

NAME: \_\_\_\_\_



# DECREFRASHER WORKBOOK



2017 CYCLE A

# 2017 OUTDOOR EMERGENCY CARE (OEC) CYCLE A REFRESHER PROGRAM

## INTRODUCTION

Welcome to the 2017 Outdoor Emergency Care (OEC) Cycle A Refresher Program. The purpose of this *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A* is to provide you with a “snapshot” view of this year’s material so that you can be well-prepared for your refresher. To get the most out of this review, it is important to spend time reviewing the *Outdoor Emergency Care Fifth Edition*, focusing especially on the topics listed in this year’s Cycle A refresher.

The instructor of record (IOR) for your refresher is the point of contact for any questions that may arise regarding attending an OEC refresher. Annual OEC refreshers are conducted at the patrol, section, region, or division levels. Contact your OEC instructor of record for refresher details.

## WHAT TO DO TO PREPARE FOR, AND COMPLETE, THIS YEAR'S REFRESHER

- 1. Enroll online.** Your IOR will provide you with the course number and instructions on how to complete your enrollment. If you are attending a refresher other than your own, contact that IOR for the enrollment information.
- 2. Review/complete the material.**
  - a. Complete the *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A*;
  - b. Review the *Outdoor Emergency Care Fifth Edition*;
  - c. Review other support materials available under “OEC Education Resources” on the NSP website.
- 3. Update your NSP record.**
  - a. Check your personal profile in the “Hi, (Name)” section of [www.nsp.org](http://www.nsp.org) to ensure that your information is correct, or call the national office at 303-988-1111.
- 4. Complete the online refresher course (if using the hybrid format).**
  - a. Access the online course by signing in to [www.nsp.org](http://www.nsp.org), then selecting “Member Resources,” then “Online Learning.”
  - b. Follow the directions carefully and completely, and have your *Outdoor Emergency Care Fifth Edition* ready.
  - c. Print your certificate and take it with you to the refresher event. If your IOR will accept an electronic version, you may save your certificate as a PDF and email it to your IOR. If you do not have a certificate, you may not be allowed into the refresher.
- 5. Gather materials for the refresher event.**
  - a. This completed *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A*, AND the printed certificate (unless electronically sent to IOR) from the online portion (hybrid only).
  - b. Your current OEC, CPR, and NSP member cards. Your OEC card should have a blank space in the Cycle A section.
  - c. A fully stocked aid belt, vest, or pack, and any additional items required at the refresher you will attend.
  - d. Weather-appropriate clothing for both indoor and outdoor refresher activities.
- 6. Practice the skills that are identified in the *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A*.**
  - a. Review the Skills Checklist on page 21 for the skills you will be reviewing during your refresher.
  - b. Practice your *Outdoor Emergency Care Fifth Edition* skills so that you can feel more comfortable at your refresher event.
- 7. Attend your skills refresher event.**
  - a. Check with your local patrol to ensure that you are completing the appropriate refresher format requirements (traditional vs. hybrid).
  - b. If you complete a refresher with another patrol, contact their IOR before you attend to ensure that you are preparing for the appropriate refresher format (traditional vs. hybrid). Be sure that you complete, and the host IOR signs, the Visitors Completion Form on page 22 of this workbook.

## WHAT TO KNOW IN ORDER TO COMPLETE THIS YEAR'S REFRESHER

### PROGRAM CONTENT: OBJECTIVES OVERVIEW (major topic groupings) CYCLE A

- » *Rescue basics (Chapter 3)*
- » *Anatomy and physiology (cardiovascular, respiratory, and integumentary) (Chapter 6)*
- » *Patient assessment (Chapter 7)*
- » *Airway management; shock (Chapters 9 and 10)*
- » *Medical emergencies: altered mental status; respiratory; cardiovascular (Chapters 11, 13, 15)*
- » *Trauma: soft tissue; burns; frostbite (Chapters 18, 19, 25); musculoskeletal injuries (Chapter 20)*
- » *Spinal alignment from a standing position of a pediatric patient (Chapter 21)*
- » *Special populations (Chapter 31)*
- » *Case reviews*

### PROGRAM PROCESS

The OEC Refresher Program is a standardized program that provides OEC technicians with an annual opportunity to update, renew, and demonstrate competency in specific OEC skills and knowledge. During each refresher cycle, OEC technicians review required material and demonstrate proficiency in all specified skills and information as outlined in this workbook. This refresher process is an excellent opportunity to hone and improve clinical skills.

Verification of OEC technician competency in fundamental knowledge, skills, and scenario management is the basis of the OEC Refresher Program. OEC technician certification is maintained by completing three consecutive annual refreshers. All NSP members must complete each of the refreshers (Cycles A, B, and C) to maintain their OEC certification. The only NSP members exempt from this requirement are mountain hosts, registered candidate patrollers enrolled in an OEC course, members who complete a full OEC course after May 31 of the current year, and members registered as physician partners (M.D. or D.O.).

The OEC Refresher Program does not provide a means for a person with previous emergency care or medical training to challenge the OEC course. Additionally, the annual refresher covers a third of the OEC Program curriculum requirements and does not meet the requirements for certification under the full OEC Program.

