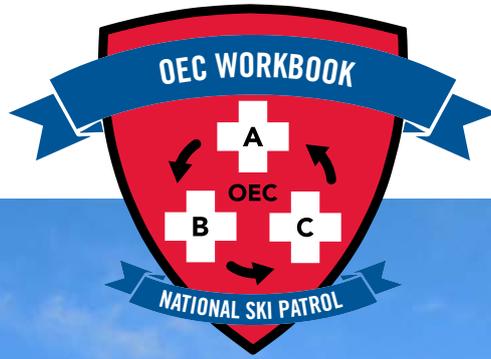


NAME: _____



2021 OEC CYCLE B REFRESHER

Special Note: Due to the Covid 19 pandemic, the National board made the decision to suspend 'in person' refreshers for 2020 Cycle A with the understanding that the skills would be incorporated into the 2021 Cycle B refresher. The 2021 Refresher skills checklist reflects this directive. If you saved the 2020 refresher workbook, please refer to it along with this Cycle B workbook. If you no longer have a copy, you can find one on the NSP web site.

2021 OUTDOOR EMERGENCY CARE (OEC) CYCLE B REFRESHER PROGRAM

INTRODUCTION

Note: If you wish a printed copy of this workbook, you are free to download this file and print a copy.

Welcome to the 2021 Outdoor Emergency Care (OEC) Cycle B Refresher Program. The purpose of this Outdoor Emergency Care Refresher Workbook 2021 OEC Cycle B 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 Sixth Edition, focusing especially on the topics listed in this year’s Cycle B 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 administrator for refresher details.

2021 CYCLE B VISITOR'S COMPLETION FORM:

THIS PORTION IS FOR YOUR PATROL REPRESENTATIVE

2021 CYCLE B OEC REFRESHER VISITOR'S 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 2021 OEC Refresher.

Please print.

OEC Technician Name: _____ NSP ID # _____

OEC Refresher Course Number: _____ Location of refresher _____

The above candidate successfully completed the requirements of the 2021 OEC Refresher and has been added to the electronic roster for course completion.

Instructor of Record (print name) _____

Instructor of Record Signature: _____

THIS PORTION IS FOR THE INSTRUCTOR OF RECORD (IOR)

2021 CYCLE B OEC REFRESHER VISITOR'S COMPLETION INFORMATION FOR THE IOR

VISITING OEC Technician: Prior to your arrival, fill out this portion and leave it with the Instructor of Record. **DO NOT SEND TO NSP.**

Please print.

OEC Technician Name: _____ NSP ID # _____

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

Email: _____ Phone: _____

OEC Technician's patrol/affiliation: _____

TO PREPARE FOR, AND COMPLETE, THIS YEAR'S REFRESHER:

1. Register on-line. Your Instructor of Record (IOR) will provide you with the course number and instructions on how to complete your registration. The registration process is the same for either refresher format.
2. Review/complete the material.
 - a. *Outdoor Emergency Care Refresher Workbook 2021 OEC Cycle B – must be completed;*
 - b. *Outdoor Emergency Care Sixth Edition;*
3. Update your NSP record.
 - a. Check your personal profile in the “Member Resources” section of 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 checking with the patrol where you are attending the refresher.
 - b. Follow the directions carefully and completely, and have your *Outdoor Emergency Care Sixth 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. The completed and printed answer sheets (pages 33, 34) of this *Outdoor Emergency Care Refresher Workbook 2021 OEC Cycle B*, 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 B 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 2021 OEC Cycle B*.
 - a. Review the skills check list on pages 28-30 for the skills you will be reviewing during your refresher.
 - b. Practice your *Outdoor Emergency Care Sixth Edition* skills, so that you can feel more comfortable at your refresher event.
7. Attend your refresher event.
 - a. Check with your local patrol to ensure 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 you complete and the host IOR signs the **Visitors’ Completion Form** available on page 2 of this workbook.

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

PROGRAM CONTENT: OBJECTIVES OVERVIEW (MAJOR TOPIC GROUPINGS) CYCLE B

- » *Moving, Lifting, and Transporting patients (Chapter 5)*
- » *Anatomy & Physiology (Nervous, Gastrointestinal, Genitourinary and Reproductive systems) (Chapter 6)*
- » *Patient Assessment (Chapter 7)*
- » *Airway Management (Chapter 9)*
- » *Shock (Chapter 10)*
- » *Allergies and Anaphylaxis (Chapter 14)*
- » *Gastrointestinal, Genitourinary, and Reproductive Emergencies (Chapter 16)*
- » *Childbirth, Obstetric Emergencies and Sexual Assault (Chapter 17)*
- » *Musculoskeletal Injuries (Chapter 20)*
- » *Spine, Brain and Nervous System Injuries (Chapter 21)*
- » *Abdominal and Pelvic Trauma (Chapter 24)*
- » *Heat Related Emergencies (Chapter 26)*
- » *Water Related Emergencies (Chapter 29)*
- » *Adaptive Athletes (Chapter 32)*
- » *Case Review*

PROGRAM PROCESS

The OEC Refresher Program is a standardized program providing 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 OEC 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 refresher 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 medical associates (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* manual 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 and P)* document:

Go to the NSP website (NSP.org) to log in. Click ‘Member Sign-in’. Select Sign-in or Create Account. Once you are signed in, locate the ‘Member Resources’ drop-down tab, select ‘Governance’ tab. Download the 2021 NSP P and P. If you have problems call the national office at 303-988-1111 or email nsp.org.

THE REFRESHER

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

- » **the didactic, or information portion (either online or in person);**
- » **the *Outdoor Emergency Care Refresher Workbook 2021 OEC Cycle B*, and,**
- » **the skills component at a refresher event.**

In order to receive credit for this refresher, 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 2021 OEC Cycle B*; and,
2. They complete a knowledge and skill-based refresher event, where they will demonstrate their OEC skills and discuss the cases they have reviewed.

» **The “hybrid” refresher format consists of three steps. Please note that the didactic portion of the objectives in the hybrid option is split between the Refresher Workbook and the online component.**

1. The OEC technician reviews and completes the assignments, skills, and cases in this *Outdoor Emergency Care Refresher Workbook 2021 OEC Cycle B*.
2. They complete the online refresher exercise that reviews the knowledge-based portion of the refresher.
3. They complete 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.

INSTRUCTIONS FOR USING YOUR OUTDOOR EMERGENCY CARE REFRESHER WORKBOOK 2021 OEC CYCLE B

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 chapter number and chapter title.

Questions that must be answered can be found in the chapter listed. Key word searches for e-reader users are shown in ***bold italics***. In an effort to help you prepare for your refresher event, we have included a list of the knowledge objectives that you will be reviewing.

