

NATIONAL SKI PATROL

OUTDOOR EMERGENCY CARE

*Refresher*

STUDY  
GUIDE

CYCLE B 2000

B



# INTRODUCTION

## NEW MILLENNIUM—CONTINUING EXCELLENCE

As the National Ski Patrol enters the new millennium it retains the same focus that inspired its formation more than 60 years ago—helping those who become ill or injured on the slopes. In large part, the enduring strength of this commitment is a reflection of you, the individual patroller, whose perseverance and dedication are the backbone of the association. Your willingness to assimilate new programs and grow with the changing concepts in emergency care ensures quality management of patients and helps preserve the NSP's reputation as a leading provider of outdoor-oriented emergency care.

The fall refresher reinforces Outdoor Emergency Care procedures and bolsters patrollers' confidence in their patient-care skills. And because participants have to go through this process every year, refreshers must be consistently interesting, challenging, and imbued with enthusiasm with regard to the information that's passed along. Judging by the evaluations submitted by refresher attendees in recent years, this approach is very well-received. Keeping this in mind, the OEC Refresher Committee has tried to develop a Cycle B refresher format that's efficient, reflective, thought-provoking, and fun.

Committee members are aware that spending a full day reviewing emergency skills and assessment protocols can be a challenge. Please keep in mind that the committee has put a lot of thought and creative energies into the 2000 refresher, and the only thing it asks in return is that you continue your commitment to quality emergency care. Prepare for the refresher by reading the OEC-oriented articles in this issue of *Ski Patrol Magazine* and carefully reviewing the materials in this *Refresher Study Guide*. The brief time you spend in preparation will be rewarded ten-fold by the satisfaction and personal confidence you'll gain from having thoughtfully completed this important exercise. Have a great refresher as well as a safe and fun 2000–2001 season!

### ONLINE OPTION ON TAP TO MAKE STUDYING EASIER

NSP members will soon be able to purchase NSP's first-ever interactive study tool designed to help them prepare for the annual Outdoor Emergency Care (OEC) refresher. Scheduled for release by August 1, 2000, the Outdoor Emergency Care Online Review is intended to make studying for the OEC refresher both stimulating and productive.

The Online Review, which is currently in development, will help patrollers evaluate their mastery of material found in the third edition of *Outdoor Emergency Care* and the *OEC Refresher Study Guide*.

This interactive study tool is being designed to offer patrollers an opportunity to renew and demonstrate competency in required OEC knowledge and skills from home or elsewhere.

Each topic and scenario to be covered in this fall's refresher will be supplemented by 20 to 40 multiple-choice questions, which patrollers can access online to test their knowledge of key concepts and procedures before attending their refresher. The program will also include an instant grading feature to provide immediate results as well as brief explanations of the answers for all questions. With results

*continued on page 3*

### OEC REFRESHER PROGRAM

The OEC refresher program provides NSP members with a continuing education opportunity to renew and demonstrate competency in required OEC knowledge and skills while using a variety of equipment and techniques.

Refreshers are based on performance, not time. This allows patrollers to work at their own pace to meet specific knowledge and skill objectives.

Activities will focus on performance criteria with immediate, constructive feedback included as a part of each section. For those whose knowledge or skills can benefit from further study or practice, additional or remedial education will be available.

The value and success of the refresher depends on the commitment displayed by each participant, including all members of the OEC Refresher Committee, the NSP patrol representatives, the instructor trainers (ITs), the instructors, and you—the individual patroller. Think of everyone involved as being part of one big quality assurance team. Refresher quality can be guaranteed only if all members of the team willingly and enthusiastically agree to dedicate themselves to the refresher process.

### JUST THE FACTS, PLEASE

- To maintain membership in the organization for the upcoming ski season, NSP members must successfully complete the annual OEC refresher. The only members exempt from this requirement are those registered candidate patrollers who are enrolled in an OEC course, those members who completed a full OEC course after May 31 of the current calendar year, and those members who are registered as medical associates.
- A refresher is *not* the equivalent of a professional challenge for a candidate patroller entering the NSP system with previous emergency care or medical training.
- A patroller who wishes to renew active status from an inactive registration or a missed patrolling season must
  1. complete the refresher cycle(s) missed during the inactive period (only those patrollers with a valid OEC certification may renew active status), and
  2. pay national dues for each inactive year.

## HOW TO PREPARE

- Allow yourself plenty of time to study the *Outdoor Emergency Care* references listed in this study guide for Cycle B. Please note that all references are to the third edition of *OEC*.
- After studying these references, review the objectives presented with the refresher topics. Then answer the questions for each scenario found in the Scenario Discussion Forum section of this study guide. (You may find it helpful to cite text references in the space provided.) *Be sure to bring the completed study guide to the refresher.*
- Use the skill performance guidelines in this study guide and in the third edition *OEC Study Book* to review and practice the skills you will be asked to demonstrate during this year's refresher.
- Check with your patrol or region to determine when and where the refresher will be held. If you have a conflict, contact the OEC region administrator for an alternate date. *Do not wait until the last minute to do this. It is your responsibility to find out when the refresher is being held.*
- Review and follow local instructions with regard to study, review, information references, and refresher logistics.

## WHAT TO BRING TO THE REFRESHER

- This *2000 Refresher Study Guide*. Remember to complete your written answers to the scenario text and action questions *before* you arrive.
- Your current OEC, CPR, and NSP registration cards. (You may obtain a duplicate OEC card from the national office by mailing a check or money order for \$4 made payable to NSP, 133 S. Van Gordon St., Suite 100, Lakewood, CO 80228. Enclose a note asking for a new OEC card and allow three to four weeks for delivery.)
- A fully stocked aid belt, vest, or pack *and* any additional items required at the refresher you will be attending. Dress appropriately to participate in both indoor and outdoor refresher activities.

