforce and also expand student knowledge and skills.

Companion Website (for students) Additional review quizzes and links to EMS resources will contribute to further reinforcement of the chapter.

EC 360 A new 60-hour distance learning program for didactic portions of the course is offered on one of three platforms: Course Compass, Blackboard, or Web CT. Includes the IRM, Powerpoints, TestGen, and Companion Website for instruction. Ask your local sales representative for more information.

Medical Emergency Response Simulator (MERS) (for students) The following MERS scenario offers important skill reinforcement for this chapter.

Level of Complexity	Case Number
Beginner	Case #14 (There are many more cases, but this case is probably the most appropriate for a student's first trauma assessment.)

OBJECTIVES CHECKLIST

Knowledge and Attitude	Date Mastered
1. Discuss the reasons for reconsideration concerning the mechanism of injury.	
2. State the reasons for performing a rapid trauma assessment.	
3. Recite examples and explain why patients should receive a rapid trauma assessment.	
4. Describe the areas included in the rapid trauma assessment and discuss what should be evaluated.	
5. Differentiate when the rapid assessment may be altered in order to provide patient care.	
6. Discuss the reason for performing a focused history and physical exam.	
7. Recognize and respect the feelings that patients might experience during assessment.	
8. Discuss the components of the detailed physical exam.	
9. State the areas of the body that are evaluated during the detailed physical exam.	
10. Explain what additional care should be provided while performing the detailed physical exam.	
11. Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient.	
12. Explain the rationale for the feelings that these patients might be experiencing.	

Skills	Date Mastered
1. Demonstrate the rapid trauma assessment that should be used to treat a patient based on mechanism of injury.	
2. Demonstrate the skills involved in performing the detailed physical exam.	

CHAPTER 10 QUIZ

Write the letter of the best answer in the space provided.

- _____ 1. After the initial assessment, the more thorough assessment that an EMT-B performs in the field is the:
A. detailed physical examination.
B. primary survey.
C. focused history and physical exam.
D. scene survey.
- _____ 2. The decision to do a rapid trauma assessment is based on:
A. information obtained from the SAMPLE history.
B. the level of consciousness.
C. mechanism of injury.
D. vitals are outside normal limits.
- _____ 3. Which of the following would appear in the focused history and physical exam of a medical patient with no signs of trauma or significant mechanism of injury?
A. Determine responsiveness.
B. Assess history of present illness.
C. Determine chief complaint.
D. Do a detailed examination of all extremities.
- _____ 4. An easy way for an EMT-B to remember what to look for in assessing the body of a trauma patient is the mnemonic:
A. SAMPLE. **C.** DCAP-BTLS.
B. AVPU. **D.** OPQRST.
- _____ 5. In assessing areas of a patient's body, the two main methods the EMT-B uses are inspection and:
A. palliation. **C.** palpation.
B. presentation. **D.** pressure.
- _____ 6. The medical term for "bruises" is:
A. deformities. **C.** contusions.
B. abrasions. **D.** lacerations.
- _____ 7. Among the most common injuries that an EMT-B can expect to see are:
A. deformities. **C.** abrasions.
B. contortions. **D.** avulsions.
- _____ 8. All of the following would lead an EMT-B to suspect a cervical spine injury except:
A. bruise on the forehead. **C.** abdominal pain.
B. broken collar bone. **D.** loss of consciousness.
- _____ 9. A cervical spine immobilization device should have all of the following characteristics except:
A. stiffness. **C.** correct size.
B. softness. **D.** rigidity.
- _____ 10. Internal bleeding may cause:
A. crepitation. **C.** distortion.
B. paradoxicality. **D.** distention.