An inactive NSP member returning to active status must hold a current OEC technician card, complete any missed cycle(s) that occurred during the inactive period, and pay dues for any missed seasons(s). If the OEC technician card expired during the inactive registration period, the member may need to retake an OEC course. Please refer to the *National Ski Patrol Policies and Procedures* for guidelines on registering as an NSP member and other OEC technician refresher requirements.

### DIRECTIONS TO FIND A COPY OF THE CURRENT NSP POLICIES AND PROCEDURES (P&P) DOCUMENT

Go to the NSP website ([www.nsp.org](http://www.nsp.org)) to log in. Go to the "Sign In" box and enter your six-digit member number and your password. Click the "For Members" button, then from the "Member Landing" page, click "Member Resources" from the top toolbar, then click on "Governance." Once that opens, click on the "National Ski Patrol Policies and Procedures" link. If you have problems, call the national office at 303-988-1111 or email [customercare@nsp.org](mailto:customercare@nsp.org).

## THE REFRESHER

For each refresher, OEC technicians must complete all of the following components:

- » **the didactic, or knowledge objectives portion (either online or in person);**
- » **the *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A*; and**
- » **the skills component at a refresher event.**

In order to receive credit for this refresher cycle, OEC technicians must successfully complete one of the following refresher types.

### The “TRADITIONAL” refresher format consists of two steps:

1. The OEC technician reviews and completes the assignments, skills, and cases in this *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A*; and
2. He or she completes a knowledge and skills-based refresher event, where they will demonstrate their OEC skills and discuss the cases they have reviewed.  
Note: The completed *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A* must be reviewed by the IOR prior to completion of the refresher.

### The “HYBRID” refresher format consists of three steps:

1. The OEC technician reviews and completes the assignments, skills, and cases in this *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A*.  
Note: The completed *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A* must be reviewed by the IOR prior to completion of the refresher.
2. He or she completes the online refresher exercise that reviews the knowledge-based portion of the refresher.
3. He or she completes a skill-based refresher event, where they will demonstrate their OEC skills and discuss the cases they have reviewed.

## OTHER PROGRAM REQUIREMENTS

**CPR for active NSP members:** Active NSP members must ensure that they maintain a current professional rescuer level CPR certification and demonstrate their CPR skills annually to an agency-approved certified CPR instructor, regardless of the requirements of the certifying agency or the expiration date on their card. This requirement is not meant to be part of the annual OEC refresher. For a complete list of the NSP-approved CPR certifying agencies, please see the *National Ski Patrol Policies and Procedures*.

**Local patrol training,** such as local patrol requirements, area needs, lift evacuation, CPR, AED, and other on-hill/on-trail training, is arranged through your home patrol and is NOT officially part of the OEC refresher process. The NSP is not responsible for the content, instruction, or scheduling of this training, so it is important to communicate with your local patrol regarding these requirements.

## 2017 WORKBOOK: A COMPLETELY NEW CONCEPT

### WE HEARD YOU ...

After reviewing feedback from last year, it became clear that members using the hybrid refresher thought the refresher workbook was redundant when done in conjunction with the online portion. This created a dilemma of how to satisfy those using the traditional refresher (approximately 42 percent of those that complete the refresher each year), those that use the hybrid (approximately 58 percent), and the *National Ski Patrol Policies and Procedures*, which states that a workbook must be published every year. So this year, you will notice significant changes to the refresher workbook. These changes include:

- » A focus on the skills portion of the objectives. This is accomplished by including photographs of the skills. Where photos are difficult to use, skill guides will be used to help clarify them. This will help prepare the OEC technician for the skills portion of the refresher.
- » Written exercises were limited to only a few questions that correspond to the skills objectives.
- » Redundant information between the refresher workbook and the online portion of the hybrid refresher has been greatly reduced.
- » A separate skills check-off sheet is located in the back of this refresher workbook.

Please let us know how this new format works for you by completing the evaluation form at the end of this workbook and turning it in to your IOR.

### Instructions for using your *Outdoor Emergency Care Refresher Workbook 2017 OEC Cycle A*

To use this year's refresher workbook, begin by reviewing the skills objectives that will be covered in each module, which are listed at the top, below the module title. Objectives are identified by the chapter and the order in which they are found in that chapter. For example, the title, **3-10. "Describe and demonstrate how to ensure scene safety,"** tells you the objective can be found in Chapter 3 and is the 10th objective. You then go through Chapter 3 until you find that particular objective.

Questions that must be answered will have the page numbers listed for reference. These page numbers will also help in locating where the objective is listed in the book. Corresponding Skill Guides, when cited, also have page numbers for your reference. Keyword searches for e-reader users are shown in ***bold italics***.

Chapter 3, 10th objective



### RESCUE BASICS (CHAPTER 3)

- **3-10.** Describe and demonstrate how to ensure scene safety
- 3-12.** Demonstrate how to safely put on and remove

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### RESCUE BASICS (CHAPTER 3)

- 3-10. Describe and demonstrate how to ensure scene safety.
- 3-12. Demonstrate how to safely put on and remove disposable medical gloves.



What are some considerations for scene safety in the above photo?

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#### Scene Safety/Scene Size-up (pages 82-85)

\_\_\_\_\_ is the process of assessing the site of an accident or disaster and making it safe for rescuers to enter.

In assessing a trauma situation, an important step is to determine the \_\_\_\_\_.

In the event of a medical disorder, you will need to determine the \_\_\_\_\_.