## REFRESHER FOLLOW-UP

- Complete and hand in the “Patroller Evaluation for the 2000 OEC Refresher” found in this study guide.
- If you attend another region or patrol's refresher, be sure the instructor of record has all the necessary information to verify your completion of the refresher to the national office on a supplemental roster. The roster must include your NSP membership I.D. number, name (as it appears in national registration records), patrol identification, and address. You may also want to use the verification form at the end of this guide to document your attendance to your patrol representative.

## CPR AND AED POLICY

- A. All active NSP members must hold a current professional-rescuer CPR certification from the American Heart Association, the American Red Cross, or the National Safety Council. This must include training in two-rescuer CPR techniques.
- B. All active NSP members must demonstrate their *CPR skills* each season, *regardless of the certifying agency's requirements or the expiration date of the card*. The National Medical Committee stresses the importance of participating in this CPR skills refresher because repetition and practice help develop competency. A new certificate need not be issued by the certifying body unless the certificate expires before the start of the upcoming ski season.
- C. CPR training may be completed in an independent patrol session, accomplished by each patroller on an individual basis, or included as a part of the OEC refresher. If CPR training is conducted in a patrol session or at an OEC refresher, organizers must allow appropriate CPR review time and use the instructional standards for updating cardholders provided by the chapter or affiliate in accordance with guidelines established in the *Journal of the American Medical Association*, October 1992.
- D. With regard to the use of automated external defibrillators (AEDs), the American Heart Association recommends AED training for rescuers who respond to incidents in high-risk environments. At this time, AED concepts are included in most CPR courses. AED skills

*continued from page 2*  
of the review in hand, patrollers will be able to reduce their training time at their local refreshers this fall. In addition, the program will provide page references to the *Outdoor Emergency Care* text and hyperlinks to other medical sites for those who wish to learn more about specific topics.

The OEC Online Review will be found at [www.nspoec.com](http://www.nspoec.com). Once at the site, NSP members will simply click on the Outdoor Emergency Care Online Review tab and purchase access to the site for a one-time charge of \$9.95 (via a secure, encrypted order form). The member will then have access to the program for six months from the date of purchase.

The OEC Online Review is the first product offered through an exciting new relationship between the NSP and Jones and Bartlett Publishers (J&B). For each unit of the review sold, J&B will pay a royalty to NSP to benefit the organization's education programs. The NSP and J&B have also partnered to develop the fourth edition of *Outdoor Emergency Care*. This alliance promises to foster the development of many new methods of delivering OEC materials—including electronic teaching tools—to help patrollers enhance their skills.

## THE TOP 10 REASONS WHY PATROLLERS CAN'T WAIT TO GO TO THEIR REFRESHERS

10. Since the grass is almost done growing, they really have nothing better to do over the weekend.



9. For weeks, they've been looking for a good excuse to get up at the crack of dawn.

8. They enjoy running around aimlessly at 8 in the morning with dozens of other people who pretend to remember this stuff like they did it just yesterday.

7. They get paid so well for being there.



6. The coffee, tea, and donuts alone are worth the drive.

5. They can sit, crammed together, in one guy's car and do the written part of the *Refresher Study Guide* on the way to the ski area.

training, where provided, is taught as an add-on option in citizen-level and professional-rescuer courses. Patrollers are reminded that they must obtain ski area management

approval to practice with and use AEDs. Furthermore, any such use must be conducted in accordance with statutes and protocols established by state and local authorities.

## OEC REFRESHER TOPICS AND OBJECTIVES

The six core topics that follow are essential subjects and skills that apply to all emergency care situations. Patrollers must review and demonstrate proficiency in all core subjects each year.

### A. CORE TOPICS AND OBJECTIVES

1. **Shock Management (2000 focus area)**
  - Provide an in-depth review of the anatomy and physiology of the circulatory system, as well as the different types of shock, their causes, and emergency treatment.
  - Be able to recognize the potential for shock and its signs and symptoms.
  - Demonstrate techniques to prevent and manage shock.
2. **Cold-Injury Management (2000 focus area)**
  - Provide an in-depth review of the body's heat production mechanism, hypothermia, and other illnesses and injuries related to the cold environment.
  - Be able to recognize and discuss the signs and symptoms of cold-related injuries, including hypothermia.
  - Demonstrate techniques to manage patients with hypothermia or other cold-related illnesses or injuries.
3. **Airway Management and Oxygen Administration**
  - Demonstrate airway management techniques and the correct application and use of airway adjuncts, oxygen administration, and suction equipment.
4. **Patient Assessment: Rapid Body Survey, Focused Trauma Survey**
  - Demonstrate assessment techniques for an injured person, using the Patient Assessment—Rapid Body Survey and Patient Assessment—Responsive—Injured (Trauma) skill performance guidelines.
5. **Infection Control**
  - Demonstrate the correct application of body substance isolation (BSI) to minimize exposure to body fluids in all applicable patient care situations.
6. **Neurological Injury Management**
  - Demonstrate the ability to recognize patients with head and/or spinal injuries.
  - Integrate the application of spinal immobilization techniques and devices in other refresher scenarios and stations.