2021 REFRESHER CYCLE B KNOWLEDGE OBJECTIVES

Moving, Lifting, and Transporting Patients Chapter 5

- 5-1 Explain how to use good ***body mechanics***.
- 5-8 Discuss how you place a patient in a ***toboggan*** while protecting the injury.
- 5-9 Explain the purpose and correct steps of ***packaging a patient***.
- 5-10 Explain a ***landing zone*** and proper ***helicopter safety***.

Anatomy and Physiology Chapter 6

- 6-1 Identify and properly use each anatomical term for ***body direction, movement and position***.
- 6-3 Describe the ***anatomy (structure) and physiology (functioning)*** of each body system: ***Nervous, GI/GU and Reproductive Systems***

Patient Assessment Chapter 7 (Cycle B skills only)

Airway Management Chapter 9

- 9-3 Describe how to manually ***open the airway or mouth*** using the following techniques:
 - ***Cross-finger technique***
 - ***Head tilt–chin lift maneuver***
 - ***Jaw-thrust maneuver***
- 9-5 Explain the ***recovery position***.

Shock Chapter 10

- 10-1. Define ***shock***.
- 10-2 Describe the three primary ***causes of shock***
- 10-3 Describe how the ***body compensates for shock***
- 10-4 Define the ***three stages of shock***
- 10-5 List the ***four major types of shock***
- 10-6 List the classic ***signs and symptoms of shock***
- 10-7 Describe and demonstrate the ***management of shock***.

Allergies and Anaphylaxis Chapter 14

- 14-1 List four routes by which an ***allergen may enter the body***.
- 14-2 List four potential ***allergy causes***.
- 14-3 List the signs and symptoms of an ***allergic reaction***.

Gastrointestinal, Genitourinary, and Reproductive System Emergencies Chapter 16

- 16-1 List the possible causes of ***emergencies involving the gastrointestinal, genitourinary, and reproductive systems***.
- 16-2 List the ***signs and symptoms*** of emergencies involving the genitourinary systems.
- 16-3 List the ***signs and symptoms*** of emergencies involving the gastrointestinal system.
- 16-4 List the signs and symptoms of ***emergencies related to reproductive systems***.

Childbirth, Obstetric Emergencies, and Sexual Assault Chapter 17

- 17-2 List the normal changes in ***vital signs*** a woman experiences ***during pregnancy***.
- 17-3 Explain how to take a ***blood pressure in a pregnant woman***.
- 17-4 Describe what happens to the ***mother and fetus during shock***.
- 17-5 Describe the ***three trimesters of a normal pregnancy***.
- 17-6 Describe possible ***complications of pregnancy***.
- 17-8 Describe the special considerations that are needed when using ***spinal motion restriction for a pregnant woman***.
- 17-9 Describe the management of a ***pregnant patient with abdominal trauma***.
- 17-11 Explain what to do when there is a possible ***sexual assault of a woman***.
- 17-12 Describe the ***basic care for a newborn***.

Musculoskeletal Injuries Chapter 20

- 20-2.1 Describe how to ***assess injuries*** in the following parts of the body: ***hip and pelvis***.
- 20-3.6 Describe how to care for the following injuries: ***hip and pelvis NO LOG ROLL***

Spine, Brain, and Nervous System Injuries Chapter 21 Skills only

Abdominal and Pelvic Trauma Chapter 24

- 24-1 Identify and locate the major ***anatomic structures within the abdominal and pelvic cavities.***
- 24-2 List and describe at least six ***abdominal and pelvic injuries***

Heat-Related Emergencies Chapter 26

- 26-1 Explain how to prevent ***heat-related illness.***
- 26-2 Explain how the body adjusts to a ***hot environment.***
- 26-3 List the signs and symptoms of a patient with the ***four types of heat-related illness.***

Water-Related Emergencies Chapter 29

- 29-1 Define ***drowning.***
- 29-2 Explain the following water-related emergencies:
- ***Arterial gas embolism (AGE)***
 - ***Decompression sickness (DCS)***
- 29-3 Discuss spinal injuries in ***submersion incidents.***
- 29-4 Explain ***swimmer's ear***, including assessment and care. new
- 29-5 Explain how to assess a patient with one of the following water-related emergencies:
- ***Drowning***
 - ***Descent emergencies new***
 - ***Ascent emergencies***
- 29-6 Describe how to manage a patient who has suffered one of the following water-related emergencies:
- ***Drowning***
 - ***Descent emergency new***
 - ***Ascent emergency***
- 29-7 List multiple ways in which a water-based emergency may be ***prevented.***

Adaptive Athletes Chapter 32

- 32-1 Define the following terms:
- ***Disability***
 - ***Handicap***
 - ***Impairment***
- 32-2 List two ***disorders that cause physical disabilities.***
- 32-3 List two ***disorders that cause intellectual disabilities.***
- 32-4 List two disorders that cause ***sensory impairment.***
- 32-7 Describe some special considerations that should be followed for ***extrication, transport, and evacuation of disabled athletes.***
- 32-8 Describe various ***special equipment*** that may be used by adaptive athletes to participate in outdoor recreation.
- 32-9 Describe how to ***effectively communicate*** with a person who has an ***intellectual disability.***
- 32-10 Describe three ways to ***communicate with a deaf person.***
- 32-11 List the signs and symptoms of ***autonomic dysreflexia.***
- 32-13 State the ***phone number*** to dial to allow you to talk to a deaf person.

2021 NEW THIS YEAR, BEYOND THE BASICS. LINKS WITH VIDEOS AND ADDITIONAL INFORMATION FOR THOSE WHO WISH TO EXPLORE.

RESCUE BASICS CHAPTER 3

Remember to incorporate BSI into each station.

BEYOND THE BASICS: [HOW SOAP KILLS VIRUSES INCLUDING COVID 19](#)

BEYOND THE BASICS: [REMOVING GLOVES VIDEO](#)

MOVING LIFTING AND TRANSPORTING PATIENTS CHAPTER 5

Demonstrate a power grip.

Demonstrate a power lift.

Demonstrate the following drags, lifts and carries.
Choose one from each group.

Moves used when there is not a suspected spinal injury.

- » Extremity lift
- » Direct ground lift

Urgent moves:

- » Shoulder drag
- » Feet drag
- » Underarm wrist drag
- » Blanket drag

Nonurgent moves:

- » Human crutch
- » Two-person assist
- » Chair carry
- » Fore and aft carry

For proper procedures/technique for each lift, drag and carry, see Chapter 5.