Determine the \_\_\_\_\_ and the need for \_\_\_\_\_.



A. What is your first impression of this incident?

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B. Always consider the entire scene.



Demonstrate the removal of medical gloves. (Skill Guide, page 93.) **Medical gloves should always be latex free.**



How do you dispose of your used gloves when on the hill?

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At your area, how do you handle the disposal of contaminated materials?

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## PATIENT ASSESSMENT (CHAPTER 7)

- 7-4. Describe and demonstrate how to perform a primary assessment and manage the ABCDs.
- 7-5. Describe and demonstrate how to perform a secondary assessment.
- 7-10. Describe and demonstrate how to assess pain using the OPQRST mnemonic.

In every situation or incident, the scene size-up and primary assessment are relatively the same. Approach your patient(s) carefully; if you become injured, you won't be able to help your patient(s).

When performing the secondary head-to-toe exam, a good rule of thumb is to start at the head and work down through the trunk, abdomen, pelvis, lower extremities, then the upper extremities and the back. Develop a systematic approach, so nothing is missed. Consider this: you are working from the most critical to the least critical area that may be injured. Below are the Skill Guides side-by-side for a trauma patient and a medical patient.

### PATIENT ASSESSMENT – TRAUMA PATIENT

Skill Guide (pages 253-254)

**Objective:** To demonstrate the proper assessment of a trauma patient, to determine a baseline, and to select the appropriate transport method.

#### Scene Size-Up

- » Determines that scene is safe.
- » Introduces self, obtains permission to assist/treat.
- » Initiates standard precautions.
- » Determines the MOI (mechanism of injury) and patient's chief complaint.
- » Identifies the number of patient(s) and the LOR of each.
- » Forms general impression, evaluates any extrication issues for each patient(s), and considers c-spine stabilization/immobilization.

#### Primary Assessment

- » Assesses airway, breathing, circulation, and disability (ABCDs).
- » Manages/treats life threats.
- » Checks for and controls any major bleeding.
- » Confirms and monitors LOR (AVPU or GCS).
- » Calls for transport, equipment, and/or additional assistance/EMS if needed.

#### Secondary Assessment

- » Performs head-to-toe detailed body assessment (DCAP-BTLS).
- » Exposes and inspects injury to identify level of emergency and formulate treatment plan.
- » Obtains SAMPLE history from patient and/or witness (if available).
- » Obtains baseline set of vitals.
- » Provides interventions per local protocols.
- » Treats for shock.
- » Maintains spinal immobilization, if applicable.
- » Prepares patient for transport.
- » Reassesses vital signs and primary assessment.

### PATIENT ASSESSMENT – MEDICAL PATIENT

Skill Guide (page 255)

**Objective:** To demonstrate the proper assessment of a medical patient, and to determine a baseline with a specific complaint.

#### Scene Size-Up

- » Determines that the scene is safe.
- » Introduces self, obtains permission to examine/treat.
- » Initiates standard precautions.
- » Determines NOI (nature of illness) and patient's chief complaint.
- » Identifies the number of patient(s) and the LOR of each.
- » Forms general impression, evaluates any extrication issues, and considers spinal precautions.

#### Primary Assessment

- » Assesses airway, breathing, circulation, and disability (ABCDs).
- » Assists breathing; manages/treats life threats.
- » Confirms and monitors LOR (AVPU or GCS).
- » Calls for transport, equipment, personnel, and EMS if needed.

#### Secondary Assessment

- » Performs detailed head-to-toe body assessment/physical exam.
- » Obtains SAMPLE history.
- » Based on the chief complaint, gathers information by asking OPQRST questions.
- » Obtains baseline vital signs.
- » Provides interventions per local protocols.
- » Treats for shock.
- » Maintains spinal immobilization, if applicable.
- » Prepares patient for transport.
- » Reassesses vital signs and primary assessment.



DURING YOUR SKILLS REFRESHER, YOU WILL HAVE AN OPPORTUNITY TO PRACTICE YOUR ASSESSMENT SKILLS.



## CRITICAL INTERVENTIONS: AIRWAY MANAGEMENT (CHAPTER 9) SHOCK (CHAPTER 10)

- 9-6. List the indications of, and uses for, the following airway adjuncts, and demonstrate the proper methods for choosing the correct size and inserting them:
- **Oropharyngeal airway (OPA)**
  - **Nasopharyngeal airway (NPA)**
- 9-8. Describe and demonstrate how to properly **set up an oxygen tank** for use.
- 10-9. Describe and demonstrate the management of **shock**.

### AIRWAY MANAGEMENT (CHAPTER 9)

Skill Guide: Oxygen Tank Setup and Breakdown (page 325); OEC Skill 9-4 (pages 320-321)

**Objective:** To prepare a new oxygen tank and apply a regulator for use.

- » Inspect the tank, regulator, and O-ring or washer for any visible damage.
- » Using an oxygen wrench or the valve stem on the top of the cylinder, turn the valve counterclockwise to slowly “crack” the cylinder for one second.
- » Attach the regulator/flow meter to the valve stem using the two-pin indexing holes and make sure that the washer is in place over the larger hole. Do not overtighten.
- » Open the O<sub>2</sub> system by turning the valve stem on top of the cylinder or using the wrench, turning counterclockwise.
- » Check for/correct any leaks. Check for adequate pressure in the tank.
- » Attach the oxygen connective tubing to the flow meter.
- » Set the regulator to the proper flow based on the delivery device.
- » Secure the bottle from falling.
- » Close the regulator and release pressure from the tank.
- » Remove the regulator from the tank.