### B. GENERAL TOPICS AND OBJECTIVES

1. **Anatomy and Physiology**
  - a. *Circulatory system*—List and be able to describe the major structures and functions of the circulatory system and how it interacts with other body systems in health, disease, and injury.
  - b. *Cutaneous system*—List and be able to describe the major structures and functions of the cutaneous system and how it interacts with other body systems in health, disease, and injury.
2. **Orthopedic Trauma**

*Upper-extremity injuries, injuries at or near joints, and open fractures*—Describe the signs and symptoms and principles of emergency care for upper-extremity injuries. Review the mechanism and pattern of upper-extremity injuries, injuries at or near joints, and open fractures. Using the applicable skill performance guidelines, demonstrate the proper assessment and correct application of various immobilization techniques and devices for the shoulder, upper arm, elbow, forearm, wrist, and hand. Demonstrate the correct management of injuries at or near a joint. Demonstrate the correct management of an open fracture before and during immobilization.

### 3. Environmental and Medical Emergencies

*Environmental injuries*—List and describe the injuries and illnesses caused by the environmental factors listed below. Describe the causes, signs and symptoms, and essential emergency care for each.

- a. Cold      b. Heat      c. Altitude      d. Solar      e. Electrical

### 4. Specific Injuries

- a. *Bleeding*—Demonstrate techniques for managing and controlling external bleeding and all soft-tissue injuries.  
b. *Burns*—Demonstrate essential emergency care for thermal burns.  
c. *Bandaging*—Demonstrate general bandaging techniques.

### 5. Transportation and Extrication

*Positioning patients*—Review the advantages and disadvantages of positioning, lifting, and/or moving a patient using the three positions of “jams and pretzels.” Demonstrate each of these positions, using the correct technique.

### 6. Local Needs

Review applicable local requirements, topics, and equipment related to the performance of outdoor emergency care at the patrol level. The OEC instructor of record reviews these concepts with patrol officers and the medical advisor to determine how to integrate applicable techniques or equipment into the current OEC refresher.

Specific area emergency care training may be accomplished at this time, including AED skills training as appropriate. Organizers may need to lengthen the overall refresher program to adequately cover these subjects. This objective is not to be confused with additional local training for patrol operations, such as lift evacuation, commonly referred to and accomplished in a separate on-the-hill refresher.

4. They can't wait to see what goofy things the instructors are going to have them do at the stations this year.



3. They heard a rumor that their new, good-looking patrol representative has volunteered to be a patient for the rapid body grope.

2. Enough time has passed since the last refresher that they've completely forgotten the pain of being strapped to the spineboard and having the Hare traction splint incorrectly seated against their “dainty parts.”



And the #1 reason patrollers can't wait to go to their refreshers: 1. They heard their patrol representative is buying the beer when it's over.

## STUDY REFERENCES

CORE TOPICS	OEC TEXT AND STUDY BOOK, THIRD EDITION
Shock Management (focus area)	Chapter 7
Cold Injury Management (focus area)	Chapter 19
Airway Management and Oxygen Administration	Chapter 6
Patient Assessment	Chapters 4, 5, 20, and 21 (Chapter 20 is included as a reference for pediatric assessment.)
Infection Control	Chapter 4 and Appendix F
Neurological Injury Management	Chapters 13 and 14
GENERAL TOPICS	OEC TEXT AND STUDY BOOK, THIRD EDITION
Anatomy and Physiology Circulatory System Cutaneous System	Chapter 2
Orthopedic Trauma Upper Extremity Injuries, Injuries At or Near a Joint, and Open Fractures	Chapters 9, 10, 11, and 12
Environmental and Medical Emergencies Environmental Emergencies	Chapter 19
Specific Injuries Control of Serious Bleeding, Burns, Bandaging	Chapters 7 and 8
Extrication and Transport Extrication from Difficult Positions, Jams and Pretzels	Chapter 22

# SKILL PERFORMANCE GUIDELINES

These are provided for review purposes. Each patroller will be required to demonstrate these skills at the refresher.

*(CPI) = Critical Performance Indicator*

*Steps marked with the CPI designation are critical to proper patient care and must be demonstrated to satisfy performance criteria.*

## MANAGING MEDICAL AND ENVIRONMENTAL EMERGENCIES

**OBJECTIVE:** *To demonstrate the skills needed to assess and manage illnesses that develop suddenly and require emergency care intervention.*

