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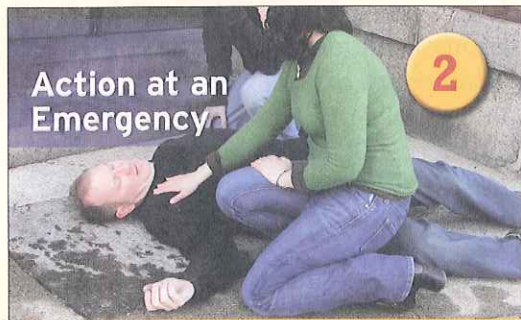
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welcome

resource preview

This concise student manual is designed to give laypersons the education and confidence they need to effectively provide emergency care. Features that reinforce and expand on essential information include:



chapter at a glance

Emergencies

- Emergencies have distinctive characteristics. They are:
- **Dangerous**—people's lives, well-being, or property are threatened.
 - **Unusual and rare events**—the average person will probably encounter fewer than a half a dozen serious emergencies in a lifetime.
 - **Different from one another**—each presents a different set of problems.
 - **Unforeseen**—they happen suddenly and without warning.
 - **Urgent**—if the emergency is not dealt with immediately, the situation will escalate.

What Should Be Done?

- Victims would benefit if bystanders could quickly and reliably do the following:
1. Recognize the emergency.
 2. Decide to help.
 3. Call 9-1-1 if emergency medical service is needed.
 4. Check the victim.
 5. Give first aid.

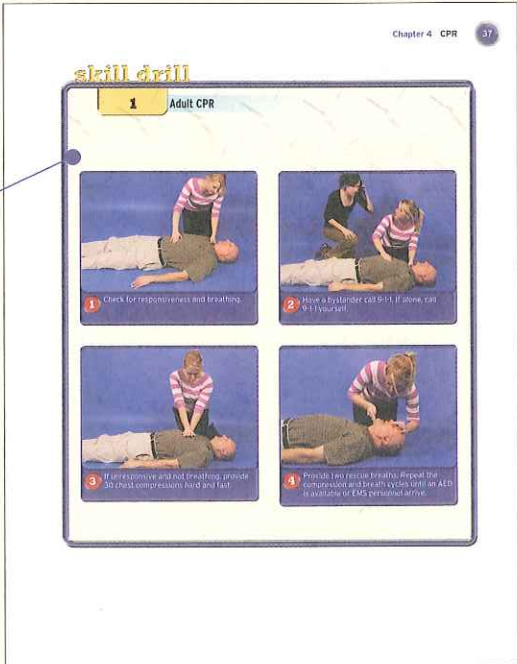
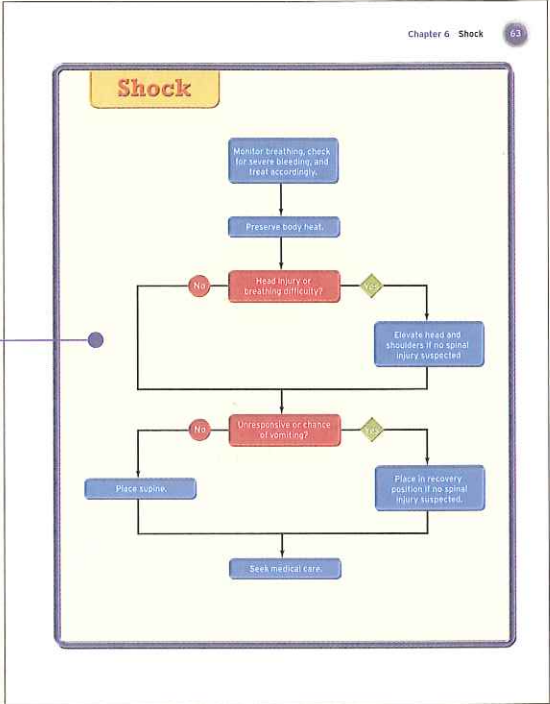
chapter at a glance

- ▶ Emergencies
- ▶ What Should Be Done?
- ▶ Seeking Medical Care
- ▶ How to Call EMS
- ▶ Scene Size-up
- ▶ Disease Precautions

Flowcharts
Pose a central question and organize treatment options by injury or illness type.