Skill Guides: Airway Adjuncts — Inserting an NPA and OPA (pages 322-323)

#### Measure the NPA

Place the flange against the nostril; the end should touch the patient’s lower earlobe (page 323).



Is the NPA in the photo above measured correctly?

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#### Measure the OPA

Place one end at the corner of the mouth and measure to the angle of the jaw (page 324).



## SHOCK (CHAPTER 10)

Shock is a failure of the circulatory system to maintain adequate blood flow to tissues. After a thorough assessment and taking care of life-threatening injuries, **you must always treat for shock**. Correct management of shock is to apply high-flow oxygen (as needed), prevent heat loss by covering the patient with a blanket, and properly position the patient's head lower than the feet, allowing for consideration of spinal integrity or significant lower leg injury.

### Skill Guide: Shock Management (page 351)

**Objective:** To demonstrate shock management.

- » Determine the scene is safe.
- » Introduce self, obtain permission to treat/help.
- » Initiate standard precautions.
- » Assess the ABCDs and treat as needed.
- » Recognize patient is showing signs and symptoms of shock.
- » Apply high-flow oxygen (as needed).
- » Initiate steps to prevent heat loss from the patient.
- » Properly position the patient with the head lower than the feet, allowing for consideration of spinal integrity or any significant lower leg injury.
- » Provide for rapid transport.
- » Monitor vital signs regularly (every 3–5 minutes).



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## MEDICAL EMERGENCIES: ALTERED MENTAL STATUS (CHAPTER 11) RESPIRATORY EMERGENCIES (CHAPTER 13) CARDIOVASCULAR EMERGENCIES (CHAPTER 15)

- 11-7. Describe and demonstrate the treatment of a patient with **altered mental status**.
- 13-11. Describe and demonstrate how to assess a patient who is having **difficulty breathing (respiratory distress)**.
- 13-12. Describe and demonstrate the appropriate treatment of a patient in **respiratory distress**.
- 15-8. Describe and demonstrate the proper care of a patient with a **cardiovascular emergency**.

### ALTERED MENTAL STATUS (AMS) (CHAPTER 11)

- 11-7. Describe and demonstrate the treatment of a patient with **altered mental status**.

**Altered mental status (AMS)** is defined as an abnormal change in a person's level of awareness or responsiveness.

List four conditions that may cause **altered mental status (AMS)**, and briefly describe their treatment (pages 359-363).

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

Three types of stroke: match the description with the type of **stroke** (pages 370-371).

- |                                    |   |
|------------------------------------|---|
| _____ 1. Ischemic                  | a. Known as "wet stroke;" occurs when a blood vessel within the brain suddenly ruptures, releasing blood into surrounding brain tissue.   |
| _____ 2. Hemorrhagic               | b. Reversible neurological deficit that is caused by a temporary interruption of blood flow to an area of the brain.  |
| _____ 3. Transient ischemic attack | c. Most common type of stroke; known as a "dry stroke;" caused by a disruption of blood flow to a portion of the brain. Primary cause of this stroke is foreign material (embolus). |

When assessing a patient with altered mental status, remember your medical assessment skill guide. Consider the acronym **AEIOU-TIPS** (page 360-362).

When caring for a diabetic with altered mental status, give the patient sugar only if they are able to swallow.

Regardless of the underlying cause, AMS is considered an emergency until the cause can be determined and treated. Administer oxygen.



## RESPIRATORY EMERGENCIES (CHAPTER 13)

- 13-11. Describe and demonstrate how to assess a patient who is having difficulty breathing (*respiratory distress*).
- 13-12. Describe and demonstrate the appropriate treatment of a patient in *respiratory distress*.



Listen to the patient's breath sounds.

*You can listen to samples of common lung sounds like rales, rhonchi, or wheezes on YouTube.*



What is the appropriate flow rate for each device (pages 311 and 312)?

Non-rebreather mask \_\_\_\_\_

Nasal cannula \_\_\_\_\_

### Skill Guide: Assisting with a Metered Dose Inhaler (page 429)

Remember, as paramedics, we only assist with medications. Inhalers must be shaken well.



FOR INHALERS AND ALL MEDICATIONS, VERIFY ALL OF THE FOLLOWING: RIGHT PATIENT, RIGHT MEDICATION, RIGHT DOSE, RIGHT ROUTE, AND RIGHT TIME.

REMEMBER TO DOCUMENT THE TIME YOU ASSISTED A PATIENT WITH THE INHALER OR MEDICATION.

## CARDIOVASCULAR EMERGENCIES (CHAPTER 15)

**15-8.** Describe and demonstrate the proper care of a patient with a cardiovascular emergency.



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**TRAUMA: SOFT TISSUE INJURIES (CHAPTER 18)  
 BURNS (CHAPTER 19)  
 COLD-RELATED EMERGENCIES (CHAPTER 25)**

- 18-6. Describe and demonstrate three methods for controlling external bleeding.
- 18-8. Demonstrate the proper procedure for applying each of the following:
  - *dressing*
  - *bandage*
  - *compression dressing*
  - *tourniquet*
- 19-7. Describe and demonstrate the management of a burn patient.
- 25-8. Describe and demonstrate the assessment and emergency care of a patient with frostbite.