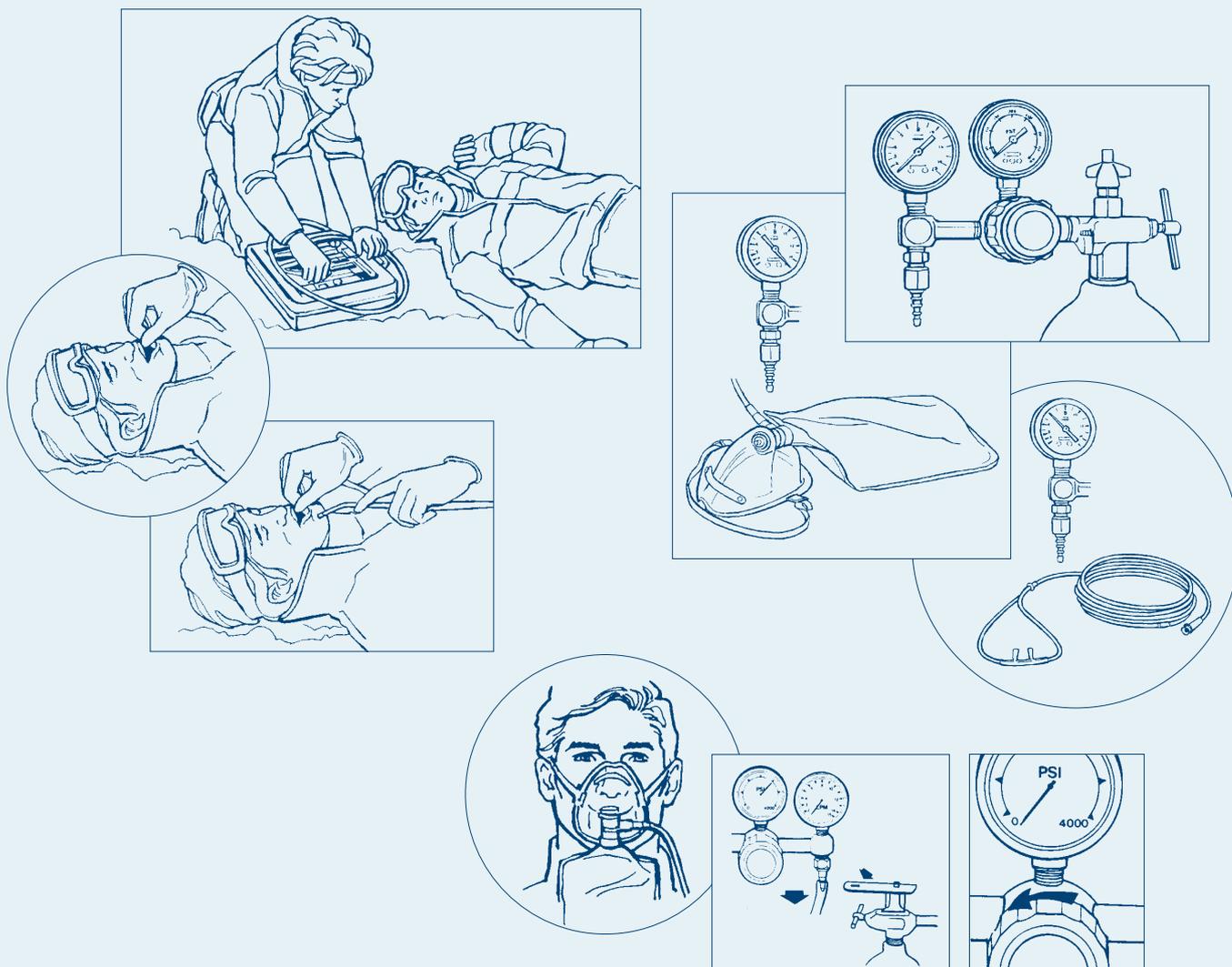
SKILL	YES	NO	NOTATIONS
■ Determines level of responsiveness (LOR) by using the AVPU Scale.			<i>(CPI)</i>
■ Performs urgent survey and provides priority emergency care intervention.			<i>(CPI)</i>
■ Provides general care for unresponsiveness, as appropriate.			<i>(CPI)</i>
■ Provides care for irrational, excited patients. <ul style="list-style-type: none"> <li>■ Does not attempt to restrain patient.</li> <li>■ Provides care for seizures.</li> <li>■ Provides care for diabetic emergencies, if indicated.</li> <li>■ Does not leave patient unattended.</li> </ul>			
■ Obtains the medical (SAMPLE) history. Obtains initial vital signs. Looks for medical-alert identification if no history is available.			<i>(CPI)</i>
■ Helps patient take any medication that has been prescribed for illness if not contraindicated by the patient's condition or circumstance and if in accordance with local protocols.			
■ Arranges for transportation to a medical facility.			
■ Maintains patient in a comfortable position.			
■ Provides protection from the environment, including any necessary warming or cooling.			
■ Provides treatment appropriate for the medical illness, including oxygen administration.			
■ Monitors vital signs at regular intervals, being alert for changes in the respiratory and circulatory systems.			<i>(CPI)</i>
Did the trainee or patroller adequately demonstrate the performance criteria of this skill?			



## USE OF OXYGEN AND AIRWAY ADJUNCTS—ADMINISTRATION OF OXYGEN

**OBJECTIVE:** *To demonstrate the correct use of oxygen equipment.*

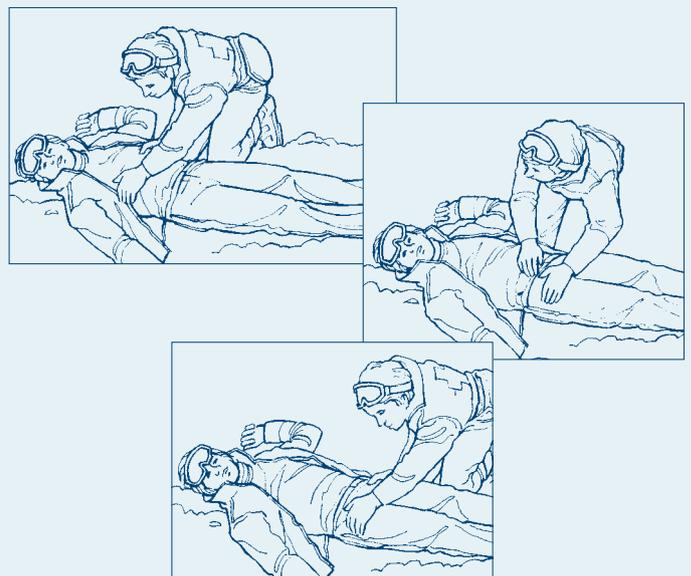
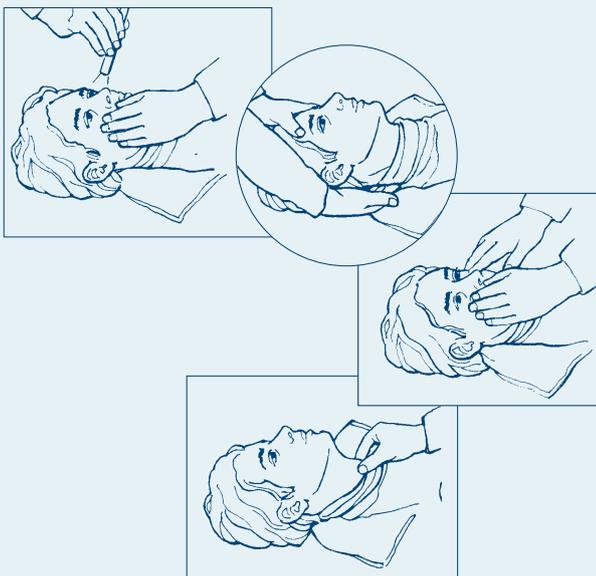
SKILL	YES	NO	NOTATIONS
<ul style="list-style-type: none"> <li>■ Assembles oxygen cylinder and regulator, and checks for leaks.</li> </ul>			(CPI)
<ul style="list-style-type: none"> <li>■ Chooses a delivery device by patient need.                             <ul style="list-style-type: none"> <li>■ Selects non-rebreather oxygen mask, connects to regulator, initially adjusts oxygen flow to 15 lpm, readjusting to keep the bag half-full on inhalation.</li> <li>■ Selects nasal cannula, connects to regulator, and adjusts oxygen to 6 lpm maximum.</li> </ul> </li> </ul>			(CPI)
<ul style="list-style-type: none"> <li>■ Applies oxygen delivery device to patient and verifies that the patient receives oxygen.</li> </ul>			(CPI)
<ul style="list-style-type: none"> <li>■ When complete, closes oxygen tank.</li> </ul>			
<ul style="list-style-type: none"> <li>■ Bleeds regulator device to “0.”</li> </ul>			
<p>Did the trainee or patroller adequately demonstrate the performance criteria of this skill?</p>			