Improper vs Proper lifting techniques

PATIENT ASSESSMENT CHAPTER 7

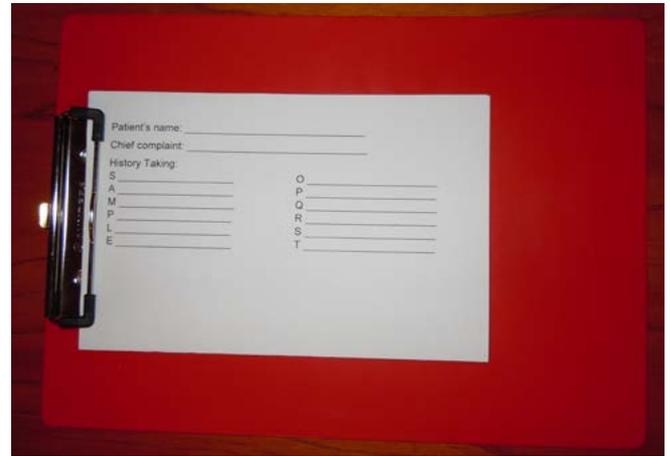
Explain and demonstrate the following parts of a patient assessment:

- Scene size-up
- Primary assessment
- History taking
- Secondary assessment
- Reassessment

Describe and demonstrate the procedure for obtaining the following vital signs:

- Pulse (heart rate)
- Respiratory rate
- Oxygen saturation (can be done with Airway Management)

History Taking:



BEYOND THE BASICS: EVALUATE THIS SCENE.



Click on arrow to see expanded scene

PATIENT ASSESSMENT PROCESS

SCENE SIZE-UP

Ensure scene safety
 Determine the MOI or NOI
 Take standard precautions
 Determine the number of patients
 Consider additional resources



PRIMARY PATIENT ASSESSMENT:

Form a general impression
Control life-threatening bleeding
 Assess level of responsiveness
 Rapidly assess airway, breathing, circulation, disability
 Obtain chief complaint
 Update dispatch of needs



HISTORY TAKING:

Investigate the chief complaint using SAMPLE
 Assess pain and other complaints using OPQRST



SECONDARY PATIENT ASSESSMENT

Perform a physical exam
 Assess vital signs



REASSESSMENT

Check effectiveness of treatment
 Repeat primary patient assessment and reassess vital signs
 Treat changes in patient's condition
 Prepare to hand off to a higher level of care

When caring for minors, remember to contact the parents.

BEYOND THE BASICS: PATIENT ASSESSMENT VIDEO

For ease of understanding, participants in the video are not wearing masks. Refer to your local protocols for the latest updates regarding PPE.

AIRWAY MANAGEMENT CHAPTER 9

Explain and demonstrate the recovery position.

Demonstrate the sizing and placement of:

Oropharyngeal and Nasopharyngeal airways

Demonstrate how to place an oxygen cylinder into service, using a

Nasal cannula and non-rebreather mask.

Demonstrate how to use a pulse oximeter. (can be done with assessment)

Using the Recovery position:

1. Kneel at the patient's left side, preferably with your knees near the patient's hips or chest.
2. Extend the patient's left arm so it extends over the person's head.
3. Gently roll the patient toward you onto the left side so the patient's head rests on his or her straightened arm.
4. The patient's head should be tilted at a slight downward angle, with the mouth open, to allow secretions to flow out of the mouth.
5. Flex the patient's right knee at a right angle to anchor the patient into this position.
6. Position the patient's right arm so it is in front of the patient and does not block the rescuer's access to the patient's airway.
7. Always make sure the airway remains open.

BEYOND THE BASICS: INSERTING AIRWAYS: OPA AND NPA

Demonstrate how to use a pulse oximeter. (can be done with assessment)

List the appropriate steps for inserting an OPA (SIC). List the appropriate steps for inserting an NPA (SLIC).

[Click here for write-able PDF answer sheet.](#)



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a _____, b _____, c _____



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a _____, b _____, c _____, d _____

Table 9-1 A Comparison of Oropharyngeal and Nasopharyngeal airway devices

Oropharyngeal Airway	Nasopharyngeal Airway
Placed in the mouth. Relieves airway obstruction caused by tongue.	Placed in the nose. Relieves airway obstruction caused by the tongue or by mucus and nasal swelling.
Relatively easy to insert.	Easy to insert.
Must not be used in a responsive patient or a person with an intact gag reflex.	Can be safely used in responsive and semiresponsive patients or in a person with an intact gag reflex.
Can be placed in patients who have nasal trauma.	Caution required if used in patients who have facial trauma.

Oxygen tanks and delivery devices:

Label the parts of the oxygen tank assembly:

[Click here for write-able PDF answer sheet.](#)



1 _____, 2 _____, 3 _____



4 _____, 5 _____

BEYOND THE BASICS: O2 TITRATION ARTICLE

2021 KEY POINT_USE OF OXYGEN OEC 6.DOCX

SHOCK CHAPTER 10

Describe and demonstrate the management of shock.

Management of a patient in shock centers on returning the patient to a state of homeostasis. Given shock is caused by inadequate tissue perfusion and oxygenation, initial treatment is focused on correcting any problems causing shock.

How to manage Shock: Monitor the airway, administer high-flow O₂, prevent heat loss, keep patient warm and dry, and provide rapid transport.

ALLERGIES AND ANAPHYLAXIS CHAPTER 14

Demonstrate the steps for properly using portable epinephrine auto-injectors.



Different types of auto-injectors that an OEC technician might come in contact with include the Epi-Pen (A) and Auvi-Q (B).



NOTE: as patrollers, we may assist with administering a patient's own auto-injector.

BEYOND THE BASICS:

[HOW TO USE THE AUVI-Q](#)

[HOW TO USE AN EPI PEN](#)

GASTROINTESTINAL, GENITOURINARY, REPRODUCTIVE EMERGENCIES CHAPTER 16:

Describe and demonstrate how to assess the abdomen.

Describe and demonstrate how to manage a patient with a severe Gastrointestinal/Genitourinary/Reproductive emergency.



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BSI, rule out traumatic injury. Determine the nature of illness (NOI).

Assessment- History Taking (SAMPLE, and OPQRST), palpate all four quadrants of the abdomen.

Treatment is supportive until definitive medical care can be obtained.

CHILDBIRTH, OBSTETRIC EMERGENCIES, AND SEXUAL ASSAULT CHAPTER 17:

Demonstrate how to examine a female patient with abdominal or pelvic pain.

Describe and demonstrate the process of assisting a woman during a delivery.