**Case Review**

It's a beautiful evening, and patrons are gathering around your area's nightly bonfire. Families and teens alike are enjoying the warmth of the fire. Folks are roasting marshmallows and making s'mores. Two teens begin horsing around, pushing and shoving each other. Their roughhousing gets a little too physical, they push each other too hard, and they both fall down. Tim falls backward and lands flat on his back, flinging his arms over his head, and the back of his right hand lands on the fire. Bill falls to the side and strikes his right wrist on the edge of his snowboard. They both get up quickly and run into the nearby aid room. Bill suffered a two-inch laceration to his wrist; it is bleeding freely. Tim suffered first- and second-degree burns to the back of his hand. You and a fellow patroller are in the aid room. Each of you assumes care of one of the patients.

**For each patient, what is your first step?**

<p><i>Tim: Patient No. 1</i></p> <hr/> <hr/> <hr/>	<p><i>Bill: Patient No. 2</i></p> <hr/> <hr/> <hr/>
--	---

**What care do you render?**

<p><i>Tim: Patient No. 1</i></p> <hr/> <hr/> <hr/>	<p><i>Bill: Patient No. 2</i></p> <hr/> <hr/> <hr/>
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## SOFT TISSUE INJURIES (CHAPTER 18)

List three methods for controlling external bleeding (pages 553-554).

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



1. Have the patient help with direct pressure.



2. Secure gauze with a pressure bandage (page 553).



3. Determine the correct location of the tourniquet.



4. Twist the rod only until the tourniquet is tight enough to stop the bleeding.

When applying a tourniquet, it is important to note the \_\_\_\_\_ it was applied.

**Remember, only use a tourniquet when all other methods fail (pages 553-554).**

## BURNS (CHAPTER 19)



1. Stop the burning.

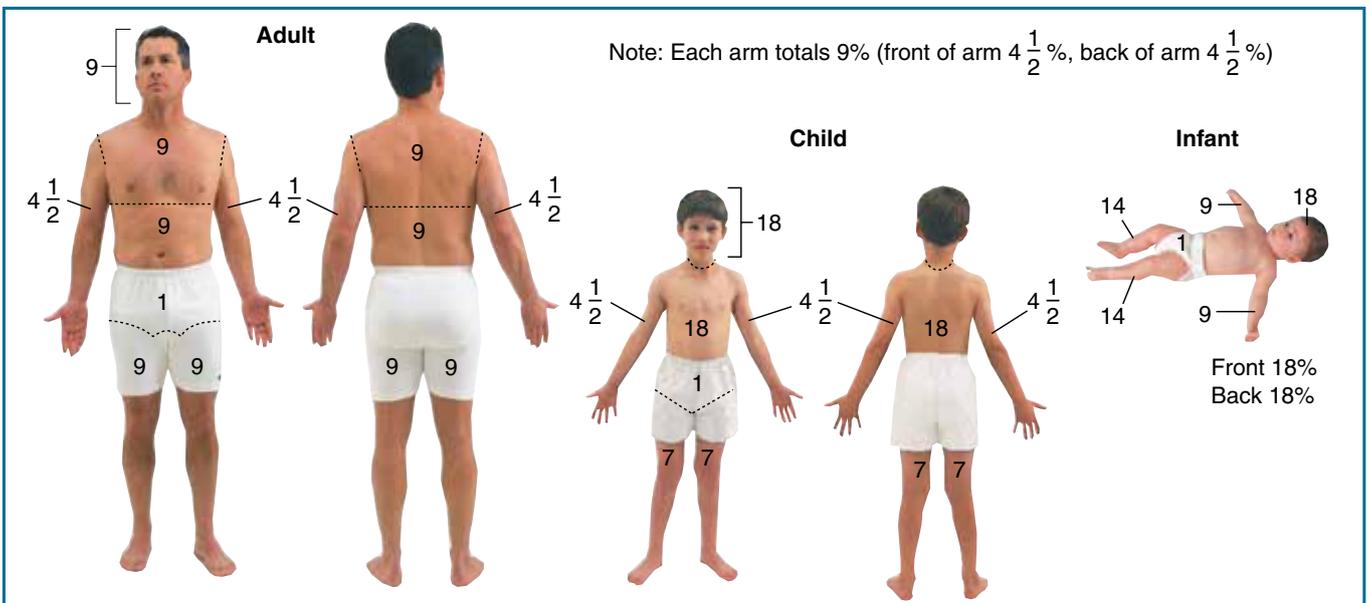


2. Separate the fingers with sterile gauze.
3. Cover the burned area with a sterile dressing and secure with roller gauze.

Using the rule of nines, what percentage of Tim's body surface is burned? (*Hint: the patient's own palm represents approximately one percent of total body surface area.*) \_\_\_\_\_

Referring to the criteria for critical burns (on pages 590 and 591), is Tim's burn considered critical? \_\_\_\_\_

Rule of nines: Used to determine the total body surface burned.