## PATIENT ASSESSMENT—BODY SURVEY (RAPID AND WHOLE)

**OBJECTIVE:** *To demonstrate the ability to perform a body survey on a patient rapidly on scene or in a comfortable environment.*

SKILL	YES	NO	NA	NOTATIONS
■ Assesses the patient's level of responsiveness (AVPU).				(CPI)
■ Obtains the SAMPLE history.				(CPI)
■ Guards the cervical spine, as appropriate.				(CPI)
■ Confirms the ABCs.				(CPI)
■ Confirms control of severe bleeding.				(CPI)
■ Examines the head (skull, facial bones, pupils, ears, nose, and mouth).				
■ Examines and palpates the neck (cervical spine and anterior neck), and looks for medical-alert identification.				
■ Examines and palpates the chest (for abnormality and deformity).				
■ Examines and palpates the abdomen (all quadrants).				
■ Examines and palpates the pelvis.				
■ Examines and palpates each lower extremity (for abnormality and circulatory and neurologic function), and looks for medical-alert identification.				
■ Examines and palpates each upper extremity (for abnormality and circulatory and neurologic function), and looks for medical-alert identification.				
■ Examines and palpates the back and buttocks.				
■ Determines the pulse and respiration rates.				(CPI)
■ Forms general impression.				(CPI)
■ Did the trainee or patroller adequately demonstrate the performance criteria of these skills?				



## PATIENT ASSESSMENT—RESPONSIVE PATIENT—INJURED (TRAUMA)

**OBJECTIVE:** *To demonstrate the ability to determine the baseline condition and specific injury or injuries in a responsive injured patient.*

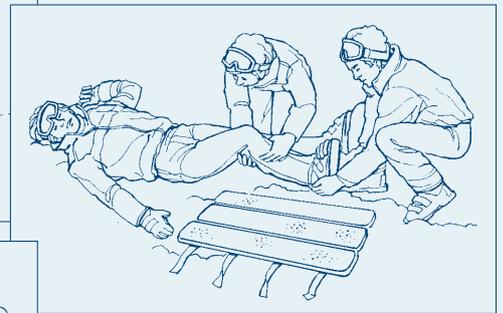
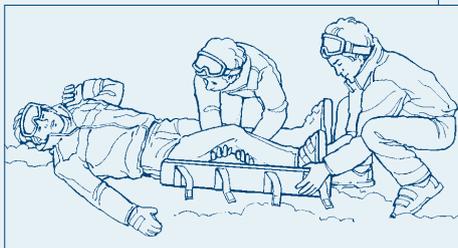
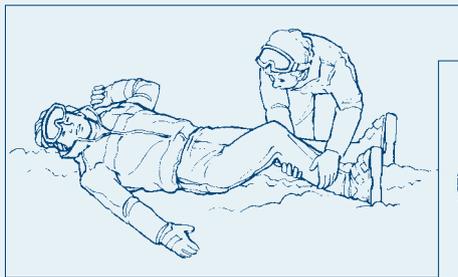
SKILL	YES	NO	NA	NOTATIONS
<b>FIRST IMPRESSION</b>				
■ Notes the presence of hazards or obstacles.				(CPI)
■ Notes the number of patients and the level of responsiveness.				
■ Determines the nature of the incident and the mechanism of injury (MOI).				(CPI)
■ Evaluates the need to access or extricate the patient(s).				
■ Notes the need for personnel or equipment.				
■ Initiates BSI precautions.				
<b>URGENT SURVEY—RESPONSIVE PATIENT</b>				
■ Offers to assist.				
■ Assesses ABCs.				
■ Observes the patient for severe bleeding. Intervention = control severe bleeding.				(CPI)
■ Observes the patient's expression and skin condition.				
■ Obtains chief complaint.				(CPI)
■ Calls for transport, equipment, assistance, and/or EMS as needed.				
■ Obtains trauma history (DCAP-BTLS) and confirms MOI.				
■ Conducts a focused body survey of the area of chief complaint, confirms chief complaint.				(CPI)
■ Stabilizes and maintains body temperature.				
■ Determines the pulse and respiration rates.				
■ If patient has <i>abnormal ABCs, significant MOI, or presents a poor general impression</i> , rescuer performs rapid body survey, SAMPLE history, interventions, and rapid transport.				
■ Provides care for the chief complaint. Conducts intervention(s) as needed.				(CPI)
■ Transports the patient off the hill.				
■ Performs the ongoing survey <i>while awaiting transport (if possible)</i> .				
Did the trainee or patroller adequately demonstrate the performance criteria of these skills?				