- _____ 11. All the following would be considered “significant” mechanisms of injury except:
- A. death of another occupant in a car.
 - B. fall from a standing position, less than 6 feet.
 - C. motor-vehicle collision with rollover.
 - D. ejection of a passenger from motor vehicle.
- _____ 12. Flat neck veins in a patient who is lying flat indicate:
- A. head injury.
 - B. neck injury.
 - C. chest injury.
 - D. blood loss.
- _____ 13. Crepitation refers to the:
- A. altering of mental status.
 - B. sound or feel of broken bones rubbing.
 - C. loss of vision.
 - D. presence of uncontrolled shivering.
- _____ 14. Paradoxical motion is most commonly associated with:
- A. chest injury.
 - B. abdominal injury.
 - C. extremity injury.
 - D. head injury.
- _____ 15. In a rapid assessment of the body, the area that an EMT-B would examine last is (are) the:
- A. head.
 - B. abdomen.
 - C. pelvis.
 - D. extremities.
- _____ 16. In trauma situations, the “S” in SAMPLE history can stand for all the following except:
- A. story.
 - B. symptoms.
 - C. spinal status.
 - D. signs.
- _____ 17. Begin the assessment of infant and child trauma patients at the:
- A. head.
 - B. fingertips.
 - C. toes.
 - D. abdomen.
- _____ 18. The assessment procedure usually performed on seriously injured or ill patients en route to the hospital is the:
- A. initial assessment.
 - B. detailed physical exam.
 - C. SAMPLE history.
 - D. rapid trauma assessment.
- _____ 19. Areas that an EMT-B will assess in the detailed physical examination that were not assessed during the rapid trauma assessment include the:
- A. head and neck.
 - B. chest and abdomen.
 - C. pelvis and posterior body.
 - D. ears, eyes, nose, and mouth.
- _____ 20. The best way to calm a frightened trauma patient is through:
- A. administration of sedation.
 - B. constant monitoring.
 - C. avoidance of eye contact.
 - D. explanation of procedures.

IN THE FIELD

Read the following real-life situation. Then answer the questions that follow.

You and your partner arrive on the scene of a motor-vehicle accident within minutes of the call. You see the flashing lights of the state troopers' cars. A fire truck is also in sight. The firefighters have put up scene lights. To the right of the road, you spot a set of tire tracks. An automobile rests on all four wheels in a ditch.

After the fire department stabilizes the vehicle, you approach. Inside the vehicle, you notice a middle-aged man who appears to be sleeping, judging by his snoring. He seems oblivious to all the commotion. You immediately stabilize his head manually and then try to arouse him. The patient awakens quickly, but he seems confused and his speech is slightly slurred. His airway is patent, and his breathing relaxed and displays no apparent difficulty. His radial pulse is strong and regular at roughly 100 beats per minute. As you work, you notice a strong smell of alcohol in the car and on the patient.

Your partner points out the damage on both sides of the car and on the roof. You conclude that the driver rolled his car before it went off the road. You decide to continue manual stabilization of his cervical spine and extricate him from the vehicle onto a long backboard. While you take this care step, you ask one of the EMT-Bs from the fire department to take a set of baseline vital signs. You also request a Paramedic intercept through the EMS coordinator.

At this point, you begin to perform the rapid trauma assessment. The assessment reveals no significant injuries to the patient. The vital signs are also within normal limits. In light of his mental status, you choose to move the patient rapidly out of the ditch, via a Stokes basket, up a ladder, and into the waiting ambulance.

1. What is the mechanism of injury? Would you consider it "significant"?
2. Were the assessments correctly performed? Explain.
3. Considering the injuries presented and the mechanism involved, where should this patient have been transported?

CHAPTER 10 REVIEW

Write the word or words that best complete each sentence in the space provided.

1. _____ means “injury,” and injuries can range from slight to severe, from a cut finger to a massive wound.
2. The first step of the focused history and physical exam is to reconsider the _____.
3. The _____ is what the patient tells you is the matter.
4. When you assess areas of the patient’s body, you will evaluate them in two main ways: _____ and _____.
5. An easy way to remember what you are trying to find during a physical exam is the memory aid _____.
6. The medical term for bruising is _____.
7. Cut, open wounds that sometimes cause significant blood loss are known as _____.
8. Make sure the cervical collar is the right _____ for the patient.
9. The “T” in DCAP-BTLS stands for _____.
10. The assessment step called for in a patient with a significant mechanism of injury is the _____.
11. The sound or feel of bones rubbing against each other is known as _____.
12. A(n) _____ is a permanent surgical opening in the neck through which a patient breathes.
13. _____ can be a sign of a condition known as “flail chest.”
14. In trauma situations, it is good to think of the “S” in SAMPLE as standing for not just “signs and symptoms” but also for _____.
15. Assess all four extremities for _____, _____, _____, and sensation.
16. En route to the hospital, you may have time to do a more complete patient assessment known as the _____.
17. Bruising behind a patient’s ears is called _____.