» KEY POINT

First Steps in Treating a Pregnant Trauma Patient

Early critical intervention for a pregnant woman with trauma includes placing her on high-flow oxygen if her oxygen saturation is less than 94% and positioning her on her left side (perhaps by tilting the patient to the left). Treat her for shock even in the presence of normal vital signs.



Figure 17-9 If possible, place the woman on her left side, or elevate her right hip or manually displace the uterus. Avoid placing straps over her abdomen

» KEY POINT

Always be Prepared for an Emergency Delivery

When assisting with an emergency delivery, always use standard precautions, and wear a face mask with an eye shield or safety glasses. Consider having a commercial obstetric delivery kit available in the aid room for emergencies.



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ASSISTING WITH CHILDBIRTH:

Referring to the photos on pages 368 and 369 of OEC 6th edition; number the following steps in correct order:

[Click here for write-able PDF answer sheet.](#)

- ___ Delivery of the body
- ___ Cut cord
- ___ Crowning
- ___ Suction as needed
- ___ Delivery of placenta
- ___ Delivery of the head

» KEY POINT

Caution in Suctioning the Baby's Airway

ONLY if there is obvious obstruction to the baby's spontaneous breathing will you immediately suction the baby's mouth and then the nostrils, using a soft rubber bulb syringe.

BEYOND THE BASICS: CHILDBIRTH

MUSCULOSKELETAL INJURIES CHAPTER 20:

Describe and demonstrate how to assess injuries of the hip and demonstrate how to care for them.

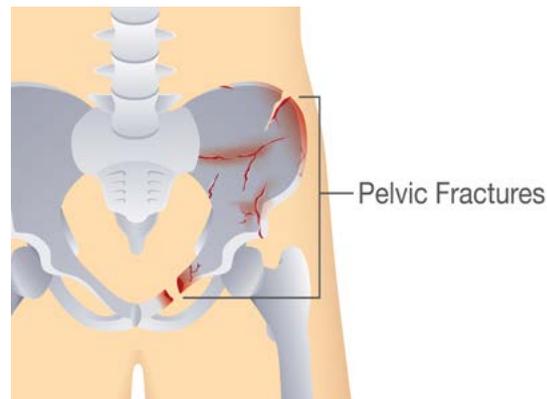
Hip injuries vs pelvic injuries:



Hip Dislocation



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Pelvic Fracture (covered on pages 23 and 24 of this workbook)

ASSESSING HIP INJURIES:

Hip fractures:

- » Fractures involving the proximal femur are commonly referred to as hip fractures.
- » Most patients with a placed proximal femur fracture present with the affected leg shortened and externally rotated.
- » Patient usually will not want to move the injured leg.
- » Pain is extreme and located in the groin or inner aspect of the thigh.
- » Occasionally the pain is referred to the knee.
- » Movement makes pain worse
- » Patient will complain of pain with **GENTLE, very slight** movement of the leg by rolling the knee medially and laterally.

Hip dislocations:

- » Signs of the less common anterior hip dislocation include abduction of the thigh and external rotation of the knee.
- » Over 90% of hip dislocations are posterior dislocations.
- » MOI for posterior hip dislocation is significant force applied to the knee of a person who is sitting. (think car collision)
- » Signs of posterior hip dislocation include interior rotation of the knee and shortening of the leg.
- » Sciatic nerve can be injured in a dislocated hip, possibly resulting in temporary partial or complete paralysis of the ankle and foot.



A) Anterior hip dislocation



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B) Posterior hip dislocation

CARING FOR A HIP DISLOCATION OR FRACTURE.



Check CMS distal to the injury. Keep affected extremity in position found, pad any and all voids with blankets, pillows, backpack, etc. Gently secure the patient on a long spine board. Recheck CMS.

SPINE, BRAIN AND NERVOUS SYSTEM INJURIES CHAPTER 21

(See page 523 for spinal injury algorithm.)

Demonstrate how to perform an axial drag.

Demonstrate how to properly care for a patient with a brain and spinal cord injury.

Demonstrate how to maintain proper spinal alignment, using a log roll, draw sheet, plastic slider, or flat transfer lift while placing a patient on to a long back board from a supine position.

Demonstrate how to secure a patient to a long back board or full-body vacuum mattress if available.

Describe and Demonstrate how to remove a helmet.

Explain and demonstrate the principle of “jams and pretzels”.

For proper steps in securing a patient to a long back board, see OEC Skill 21-4, pages 529 and 530.

HELMET REMOVAL:



JAMS AND PRETZELS:

Jams and Pretzels, a phrase referring to the process by which someone who is injured and in an awkward position is returned to normal supine anatomic position while maintaining spinal motion restriction.



» KEY POINT

Spinal Motion Restriction

When a patient with spinal trauma is moved without taking spinal precautions using spinal motion restriction, damage to the spinal cord can occur. Unstable vertebrae or vertebral bone fragments may intrude into the spinal canal and may put direct pressure on the spinal cord.