## GENERAL MANAGEMENT OF A FRACTURE AT OR NEAR A JOINT

**OBJECTIVE:** *To demonstrate the immobilization of a fracture site, the adjacent joints, and the extremity for a fracture or dislocation at or near a joint.*

SKILL	YES	NO	NOTATIONS
■ Assesses the limb, joint, and mechanism of injury (MOI) to determine the presence and location of a fracture and/or dislocation.			
■ Assesses the circulatory and neurological function of the limb.			
■ Manually stabilizes the fracture site and the limb. <i>(Note: Continuous manual stabilization must be maintained until a mechanical device is applied and completely secured.)</i>			
■ Moves the limb toward a nearer-anatomically correct position, if possible, with the assistance of the patient.			
■ <i>If there is no distal circulation</i> , aligns limb until resistance is met or circulation returns.			<i>(CPI)</i>
■ Prepares the immobilization device for use, taking into account any unusual anatomical positioning of the limb.			
■ Positions the device without excessive movement of the limb.			
■ Applies and secures the device to the limb and body without excessive movement, ensuring that all voids are filled, and checks to make sure that the fracture site, the adjacent joints, and the limb are immobilized.			<i>(CPI)</i>
■ Reassesses the circulatory and neurological function of the limb.			
Did the trainee or patroller adequately demonstrate the performance criteria of this skill?			



## MANAGEMENT OF AN OPEN FRACTURE

**OBJECTIVE:** *To demonstrate the control of severe bleeding associated with an open fracture.*

SKILL	YES	NO	NOTATIONS
■ Uses BSI precautions according to local protocols.			<i>(CPI)</i>
■ Assesses the limb, identifying the presence of an open fracture as well as its severity and stability.			
■ Assesses the circulatory and neurological function of the extremity, if not contraindicated by severe bleeding.			
■ Begins to control any severe bleeding.			<i>(CPI)</i>
■ Manually stabilizes the fracture site and the limb.			
■ Aligns the limb to near-anatomically correct position.			
■ Controls any bleeding that is present. <ul style="list-style-type: none"> <li>■ Exposes the fracture site.</li> <li>■ Uses direct and indirect pressure.</li> <li>■ Uses the pressure point, if necessary.</li> <li>■ Applies a dressing over the wound.</li> </ul>			<i>(CPI)</i>
■ Cleans and irrigates the wound according to local protocol.			
■ Dresses and initially bandages the wound with pressure as needed.			<i>(CPI)</i>
■ Immobilizes the limb and adjacent joints, maintaining elevation if possible.			<i>(CPI)</i>
■ Applies final bandaging of the wound after immobilization.			
■ Reassesses the circulatory and neurological function of the extremity.			
Did the trainee or patroller adequately demonstrate the performance criteria of this skill?			



## CONTROL OF SEVERE BLEEDING IN A WOUND

**OBJECTIVE:** *To demonstrate the ability to control severe bleeding.*

SKILL	YES	NO	NOTATIONS
■ Uses BSI precautions according to local protocols.			(CPI)
■ Recognizes the severity of the bleeding and gives it proper priority.			
■ Exposes the wound site.			
■ Applies direct pressure.			(CPI)
■ Elevates the wound site above the level of the heart.			
■ Maintains direct pressure and elevation.			
■ Applies direct pressure to the appropriate pressure point if bleeding has not been controlled.			
■ Checks that the bleeding has been controlled.			(CPI)
■ Immobilizes as necessary.			
Did the trainee or patroller adequately demonstrate the performance criteria of this skill?			



# SCENARIO DISCUSSION FORUM

Based on responses recorded in last fall's Refresher Evaluations, the new Scenario Discussion Forum station was a resounding success! Refresher participants appreciated the more realistic approach to emergency care situations afforded by the required "timeline" responses. Also, many respondents voiced satisfaction at being able to discuss and share their thoughts about difficult injury/illness problems with fellow patrollers.

To complete this segment of the study guide, first carefully read the following four scenarios. Then, use the space provided to answer the "text questions" relating to the script of each scenario. Use additional paper if necessary. Feel free to research these topics in the third edition of *Outdoor Emergency Care*. Next, answer the two "action questions" that follow each scenario. Finally, *bring these Scenario Discussion Forum sheets with you to your refresher* for use and reference at this station.

## SCENARIO I

It's late in the day and an 11-year-old girl is practicing freestyle snowboarding tricks in a terrain park. Even though the temperature is 34° F and a light rain is falling, the girl isn't wearing a hat. She's been pushing the upper limits of her abilities all day, and as she approaches a flattop hit, she falls forward onto her right arm, with the elbow partially flexed.

You're dispatched to the scene and when you arrive with a toboggan the girl is sitting up, shivering violently, crying, and cradling her right forearm to her chest. In soft and halting speech, she complains of pain in her right elbow. You ask a witness if the girl has shown any loss of responsiveness and he says no.

A rapid body survey reveals that the girl responds slowly and is oriented to place only. Her right elbow feels deformed on palpation of the apex (olecranon process) and it's "locked" in 50 degrees of flexion. Circulation, motion, and sensation in the right hand are normal.

A medical-alert bracelet on the girl's right wrist indicates that she's diabetic. You ask when she last took her insulin, and she says she can't remember if she had it that morning or not.