Chapter at a Glance
Guides students through the topics covered in the chapter.

Skill Drills Provide step-by-step explanations and visual summaries of important skills for first aiders.



Four-Color Illustrations and Photographs
Descriptive images and photos enable the student to visualize common signs and treatment options.

Chapter 8 Wounds 61

Figure 9
Care of an amputated part.

- Put the wrapped amputated part in a plastic bag or other waterproof container.
- Place the bag or container with the wrapped part on a bed of ice. Keep the amputated part cool, but do not freeze.
- Seek medical care immediately.

Blisters
A blister is a collection of fluid in a "bubble" under the outer layer of skin. (Note: This section applies only to friction blisters and does not apply to blisters from burns, frostbite, drug reactions, insect or snake bites, or contact with a poisonous plant.) Repeated rubbing of a small area of the skin will produce a blister.

Figure 10
Friction blister.

Care for Blisters
When caring for a friction blister, try to (1) avoid the risk of infection, (2) minimize the victim's pain and discomfort, (3) limit the blister's development, and (4) promote a fast recovery. The best care for a particular blister is determined mainly by its size and location. If an area on the skin becomes a "hot spot" (painful, red area), snugly apply a piece of tape (adhesive or duct). You could also cut a hole in several pieces of moleskin or medicated in-layers and place them around the blister, make a doughnut-shaped pad, and apply it over the blister. If a blister on a foot is closed and not very painful, a conservative approach is to tape the blister with

CAUTION
DO NOT try to decide whether a body part is salvageable or too small to save—leave that decision to a physician.
DO NOT wrap an amputated part in a wet dressing or cloth. Using a wet wrap on the part can cause waterlogging and tissue softening, which will make reattachment more difficult.
DO NOT bury an amputated part in ice—place it on ice. Reattaching frostbitten parts is usually unsuccessful.
DO NOT use dry ice.
DO NOT cut a skin "bridge," a tendon, or other structure that is connecting a partially attached part to the rest of the body. Instead, reposition the part in the normal position, wrap the part in a dry, sterile dressing or clean cloth, and place an ice pack on it.

Caution Boxes
Emphasize crucial actions that first aiders should or should not take while administering treatment.

FYI Boxes Include valuable information related to the injuries or illnesses discussed in that section, including prevention tips and risk factors.

Q&A Boxes Answer questions common to first aiders.

70 First Aid, CPR, and AED Essentials

Dressings and bandages are two different kinds of first aid supplies. A **dressing** is applied over a wound to control bleeding and prevent contamination. A **bandage** holds the dressing in place. Dressings should be sterile or as clean as possible; bandages need not be.

When to Seek Medical Care
High-risk wounds should receive medical care. Examples of high-risk wounds include those with embedded foreign material (such as gravel), animal and human bites, puncture wounds, and jagged wounds. Large or deep wounds should receive medical care. Any wound where edges do not come together spontaneously should receive medical care. Any wounds that have visible bone, joint, muscle, fat, or tendons and wounds that may have entered a joint or body cavity should receive medical care. A particularly high-risk wound is the "fight bite," a wound over the knuckle caused by punching a person in the teeth. Sutures, if needed, are best placed within 6 to 8 hours after the injury. Anyone who has not had a tetanus vaccination within 10 years (5 years in the case of a dirty wound) should seek medical attention within 72 hours to update his or her tetanus inoculation status.

Wound Infection
Any wound, large or small, can become infected. Once an infection begins, damage can be extensive, so prevention is the best way to avoid the problem. A wound should be cleaned using the procedures described earlier in this chapter.

Figure 7
Infected wound.

It is important to know how to recognize and treat an infected wound. The signs and symptoms of infection include the following:
Swelling and redness around the wound
A sensation of warmth
Throbbing pain
Pus discharge
Fever
Swelling of lymph nodes
One or more red streaks leading from the wound toward the heart
The appearance of one or more red streaks leading from the wound toward the heart is a serious sign

FYI
Using Topical Antibiotics to Improve Wound Healing
The use of topical triple-antibiotics significantly decreases infection rates in minor wounds that are contaminated. Topical antibiotics are effective for minor wounds, but not for major wounds. Many studies support the use of topical antibiotics on wounds that are clean. Topical bacitracin zinc (Bacitracin), a triple ointment of neomycin sulfate, bacitracin zinc, and polymyxin B sulfate (Neosporin), and silver sulfadiazine (Silvadene) were compared with petrolatum as a control in patients with minor wounds. Wound infection rates were 17.6% for petrolatum, 5.5% for Bacitracin, 4.5% for Neosporin, and 12.1% for Silvadene.
Source: Dohi S, Singh A, Jamison R. 2007. *The Journal of Family Practice*, 56(2):140-144.