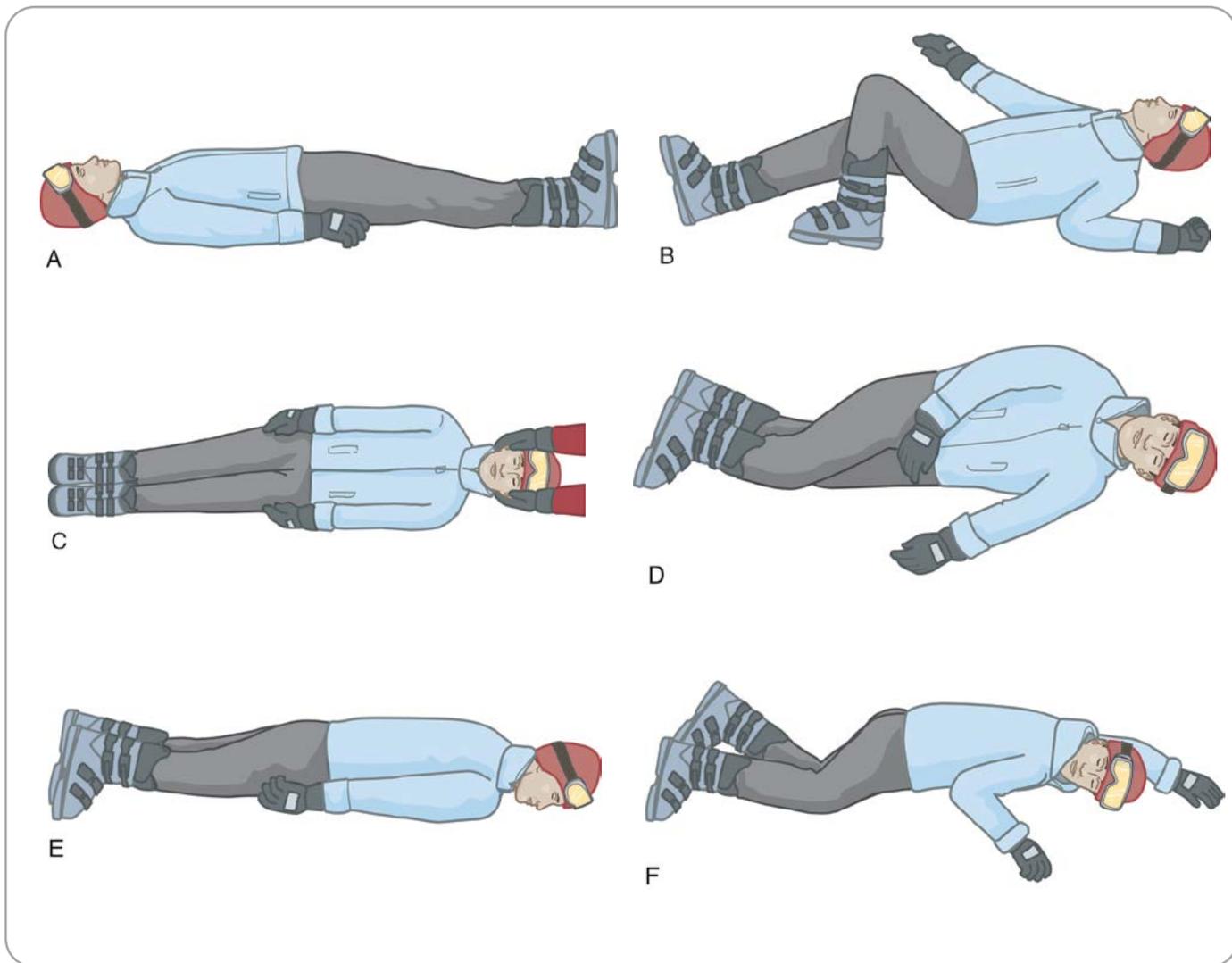


Figure 24-7 A. Position 1. B. Position 1a. C. Position 2. D. Position 2a. E. Position 3. F. Position 3a.

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ABDOMINAL AND PELVIC TRAUMA CHAPTER 24

Describe and demonstrate how to assess a patient with abdominal or pelvic trauma.

Describe and demonstrate how to manage a patient with abdominal or pelvic trauma

Describe and demonstrate how to manage an evisceration.

Describe and demonstrate how to manage an impaled object in the abdomen or pelvis.

Describe and demonstrate how to manage a pelvic fracture (pelvic sling). **NO log roll.**



Bruising of the abdomen is a sign of blunt trauma and possibly internal bleeding, which can be a life-threatening condition

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ABDOMINAL AND PELVIC TRAUMA ASSESSMENT AND MANAGEMENT:

As you perform the physical exam, note the presence of the following signs and symptoms that are consistent with an abdominal or pelvic injury:

- » Pain
- » Tenderness
- » Visible external wounds
- » Abdominal distention
- » Abdominal rigidity
- » Unexplained shock

Note: Pay particular attention to shoulder pain without evidence of shoulder injury (Kehrs sign-referred pain). Left shoulder pain-possible spleen damage; right shoulder pain-possible liver damage.

Closely monitor for signs of shock.

Briefly describe the management of a patient with abdominal and pelvic trauma.

[Click here for write-able PDF answer sheet.](#)



NEW: ABDOMINAL EVISCERATION

It is acceptable to put abdominal contents back into a large wound so the organs do not dry out and the blood vessels are not stretched. This is more beneficial than leaving the organs out. If possible, clean off any gross contamination first. If there is a small hole, leave the contents out. Do not force the contents back in. Cover the area with a sterile dressing moistened with sterile water or saline solution, if available. If you do not have access to sterile fluids, then keep the area moist with water that is clean enough to drink. Do not use pond or stream water, which could have bacterial contamination. Do not allow the eviscerated abdominal contents to dry out. In the event you are in an area where clean water is not available, use a dry sterile dressing. Keep the patient warm because evisceration can cause rapid, significant heat loss.

CASE REVIEW, 2021 CYCLE "B"

Trees. I have always enjoyed skiing them. Skiing where others would prefer not to. Oh sure, I have my secret spots, where the out-of-towners don't know, and the fresh powder seems to last a few hours longer. Tourists will always ask where are the "secret stashes", I usually direct them to Jim's, my roommates, secret spot. I would take Jim to mine someday, but all he would do is tell tourists where it is. One has to be careful who you let in on your secret spot. Today, somebody beat me to my secret spot. Not too bad, just a bit skied over. We had about 8" of fresh powder, and since I had to work this A.M. to support my skiing habit, I didn't get here until early afternoon. Starting my run, I had a good fall line, then seeing a nice lump of fresh powder skied right through it. Well almost. I actually hit a log buried beneath the snow. One ski went under the log, the other over it. Both skies released, but the tree I hit was less hospitable. Those branches hurt and I was glad I tumbled away from the tree and tree well. One branch however elected to stay with me. It hurt more than I care to admit so I yanked it out. I thought it had just ripped my jacket, nope it actually took a good amount of flesh with it. Unzipping my coat and looking at the offending spot, I noticed parts were coming out of

an 8-inch laceration. An evisceration! Blood was never a strong point of interest of mine - innards (particularly mine)- even less so. What to do? I could jam them back in. If I actually touch the organs, I would probably throw up, way too much stuff for me to see. I could lie here and hope the Patrol does a final sweep here...soon. I could faint, scream or panic. Yes, that's the answer, everybody should learn to enjoy a really good panic. Fortunately, before I could get into full panic mode, I heard some other skiers coming, whom I was able to summon for help. They called the ski patrol. Cell phone, I'll have to remember that option next time. While waiting for the ski patrol to arrive, I thanked the skiers who found me. They were from out of town, but some guy on the chair lift named Jim, told them about this area. He said it was his roommate's secret spot.

As the responding patroller/s, how did you care for the patient and manage the scene? Be sure to include everything from arrival on scene, assessment, first aid provided, transport decisions and scene clean-up. Discuss all options for treating an abdominal evisceration.

[Click here for write-able PDF answer sheet.](#)



IMPALED OBJECTS

Impaled objects should be secured in place. First, expose the wound, manually stabilize the object, and control bleeding. Then further stabilize the object with a bulky dressing. If the length of an impaled object compromises transport or rescue operations, you may need to cut the object to allow for transport. However, do not remove the object unless absolutely necessary to transport; doing so could lead to life-threatening hemorrhage. Keep the impaled object stationary when shortening it, as movement could cause additional internal injury.