### TEXT QUESTIONS

1. Medical conditions or substances that can make a person more susceptible to hypothermia include

a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_  
e. \_\_\_\_\_  
f. \_\_\_\_\_

g. \_\_\_\_\_

h. \_\_\_\_\_

OEC p. \_\_\_\_\_

2. Key assessment signs that indicate the depth of hypothermia are Mild (Body core temperature of 90–95° F)

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

Severe (Body core temperature of 80–90° F)

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

g. \_\_\_\_\_

h. \_\_\_\_\_

Body core temperature of less than 80° F

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

g. \_\_\_\_\_

OEC p. \_\_\_\_\_

3. Emergency treatment of a hypothermic patient includes

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

OEC p. \_\_\_\_\_

4. Assessment signs that suggest a joint dislocation include

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

OEC p. \_\_\_\_\_

### ACTION QUESTIONS

1. Please record all injuries and medical conditions described in this scenario.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Excluding assessment, list in order the emergency care you would provide, and note any area management concerns that might arise from the circumstances described in this scenario.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_
- g. \_\_\_\_\_
- h. \_\_\_\_\_
- i. \_\_\_\_\_
- j. \_\_\_\_\_

### SCENARIO II

It's mid-August and a 28-year-old man is participating in a 30-mile mountain bike race. He hasn't paced himself properly and he's been lax about staying hydrated. Toward the end of the race, he grows steadily more fatigued and loses control of his bike on a downhill grade. Pitching over the handlebars, he lands on his outstretched right arm and then rolls onto his shoulder.

When you arrive at the scene you find the injured biker lying supine and supporting his swollen, deformed right forearm across his abdomen. There was no loss of responsiveness, but a rapid body survey reveals that the man is confused, complains of a headache, and has hot, dry, and flushed skin. Upon palpation, you find an obvious shelf-like deformity at the point of his right

shoulder. His right mid-forearm, which is shortened and angulated, is swollen and tender, and the fingers on his right hand are pale. You find no radial pulse on the injured side. There are no other obvious injuries.

Taking the man's vital signs, you note that the pulse is 120 and strong; his respirations are 22 and deep.

### TEXT QUESTIONS

1. Describe the emergency care of a patient with heat stroke.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

OEC p. \_\_\_\_\_

2. List three other types of heat illness.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

OEC p. \_\_\_\_\_

3. Conditions/substances that heighten the risk of heat illnesses include

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_
- g. \_\_\_\_\_
- h. \_\_\_\_\_
- i. \_\_\_\_\_

OEC p. \_\_\_\_\_

4. What three common injuries to the shoulder girdle require the upper arm/forearm to be splinted to the chest with a sling and swathe?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

OEC pp. \_\_\_\_\_

### ACTION QUESTIONS

1. Please record all injuries and medical conditions described in this scenario.

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2. Excluding assessment, list in order the emergency care you would provide, and note any area management concerns that might arise from the circumstances described in this scenario.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

g. \_\_\_\_\_

h. \_\_\_\_\_

i. \_\_\_\_\_

j. \_\_\_\_\_

k. \_\_\_\_\_

l. \_\_\_\_\_

### SCENARIO III

An area maintenance worker is leaning out of a second-story window in the lodge, attempting to knock a large snow cornice off the roof with a metal shovel. He accidentally touches the main power line with the shovel, and the ensuing electrical jolt throws him out of the window and onto the hard-packed snow below.

Rushing to the scene you find that the man, who you estimate to be in his mid-20s, is unresponsive. His pulse is 130 and irregular and his respirations are 8. The ring and middle fingers of his right hand have been amputated by the electrical charge, and you note full-thickness (third-degree) burns on his right and left palms. The man has a gaping wound in his right thigh, which appears to be the electrical exit wound. However, there is no palpable deformity or instability of the right thigh, and no other obvious injuries.

### TEXT QUESTIONS

1. Some of the primary concerns associated with electrical burns are

a. \_\_\_\_\_

\_\_\_\_\_

b. \_\_\_\_\_

\_\_\_\_\_

c. \_\_\_\_\_

\_\_\_\_\_

d. \_\_\_\_\_

\_\_\_\_\_

e. \_\_\_\_\_

\_\_\_\_\_

*OEC p.* \_\_\_\_\_

2. Describe the different effects that alternating current (AC) and direct current (DC) can have on the heart.

a. \_\_\_\_\_

b. \_\_\_\_\_

*OEC p.* \_\_\_\_\_

3. Why are internal injuries often overlooked in electrical burn patients?

\_\_\_\_\_

\_\_\_\_\_

*OEC p.* \_\_\_\_\_

4. List and describe the three types of thermal burns.

a. \_\_\_\_\_

\_\_\_\_\_

b. \_\_\_\_\_

\_\_\_\_\_

c. \_\_\_\_\_

\_\_\_\_\_

*OEC p.* \_\_\_\_\_

### ACTION QUESTIONS

1. Please record all injuries and medical conditions described in this scenario.

\_\_\_\_\_

\_\_\_\_\_

*OEC p.* \_\_\_\_\_

2. Excluding assessment, list in order the emergency care you would provide, and note any area management concerns that might arise from the circumstances described in this scenario.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_
- g. \_\_\_\_\_
- h. \_\_\_\_\_
- i. \_\_\_\_\_
- j. \_\_\_\_\_
- k. \_\_\_\_\_
- l. \_\_\_\_\_
- m. \_\_\_\_\_
- n. \_\_\_\_\_
- o. \_\_\_\_\_

#### SCENARIO IV

A young woman who looks to be in her late teens enters the aid room and appears to be very flustered. She tells you her name is Ashley and in a panicked voice says she mistakenly ate some peanuts in a brownie that an acquaintance offered her. She gasps that she's allergic to peanuts and that the last time she made a similar mistake she had to be rushed to the hospital.