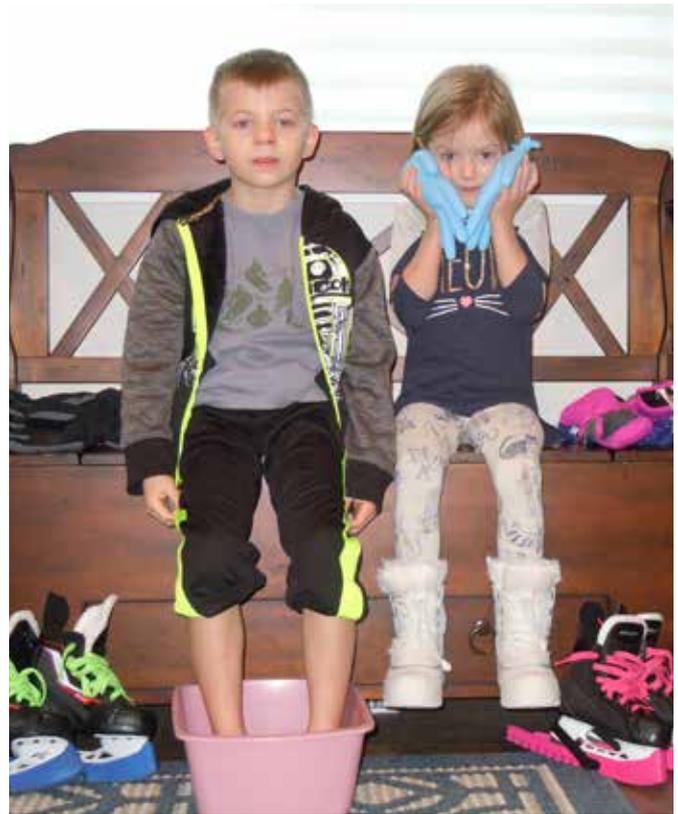
## COLD-RELATED EMERGENCIES (CHAPTER 25)

Frostnip is a relatively minor, local cold injury that results from local vasoconstriction of blood vessels in response to cold. Frostnip affects the first or top layer of skin; no permanent damage to tissues results.

Frostbite is the actual freezing of the body tissues, and the degrees of severity range from superficial (frostnip), to moderate, to third-degree. Partial-thickness frostbite affects the upper layers of skin; minor damage to tissues results. Full-thickness frostbite affects all the layers of skin plus muscle, and may even affect bone; severe damage to the tissues, including tissue death, results.

When treating frostbite, what temperature should the water be (page 528)? \_\_\_\_\_

It is important to \_\_\_\_\_ once the area has been thawed/warmed (page 827).



*Medical gloves filled with warm water make great warm packs.*

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## MUSCULOSKELETAL INJURIES (CHAPTER 20) AND SPINAL IMMOBILIZATION OF A PEDIATRIC PATIENT FROM A STANDING POSITION (CHAPTERS 21 AND 30)

**20-2.4.** Describe and demonstrate how to *assess each specific injury*:

- *forearm*
- *wrist*
- *elbow*
- *shoulder*
- *open humerus*

**20-3.3.** Describe and demonstrate how to *care for each specific injury*:

- *forearm*
- *wrist*
- *elbow*
- *shoulder*
- *open humerus*

**21-9.** Demonstrate how to maintain proper *spinal alignment while placing a pediatric patient onto a backboard from a standing position*.

### MUSCULOSKELETAL INJURIES (CHAPTER 20)

*If you sling it, you must swathe it. ... Sage advice from an old and very wise patroller.*

#### Skill Guide: Splinting an Upper Extremity Injury (page 686)

- » Determines scene is safe.
- » Introduces self, obtains permission to help/treat.
- » Initiates standard precautions.
- » Exposes injury to assess and manage the ABCDs.
- » Bandages any wounds as necessary.
- » Directs helper to stabilize above and below the injury site.
- » Assesses for CMS.
- » Technician chooses the correct device/material for splinting/stabilization.
- » Sizes splint properly, padding as needed, and positions splint.
- » Rotates extremity if necessary and as tolerated by patient.
- » Extremity is splinted and stabilized with minimal movement.
- » Sling and swathe correctly applied and restricts movement of injured extremity.
- » Reassesses CMS.
- » Applies cooling method to help reduce swelling/bruising.
- » Prepares patient for transport.
- » Provides oxygen/treats for shock if appropriate.

#### Case Review

It's a busy weekend at Mt. Darby, and the terrain park is especially crowded. Jimmy is a very experienced rider. All of the kids are watching him as he hits every rail, jump, and terrain feature and beautifully executes every maneuver he attempts. He hits the last tabletop and does a 360, but miscalculates his landing. He falls forward onto his outstretched arm. You arrive on the scene; what do you do first? What safety concerns do you have? Your assessment reveals a wrist deformity; what is your treatment plan?

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### Wrist or Forearm Injury

Splint a wrist or forearm injury with a padded board, cardboard, SAM splint, pillow, etc. Apply a sling and swathe.



### Elbow Injury

For an elbow injury, use padded board splints and a sling and swathe. Modify the sling so it does not put pressure on the elbow.



### Shoulder Injury

When making a blanket roll for a shoulder injury, use different colored cravats or number each cravat in the corners; then you can easily identify the correct ends. Roll the blanket securely and to the appropriate size to fill the void under the arm.