HANDOUT 10-4: Continued

18. In conducting a detailed physical exam of the ears, you are looking for DCAP-BTLS plus _____.
19. The final step of the detailed physical exam is to reassess the _____.
20. A detailed physical exam does not take place before transport unless _____.

TRAUMA PATIENT ASSESSMENT LISTING

Complete the following lists.

1. List the five steps for the focused history and physical exam of a trauma patient with no significant mechanism of injury.

2. List nine significant mechanisms of injury for adults.

3. List three additional significant mechanisms of injury for a child.

4. List the eight things to look for when using DCAP-BTLS to assess areas of a patient's body.

TRAUMA PATIENT ASSESSMENT MATCHING

Write the letter of the term in the space next to the appropriate description.

- A. colostomy
- B. crepitation
- C. detailed physical examination
- D. distention
- E. focused history and physical exam
- F. jugular vein distention
- G. paradoxical motion
- H. priapism
- I. rapid trauma assessment
- J. stoma

- _____ 1. quick physical assessment of the major areas of the body to detect injury
- _____ 2. permanent surgical opening in the neck that the patient breathes through
- _____ 3. surgical opening in the wall of the abdomen
- _____ 4. assessment that involves using SAMPLE to gather information
- _____ 5. methodical physical examination of the patient done en route to the hospital
- _____ 6. bulging neck veins, normally seen in a patient lying flat
- _____ 7. persistent erection of the penis, often resulting from spinal injury
- _____ 8. grating sound or feeling of broken bones rubbing together
- _____ 9. condition of being stretched, bloated, inflated, or larger than normal
- _____ 10. movement of part of the chest in the opposite direction of the rest of the chest when breathing

Chapter 10 Answer Key

HANDOUT 10-2: Chapter 10 Quiz

- | | | | |
|------|-------|-------|-------|
| 1. C | 6. C | 11. B | 16. C |
| 2. C | 7. C | 12. D | 17. C |
| 3. B | 8. C | 13. B | 18. B |
| 4. C | 9. B | 14. A | 19. D |
| 5. C | 10. D | 15. D | 20. D |

HANDOUT 10-3 In the Field

1. An assessment of the damage would indicate that the car rolled over at least once. This is considered a significant mechanism of injury. The EMT-B should perform a focused history and physical exam for a trauma patient with a significant mechanism of injury.
2. Yes. After the initial assessment, the EMT-B correctly decided that this patient was a high-priority patient. The EMT-B continued manual cervical spine immobilization, requested an ALS intercept, and began a rapid trauma assessment while waiting for the crew to package the patient.
3. In light of the injuries, or apparent lack of them, it would seem that the patient could be transported to the local hospital. However, in reassessing the mechanism of injury, it is obvious that there is a potential for extensive internal injuries. Therefore, the patient should be transported to the closest trauma center for further evaluation.

HANDOUT 10-4: Chapter 10 Review

- | | |
|-----------------------------|----------------------------------|
| 1. Trauma | 12. stoma |
| 2. mechanism of injury | 13. Paradoxical motion |
| 3. chief complaint | 14. story |
| 4. inspecting, palpating | 15. distal pulse, motor function |
| 5. DCAP-BTLS | 16. detailed physical exam |
| 6. contusion | 17. Battle's sign |
| 7. lacerations | 18. drainage |
| 8. size | 19. vital signs |
| 9. tenderness | 20. transport is delayed |
| 10. rapid trauma assessment | |
| 11. crepitation | |

HANDOUT 10-5: Trauma Patient Assessment Listing

1. Reconsider the MOI. Determine the chief complaint. Perform a focused physical exam. Obtain baseline vital signs. Take a SAMPLE history.
2. ejection from vehicle; death in same passenger compartment; falls of more than 15 feet or 3 times patient's height; rollover of vehicle; high-speed vehicle collision; vehicle-pedestrian collision; motorcycle crash; unresponsive or altered mental status; penetrations of the head, chest, or abdomen
3. falls from more than 10 feet; bicycle collision; vehicle in medium-speed collision
4. deformities, contusions, abrasions, punctures/penetrations, burns, tenderness, lacerations, swelling

HANDOUT 10-6: Trauma Patient Assessment Matching

- | | | | | |
|------|------|------|------|-------|
| 1. I | 3. A | 5. C | 7. H | 9. D |
| 2. J | 4. E | 6. F | 8. B | 10. G |