PELVIC FRACTURES: USING A FOLDED SHEET AS A PELVIC BINDER



1



2



3



4



5



6



7

Match the following steps with the correct photo above.

[Click here for write-able PDF answer sheet.](#)

- _____ Lift the knees approximately 6 to 8 inches or the position of comfort and place a blanket or other padded material under the knees prior to strapping the patient down.
- _____ Lift the patient carefully into the toboggan or transport device. Again, a bridge lift is best.
- _____ Perform a bridge lift. Place the patient on top of the sheet or the commercial binder so it is 1 to 2 inches below the iliac crests. Logroll only if absolutely necessary since doing so can cause more internal bleeding.
- _____ Finish securing the patient to the backboard or stretcher.
- _____ Prepare the commercial pelvic binder or folded sheet and place it beside the patient on the backboard, or stretcher, that is being used as a litter. Place it where the supine patient's pelvis will be. If possible, dig out the snow or material under the pelvis and slide the device under the patient and apply.
- _____ Because this is a distracting injury, apply a collar and head blocks and use SMR (with the padding under the knees).
- _____ Fasten the binder: a) If using a sheet, draw the two ends of the sheet together over the symphysis pubis, compressing the hips (greater trochanters) together. Then tie the sheet ends together snugly using an overhand knot. Plastic ties are in some cases better than using an overhand knot if available.

USING A COMMERCIALLY PREPARED PELVIC SLING:

If using a commercial binder, pull the two ends together snugly in a similar way and Velcro or belt the binder per the manufacturer's directions.



SAM Pelvic Sling II Courtesy of SAM Medical.



» KEY POINT

Caution About Logrolling

It is best to perform a direct lift for any patient movement, rather than logroll, if the patient has a suspected pelvic fracture.

The BEAN/bridge lift is the preferred method of lift which is considered a form of direct lift.

BEYOND THE BASICS: [PELVIC SLING APPLICATION VIDEO SAM SPLINT II](#)

Scroll to two rescuer application

HEAT RELATED EMERGENCIES CHAPTER 26

Describe and demonstrate the assessment and emergency care of a patient suffering from one of the four types of heat-related illnesses.

- » Heat Syncope
- » Heat Cramps
- » Heat Exhaustion
- » Heat Stroke

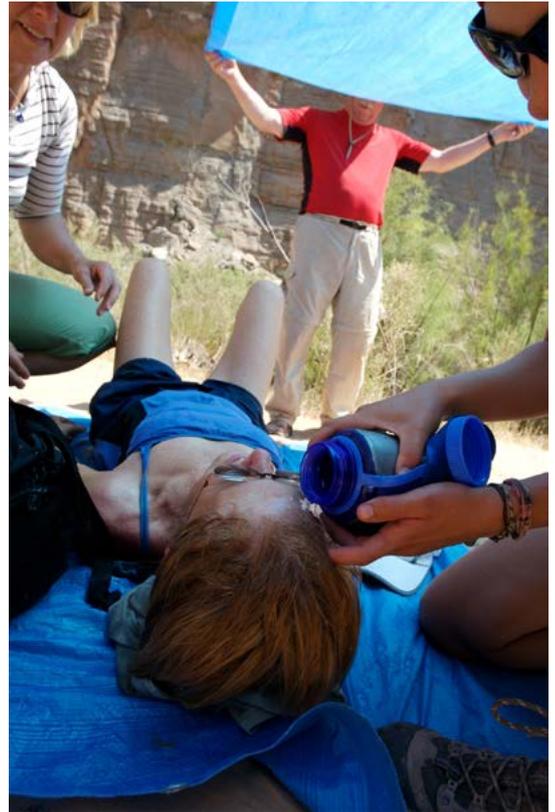


Figure 26-5 Remove patients from direct sunlight and begin to cool them immediately

The following photos may or may not be suitable treatment for heat-related illnesses. Indicate which items are suitable to treat heat related illnesses, by placing the corresponding numbers under each photo. Some may be used more than once. [Click here for write-able PDF answer sheet.](#)

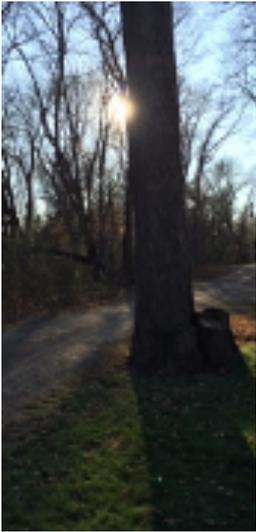
Not suitable = 0

Heat syncope = 1

Heat cramps = 2

Heat exhaustion = 3

Heat stroke = 4



Provide shade

a. _____



Alcoholic beverages

b. _____



Call 911

c. _____



Drink water

d. _____



Ice packs

e. _____



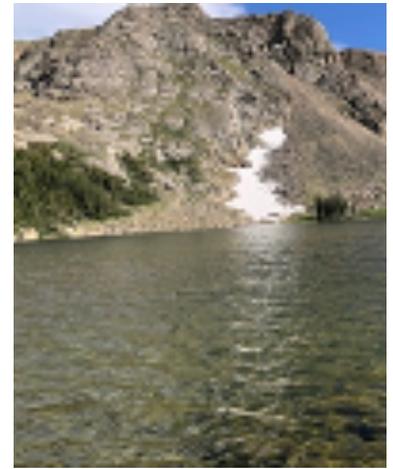
Cold beer

f. _____



Water with salt added

g. _____



Immerse in water

h. _____



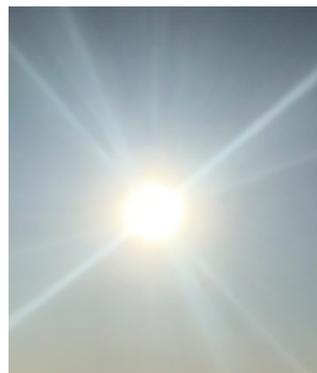
Sport drinks

i. _____



Shade with umbrella or tarp

j. _____



Direct sunlight

k. _____



Epi pen

l. _____

WATER-RELATED EMERGENCIES CHAPTER 29

While there are no skills demonstrations associated with this Chapter, some important key points are:

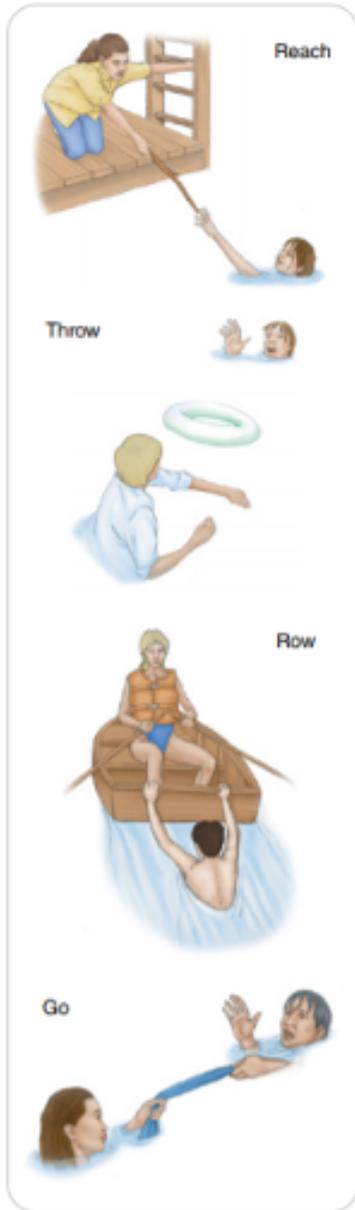


Figure 29-7 Basic rules of water rescue

© Jones & Bartlett Learning

ADAPTIVE ATHLETES CHAPTER 32

Describe and demonstrate how to assess and care for an adaptive athlete with an above-the-knee amputation with a femur fracture on the same leg.



Some key points for Assessment of Adaptive Athletes:

The principles of a good assessment apply to all adaptive athletes, whether their disability is physical, intellectual, or sensory.

- » Always use body substance isolation (BSI), as many adaptive athletes have body fluids in bags attached to their bodies.
- » Respect for the patient, and common sense are an OEC technician's best tools for performing a useful and accurate evaluation.
- » When assessing for ABCD-related problems, the D represents new disability problems.
- » OEC technicians should take particular care to look for medic alert tags.
- » Speak directly to the adaptive athletes, not through their guides or companions, using a clear voice and calm demeanor.
- » Do not assume the patient knows your role or can read your name tag.
- » Remaining calm is essential when helping an adaptive athlete with an intellectual disability.
- » Be willing to ask the patient and companions about their condition and equipment.

For more complete information regarding adaptive athlete assessment, refer to Chapter 32, pages 757 - 760.

CARING FOR A FEMUR FRACTURE OF AN AMPUTEE:

Stabilization of injuries in amputees often means splinting in a position of comfort. Using traction for a midshaft femur fracture in an above or below-the-knee amputee is not practical in outdoor environments. In general, immobilize this fracture above and below the fracture, using a quick splint. Use extra padding to avoid pressure on areas without sensation, whether those areas are close to the injury or not. Modify splints and strapping if needed, but never force an injured extremity into a rigid splint. For patients with muscle spasticity as in CP (cerebral palsy), traction splints used for a femur fracture may aggravate muscle spasticity, so use a quick splint or other immobilization technique if necessary.

» KEY POINT

When Is a Patient Dead?

Remember that *patients are not dead until they are warm and dead!* This is especially true in cold-water drowning.

OEC REFRESHER 2021 CYCLE B SKILLS CHECKLIST	Each OEC technician must perform the following skills	Each OEC technician must participate as a team member	Instructor sign-off
Every OEC Technician must perform the following skills:			
Describe and demonstrate how to manage shock. Incorporate into all stations		X	
Demonstrate how to remove contaminated gloves	X		
Each OEC Technician must perform the following skills:			
Demonstrate a power grip.	X		
Demonstrate a power lift.	X		
Each OEC technician must lead one and participate in all others:			
Demonstrate the following drags, lifts and carries. Choose one from each group			
Moves when there is NOT a spinal injury			
Extremity lift		X	
Direct ground lift		X	
Urgent moves			
Shoulder drag		X	
Feet drag		X	
Blanket drag		X	
Underarm/wrist drag		X	
Non-urgent moves			
Human crutch		X	
Two-person assist		X	
Chair carry		X	
Fore and aft carry		X	
Each OEC Technician must perform the following skills:			
Explain and demonstrate the following five parts of a patient assessment. 			
a. Scene size-up	X		
b. Primary patient assessment	X		
c. History taking	X		
d. Secondary patient assessment	X		
e. Reassessment	X		
Demonstrate where you can take five pulses in five different locations on the body. 	X		
Describe and demonstrate the procedure for obtaining the following vital signs:			
Pulse (heart rate)	X		
Respiratory rate	X		
Oxygen Saturation (can be done with airway management) 	X		
Each OEC Technician must perform the following skills:			
Describe and demonstrate the proper way to clear an airway using suction.	X		
Explain and demonstrate the recovery position.	X		
Demonstrate the sizing and placement of:			
Oropharyngeal airway	X		
Nasopharyngeal airway	X		
Describe and demonstrate how to place an oxygen tank into service, using:			
Nasal cannula and	X		
Non-rebreather mask	X		
Explain what a pulse oximeter is and demonstrate how it is used. (or do with assessment-see above) 	X		

OEC REFRESHER 2021 CYCLE B SKILLS CHECKLIST	Each OEC technician must perform the following skills	Each OEC technician must participate as a team member	Instructor sign-off
Each OEC Technician must lead one and participate in all others:			
Describe and demonstrate the management of a transient ischemic attack.		X	
Describe and demonstrate the management of the two types of stroke: Hemorrhagic Ischemic		X X	
Describe and demonstrate how to assess a patient who is having difficulty breathing (including breath sounds). Note: all must perform.	X		
Describe and demonstrate the appropriate management of a patient in respiratory distress.		X	
Demonstrate how to assist with an inhaler. Note: all must do.	X		
Demonstrate how to assess and treat a patient with a cardiovascular emergency.		X	
Describe and demonstrate assisting a patient in taking: Nitroglycerin Aspirin		X X	
Each OEC Technician must perform the following skill:			
Demonstrate the steps for properly using portable epinephrine auto-injectors.	X		
Each OEC Technician must lead one and participate in all others:			
Describe and demonstrate how to assess the abdomen.	X		
Describe and demonstrate how to manage a patient with a severe Gastrointestinal/Genitourinary/Reproductive emergency.		X	
Demonstrate how to examine a female patient with abdominal or pelvic pain.		X	
Describe and demonstrate the process of assisting a woman during a delivery.		X	
Each OEC Technician must perform the following skills:			
Explain and demonstrate the different methods to control bleeding: Direct pressure Pressure Dressing Tourniquet application Packing the wound	X X X X		
Each OEC Technician must lead one and participate in all others:			
Demonstrate how to care for an injured extremity when there is neurovascular compromise.		X	
Describe and demonstrate how to assess injuries in the following parts of the body and demonstrate how to care for them. (Choose at least three.)			
Shoulder/scapula		X	
Clavicle		X	
Humerus		X	
Elbow		X	
Forearm		X	
Wrist		X	
Describe and demonstrate how to assess injuries of the hip and demonstrate how to care for them.		X	
Each OEC Technician must perform the following skills:			
Explain and demonstrate how to perform neutral head alignment.	X		
Demonstrate how to size and apply a cervical collar.	X		