### Open Humerus Injury

Cover the open wound with sterile gauze and apply a donut roll to protect the protruding bone end. Secure in place with roller gauze or a cravat. Splint as you would a closed humerus injury. Take care to not put any undue pressure on the open area.

When splinting any injury, it is important to check \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ before and after (page 620).

## SPINAL IMMOBILIZATION OF A PEDIATRIC PATIENT FROM A STANDING POSITION (CHAPTERS 21 AND 30)

*Note from National Ski Patrol Medical Adviser David Johe, M.D.: When to use the standing backboard for a patient who is up, walking, or standing at the scene.*

The standing backboard should only be used after the OEC technician has completed a thorough assessment and has found the patient to have one or more of the specific findings or symptoms that would indicate the need for a backboard. These findings include: deformity or step off of the spinal alignment; midline spine tenderness; numbness or motor weakness; skull depression; or cerebral spinal fluid leaking from the nose or ears. In addition, if a patient's exam is unreliable, or there is an inability to respond appropriately to questions (altered mental status, e.g. alcohol, drugs, head injury), a backboard is needed.

Follow the Skill Guide below to complete a standing backboard on a pediatric patient. Remember that to maintain the airway on a pediatric patient, additional padding may be necessary (see picture).

### Skill Guide: Immobilizing a Standing Patient (page 737)

- » Determines scene is safe.
- » Introduces self, obtains permission to treat/help.
- » Initiates standard precautions.
- » Rescuer one stands beside or behind the patient and manually stabilizes the patient's head/c-spine.
- » Rescuer two checks CMS in each extremity and sizes and correctly applies cervical collar.
- » Rescuer three prepares and positions backboard behind the patient.
- » Rescuers two and three stand next to the patient, one on either side. Rescuer two stands on the right side of the patient, places one hand on the patient's elbow and the other under the patient's armpit, and grasps the backboard slot above the patient's shoulder. Rescuer three does the same on the other side of the patient.
- » Moving as a unit and maintaining spinal stabilization, the rescuers lower the patient to the ground.
- » If necessary, rescuers realign/re-center the patient on the board using axial movements.
- » Secure the patient to the backboard in the usual manner.
- » Reassess CMS.



With all patients, especially pediatric patients, remember to pad all voids.

2017 OEC REFRESHER CYCLE A SKILLS CHECKLIST	Individual	Group	Instructor Sign Off
<b>Overall objectives (Each must be covered in each station.)</b>			
Describe and demonstrate how to ensure scene safety, including use of BSI.	X	X	
Describe and demonstrate the management of shock.	X	X	
<b>Section 1 (Each OEC technician must perform the following skills.)</b>			
Describe and demonstrate how to ensure scene safety.	X		
Demonstrate how to safely put on and remove disposable medical gloves (latex free).	X		
Describe and demonstrate how to perform a primary assessment and manage the ABCDs.	X		
Describe and demonstrate how to perform a secondary assessment.	X		
Describe how to assess pain using the OPQRST mnemonic.	X		
<b>Section 2 (Each OEC technician must perform the following skills.)</b>			
Describe and demonstrate three methods for controlling external bleeding.	X		
Describe the proper procedure for applying each of the following: <ul style="list-style-type: none"> <li>Dressing</li> <li>Bandage</li> <li>Compression dressing</li> </ul>	X X X		
Describe and demonstrate the management of a burn patient.	X		
Describe and demonstrate the assessment and emergency care of a patient with frostbite.	X		
<b>Section 3 (Each OEC technician must perform the following skills.)</b>			
Describe the proper methods for choosing the correct size and inserting them: <ul style="list-style-type: none"> <li>Oropharyngeal airway</li> <li>Nasopharyngeal airway</li> </ul>	X X		
Describe and demonstrate how to properly set up an oxygen tank for use.	X		
Describe and demonstrate how to assess and treat a patient who is having difficulty breathing (respiratory distress).	X		
Describe and demonstrate the proper care of a patient with a cardiovascular emergency.	X		
<b>Section 4 (Each OEC technician must perform the following skills.)</b>			
Describe and demonstrate how to assess and care for each specific injury: <ul style="list-style-type: none"> <li>Wrist</li> <li>Forearm</li> <li>Elbow</li> <li>Shoulder</li> <li>Open humerus</li> </ul>	X X X X X		
<b>Section 5 (Each OEC technician must perform/participate in the following skills.)</b>			
Describe and demonstrate the treatment of a patient with altered mental status.		X	
Demonstrate how to maintain proper spinal alignment while placing a pediatric patient onto a backboard from a standing position.		X	
<b>Section 6 (Group skill)</b>			
Case reviews		X	

THIS HALF IS FOR YOUR PATROL REPRESENTATIVE

## 2017 CYCLE A OEC REFRESHER VISITORS COMPLETION FORM

Have this portion of the form signed by the instructor of record (IOR) at the refresher, **then return it to your NSP patrol representative. DO NOT SEND TO NSP.**

**This verifies that you have attended and successfully completed all requirements for the 2017 OEC refresher.**

*Please print.*

OEC technician name: \_\_\_\_\_

NSP member ID: \_\_\_\_\_ OEC refresher course number: \_\_\_\_\_

Name of patrol where you completed the refresher: \_\_\_\_\_

Date you enrolled in course: \_\_\_\_\_ IOR confirmed name on enrollment roster: YES NO

Online Refresher Certificate of Completion verified (if applicable): YES NO

The above candidate successfully completed the requirements of the 2017 OEC refresher and will be included in the course completion records.