An urgent survey reveals that the young girl is very anxious, has facial swelling, and is wheezing. She says that she normally carries medication but left it in her car today. After conducting a quick SAMPLE history, you learn that her car is in a nearby parking lot.

#### TEXT QUESTIONS

1. The emergency antidote for anaphylactic shock is

\_\_\_\_\_

*OEC p.* \_\_\_\_\_

2. Describe the physical response to an offending allergen.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

e. \_\_\_\_\_

*OEC p.* \_\_\_\_\_

3. List three corrections the body rapidly initiates to compensate for the occurrence of shock.

- a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
- OEC p.* \_\_\_\_\_

4. Summarize the emergency care for shock.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*OEC p.* \_\_\_\_\_

#### ACTION QUESTIONS

1. Please record all injuries and medical conditions described in this scenario.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Excluding assessment, list in order the emergency care you would provide, and note any area management concerns that might arise from the circumstances described in this scenario.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

# OEC REFRESHER COMPLETION RECORD

Instructors at the refresher should use this form to indicate whether the patroller successfully completed the content or skill objective listed here and described in the study guide. Successful completion of all requirements and objectives is required to maintain NSP membership for the upcoming season. The local

patrol may include additional topics, and some of the objectives may be combined in activities during the refresher.

Note: Items in *italics* require that each individual demonstrate and obtain verification of successful performance according to specific OEC skill performance guidelines.

## PRE-REFRESHER ASSIGNMENTS

	CHECK OFF	COMMENTS
■ Scenario Discussion Forum Exercises		
■ Other Local Assignments		

## CORE TOPICS

■ Shock Management (2000 focus area)		
■ Cold-Injury Management (2000 focus area)		
■ Airway Management and Oxygen Administration		
<i>Use of Oxygen and Airway Adjuncts—Administration of Oxygen</i>		
■ Patient Assessment		
<i>Patient Assessment—Rapid Body Survey</i>		
<i>Patient Assessment—Responsive Patient—Injured (Trauma)</i>		
■ Infection Control		
■ Neurological Injury Management		

## GENERAL TOPICS FOR 2000

■ Anatomy and Physiology		
Circulatory System		
Cutaneous System		
■ Orthopedic Trauma		
■ Upper Extremity Injuries		
<i>General Management of a Fracture at or Near a Joint</i>		
<i>Management of an Open Fracture</i>		

*continued*

PRE-REFRESHER ASSIGNMENTS	CHECK OFF	COMMENTS
GENERAL TOPICS FOR 2000 (continued)		
■ Environmental and Medical Emergencies		
Environmental Emergencies (for conditions including cold, heat, high altitude, solar radiation, electrical hazard)		
<i>Managing Medical and Environmental Emergencies</i>		
■ Specific Injuries		
<i>Control of Severe Bleeding in a Wound</i>		
Burns		
Bandaging		
■ Transportation and Extrication		
Positioning Patients: “Jams and Pretzels”		
■ Local Needs		
CPR (if included in the refresher)		
■ Skill Check		
■ Certification Expiration		
<b>EVALUATION TURNED IN</b>		

## COMPLETION ACKNOWLEDGEMENT

Have this signed by the instructor of record at the refresher, and return it to your NSP patrol representative or patrol director to verify that you have attended and successfully completed all requirements for the 2000 refresher. *Please print.*

Patroller:

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NSP Member I.D. #:

---

Ski Patrol Registered With:

---



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Refresher Location and Date:

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OEC Instructor of Record (*please print name*):

---

Signature:

---

CUT HERE

## SUPPLEMENTAL ROSTER INFORMATION

After completing the refresher, fill out this form and submit it to the instructor of record. This will help the instructor document your completion of this year's OEC refresher requirements to the national office. *Please print.*

Patroller:

---

NSP Member I.D. #:

---

Address:

---

City:

State:

Zip:

---

E-mail Address:

---

Ski Patrol Registered With:

---



---

Region:

---

Refresher Location and Date:

---



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OEC Instructor of Record (*please print name*):

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# PATROLLER EVALUATION FOR THE 2000 OEC REFRESHER

This evaluation is designed to help local instructors, patrol officers, and the national organization review and improve the annual OEC refresher. Last year's responses were greatly appreciated, and many of them have been implemented in this refresher. We look forward to receiving your feedback again this year.

DIVISION:

PATROL:

NAME (OPTIONAL):

	WHAT DID YOU LIKE BEST?	WHAT NEEDS IMPROVEMENT?
1. Refresher Overall		
2. Facilities		
3. Quality of Presenters and Presentations		
4. Skill Stations		
5. <i>Refresher Study Guide</i>		
6. <i>Refresher Study Guide</i> Scenario Discussion Forum		

**ADDITIONAL COMMENTS:**

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*Please return this evaluation to the refresher instructor of record before you leave the refresher.*

# Refresher

# STUDY GUIDE

C Y C L E B - 2 0 0 0

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## INPUT APPRECIATED

As the OEC program and the refresher process continue to evolve, members of the OEC Refresher Committee encourage you to be a part of the process. Your interest, expressed by taking the time to contact a committee member to discuss content or quality, is greatly appreciated. If you have suggestions on how to improve the refresher, feel free to contact any committee member or your division OEC supervisor. Listed at left are committee members' names, patrol affiliations, addresses, phone numbers, and e-mail addresses. You also may forward comments to the education department at the national office through its e-mail address, [education@nsp.org](mailto:education@nsp.org).

The committee is particularly interested in your training needs, ideas for activities, and suggestions for alternative ways to communicate OEC medical content. Please feel free to apprise committee members of problems you think they should address, too.