OEC REFRESHER 2021 CYCLE B SKILLS CHECKLIST	Each OEC technician must perform the following skills	Each OEC technician must participate as a team member	Instructor sign-off
Each OEC Technician must lead one and participate in all others:			
Demonstrate how to perform an axial drag.		x	
Demonstrate how to properly care for a patient with a brain and spinal cord injury.		x	
Demonstrate how to maintain proper spinal alignment, using a log roll, draw sheet, plastic slider, or flat transfer lift while placing a patient on to a long back board from a supine position.		x	
Demonstrate how to secure a patient to a long back board or full-body vacuum mattress if available. (Full body vacuum mattress) 		x	
Describe and Demonstrate how to remove a helmet.		x	
Explain and demonstrate the principle of “jams and pretzels”.		x	
Each OEC Technician must lead one and participate in all others:			
Describe and demonstrate how to assess and manage a patient with a penetrating injury to the eyeball.		x	
Describe and demonstrate how to assess and manage the proper care of a penetrating trauma to the face:		x	
Each OEC technician must:			
Describe and demonstrate how to assess a patient with abdominal or pelvic trauma.	x		
Each OEC technician must lead one and participate in all others:			
Describe and demonstrate how to manage a patient with abdominal or pelvic trauma.			
Describe and demonstrate how to manage an evisceration.		x	
Describe and demonstrate how to manage an impaled object in the abdomen or pelvis		x	
Describe and demonstrate how to manage a pelvic fracture (pelvic sling). NO log roll. 		x	
Each OEC Technician must lead one and participate in all others:			
Demonstrate the management of a patient with cold injuries:			
Frost bite		x	
Hypothermia		x	
Each OEC technician must lead one and participate in all others:			
Describe and demonstrate the assessment and emergency care of a patient suffering from one of the four types of heat-related illnesses:			
Heat syncope		x	
Heat cramps		x	
Heat Exhaustion		x	
Heat Stroke		x	
Group Participation Skill:			
Describe and demonstrate how to assess and care for an adaptive athlete with an above-the-knee amputee with a femur fracture on the same leg.		x	
Group			
Case Review discussion Cycle B		x	

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. Did you use your *OEC 6th edition* to review the refresher topics and complete your 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 Review" was 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?

13. What could be improved in the refresher?

14. I'd like my instructor(s) to do a better job of:

15. My instructor(s) did an excellent job of:

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

Participants: Please return this completed form to your instructor.

Instructors: Please submit this form to the proper person per your region or division guidelines.
Please DO NOT mail forms to the national office.

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.

2021 CYCLE B 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 of 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.

Email the Refresher Committee at refresher@nspserver.org



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PHOTOS

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and Refresher Committee

Special thanks to Kristi, Bob and Grace Ball for the assessment video; and Dave Hemendinger for video enhancements.

Name: _____

Patrol Name: _____ NSP membership number: _____

2021 OEC Cycle B Workbook Writeable PDF Answer sheet: When completed, you may print and take to your refresher. Or if allowed by your IOR, save and email the document to the IOR.

1. List the appropriate steps for inserting an OPA (SIC). List the appropriate steps for inserting an NPA (SLIC).

OPA (SIC)

- a. _____
 b. _____
 c. _____

NPA (SLIC)

- a. _____
 b. _____
 c. _____
 d. _____

[Click Here to go back to workbook](#)

2. Label the parts of the oxygen tank assembly. Refer to page 13 of the workbook

1. _____
 2. _____
 3. _____
 4. _____
 5. _____

[Click Here to go back to workbook](#)

3. Assisting with Childbirth: Referring to the photos on pages 368 and 369 of OEC 6th edition; number the following steps in correct order:

- _____ delivery of the body
 _____ cut cord
 _____ crowning
 _____ suction as needed
 _____ delivery of placenta
 _____ delivery of the head

[Click Here to go back to workbook](#)

4. Briefly describe the management of a patient with abdominal and pelvic trauma.

[Click Here to go back to workbook](#)

5. Stabilizing the pelvis: Match the following steps with the correct photo on page 23 of the workbook.

_____ Lift the knees approximately 6 to 8 inches or the position of comfort and place a blanket___ or other padded material under the knees prior to strapping the patient down.

_____ Lift the patient carefully into the toboggan or transport device. Again, a bridge lift is best.

_____ Perform a bridge lift. Place the patient on top of the sheet or the commercial binder so it _____ is 1 to 2 inches below the iliac crests. Logroll only if absolutely necessary since doing so can cause more internal bleeding.

_____ Finish securing the patient to the backboard or stretcher.

_____ Prepare the commercial pelvic binder or folded sheet and place it beside the patient on the backboard, or stretcher, that is being used as a litter. Place it where the supine patient's pelvis will be. If possible, dig out the snow or material under the pelvis and slide the device under the patient and apply.

_____ Because this is a distracting injury, apply a collar and head blocks and use SMR (with the padding under the knees).

_____ Fasten the binder: a) *If using a sheet*, draw the two ends of the sheet together over the symphysis pubis, compressing the hips (greater trochanters) together. Then tie the sheet ends together snugly using an overhand knot. Plastic ties are in some cases better than using an overhand knot if available.

[Click Here to go back to workbook](#)

6. Using the photos on page 26 of the workbook, indicate which items are suitable to treat heat-related illnesses, by placing the corresponding numbers under each photo. Some may be used more than once.

Not suitable = 0

Heat syncope = 1

Heat cramps = 2

Heat exhaustion = 3

Heat stroke = 4

a. Provide shade _____

b. Alcoholic beverages _____

c. Call 911 _____

d. Drink water _____

e. Ice packs _____

f. Cold beer _____

g. Drink water with salt added _____

h. Immerse in water _____

i. Sports drinks _____

j. Shade with umbrella or tarp _____

k. Assist with epi pen _____

l. Direct sunlight _____

[Click Here to go back to workbook](#)

Case Review: After the Patrol arrived what did they do to help me? Be prepared to discuss at your refresher. Use the space below to jot down notes.

[Click Here to go back to workbook](#)