Instructor of record (print name): \_\_\_\_\_

Instructor of record signature: \_\_\_\_\_

THIS HALF IS FOR THE INSTRUCTOR OF RECORD

## 2017 CYCLE A OEC REFRESHER SUPPLEMENTAL ROSTER INFORMATION

VISITING OEC technician: Prior to your arrival, fill out this portion and leave it with the instructor of record. This will enable the instructor of record to confirm that you enrolled correctly and successfully completed the 2017 OEC refresher. **DO NOT SEND TO NSP.**

*Please print.*

OEC technician name: \_\_\_\_\_ NSP member ID: \_\_\_\_\_

OEC refresher course number: \_\_\_\_\_ Date of electronic enrollment: \_\_\_\_\_

Certificate of completion (online) provided to IOR: YES NO

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

OEC technician's patrol/affiliation: \_\_\_\_\_

Refresher location/date: \_\_\_\_\_

OEC instructor of record: \_\_\_\_\_

# REFRESHER EVALUATION FORM

Name (optional): \_\_\_\_\_

Date: \_\_\_\_\_

Home Patrol: \_\_\_\_\_

Refresher Location: \_\_\_\_\_

1. The refresher was well-organized.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
2. The presentations were clear and well-prepared.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
3. At the skills stations, I understood what I needed to do at each one.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
4. The equipment we used was in good condition, and there was enough to go around.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
5. The instructor(s) provided fair feedback of my skills.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
6. The refresher was run in a relaxed, positive manner.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
7. I used my *OEC Fifth Edition* to review the refresher topics and complete the workbook.  
 Yes     No
8. The refresher workbook was helpful in preparing for this refresher.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
9. The refresher workbook reviewed the skills required for this year's refresher cycle.  
Did the instructors incorporate this material into the skills stations?     Yes     No
10. The "Case Reviews" were helpful, and a valuable part of the refresher.  
 Strongly agree     Agree     Neutral     Disagree     Strongly disagree
11. Overall, I would rate this refresher:  
 Excellent     Very good     Good     Needs improvement

12. What are the strengths of the refresher?

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13. What could be improved in the refresher?

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14. I'd like my instructors to do a better job of:

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15. My instructors did an excellent job of:

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16. Have you used your OEC skills in a place other than your normal patrol environment? If so, where?

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We welcome your comments and suggestions for improving NSP OEC programs. Please be as specific as possible, and use another sheet of paper if needed.



# 2017 CYCLE A OEC REFRESHER COMMITTEE STATEMENT

The mission of the OEC Refresher Committee is to provide assistance to all Outdoor Emergency Care technicians so that they may effectively review Outdoor Emergency Care content and skills each year and render competent emergency care to the public they serve.

The objectives of the program are to:

- Provide a source of continuing education for all OEC technicians.
- Provide a method for verifying OEC technician competency in OEC knowledge and skills.
- Review the content of the OEC curriculum over a three-year period.
- Meet local patrol and area training needs in emergency care.

Please take a moment and let us know how we can make your refresher better!

Email the Refresher Committee at [refresher@nspserver.org](mailto:refresher@nspserver.org).

## 2017 OEC REFRESHER COMMITTEE

**William Devarney (Chair)**  
Eastern Division Admin. Patrol  
[wdevarney@gmail.com](mailto:wdevarney@gmail.com)

**George Angelo**  
Utah Olympic Park Ski Patrol  
[georgelopc@gmail.com](mailto:georgelopc@gmail.com)

**Jason Erdmann**  
Tyrol Basin Ski Patrol  
[jmerdmann@gmail.com](mailto:jmerdmann@gmail.com)

**Kathy Glynn**  
Three Rivers Ski Patrol  
[Angelw499@aol.com](mailto:Angelw499@aol.com)

**Eva Kunkel**  
Seven Springs Ski Patrol  
[ekunkel@stvincent.edu](mailto:ekunkel@stvincent.edu)

**William C. Smith**  
Wintergreen Ski Patrol  
[skibill13@cox.net](mailto:skibill13@cox.net)

**Tim Thayer**  
Afton Alps Ski Patrol  
[timthayer@comcast.net](mailto:timthayer@comcast.net)

### MEDICAL REVIEW PANEL

**David Johe, M.D.**, NSP Medical Adviser

### INDEPENDENT REVIEW PANEL

**Deb Foss**, Eastern Division

**Michelle Goldsmith**, Eastern Division

### OEC EDUCATION STAFF

**David Johe, M.D.**, NSP Medical Adviser

**Deb Endly**, NSP OEC Program Director

**Sheila Summers**, NSP Education Director

**Candace Horgan**, NSP Communications Director

### DESIGN

Agnieszka Hansen

### PHOTOS

Bill Devarney, Audrey Friedman, Tim Thayer, Kathy Glynn.

Cover photo: Scott Brockmeier.

Back cover photo: Dave Engle.

The *Outdoor Emergency Care Refresher Workbook* is published annually by the National Ski Patrol System, Inc., a nonprofit association of ski patrollers which is located at 133 S. Van Gordon Street, Suite 100, Lakewood, CO 80228. 303.988.1111. © 2017 by National Ski Patrol System, Inc.