Q&A
When should wounds be closed by a physician?
Generally, a wound should be closed by one of several options (eg, sutures, staples, topical skin adhesives) when: (1) the edges of the skin do not fit together and/or (2) the cut is more than an inch long and is deep. Closing the wound speeds the healing process, lessens the risk of infection, and lessens scarring. If sutures are needed, they should be made by a physician within 6 to 8 hours of the injury.

102 First Aid, CPR, and AED Essentials

Emergency Care Wrap-up

Condition	What to Look For	What to Do
Thermal (Heat) Burns	First degree burn (redness, mild swelling, pain)	Cool the burn with cool water. Apply aloe vera gel or a skin moisturizer. If available, give an OTC medication to reduce pain and swelling.
	Second degree burn (blisters, redness, swelling, pain)	Cool burn with cold water and monitor victims with large, second-degree burns for hypothermia. Apply antibiotic ointment. Cover with a dry, nonstick sterile dressing. If available, give an OTC medication to reduce pain and swelling. Seek medical care.
	Third degree burn (char, blackened skin)	Monitor breathing and provide care as needed. Cover burn with a dry, nonstick sterile, or clean dressing. Treat for shock. Seek medical care.
Chemical Burns	Stings or burns	Brush dry chemicals off skin. Flush with a large amount of water for 20 minutes (gentle water flows). Remove the victim's contaminated clothing and jewelry while flushing. Cover the area with a dry, sterile, or clean dressing. Seek medical care.
Electrical Burns	Visible injury or burn with or without a visible electrical source	Safety first! Unplug, disconnect, or turn off the electricity. Open the airway, check breathing, and provide care as needed. Care for burns as you would a third-degree burn. Seek medical care.

Emergency Care Wrap-ups These decision tables provide a succinct summary of what signs first aiders should look for and what treatment they should provide for the emergency presented in the text.

Ready for Review A thorough summary of the key points in the chapter.

Vital Vocabulary List of the key terms and definitions from the chapter.

Assessment in Action Brief case study followed by critical thinking questions that allow students to apply what they've learned.

17

prep kit

Ready for Review

- A heart attack occurs when heart muscle tissue dies because the blood supply is severely reduced or stopped.
- The five links in the chain of survival are: recognition and action, CPR, defibrillation, advanced care, and post-arrest care.
- CPR consists of moving blood to the heart and brain by giving chest compressions and breathing oxygen into a victim's lungs.
- The signs of a severe airway obstruction include difficult breathing, weak and ineffective cough, inability to speak or breathe, and signs of cyanosis.

Vital Vocabulary

airway obstruction A blockage, often the result of a foreign body, in which air flow to the lungs is reduced or completely blocked.

cardiac arrest Stoppage of the heartbeat.

chain of survival A concept involving five critical links to help improve survival from cardiac arrest.

chest compressions Depressing the chest and allowing it to return to its normal position as part of CPR.

continuous compressions, resuscitation (CPR) The act of providing chest compressions and rescue breaths for a victim in cardiac arrest.

heart attack Death of a part of the heart muscle.

Assessment in Action

You are having dinner in a very crowded restaurant with your family on New Year's Eve. An elderly man is pushing a piano into the restaurant as part of the entertainment that evening. As he passes your table, he clutches his chest and falls to the floor. He is not moving.

Directions: Circle Yes if you agree with the statement; circle No if you disagree.

Yes No 1. If he is not breathing or is breathing abnormally, you should next call 9-1-1.

Yes No 2. The man must be choking since he is in a restaurant.

Yes No 3. Perform abdominal thrusts.

Yes No 4. Perform cycles of 30 chest compressions and 2 breaths.

Yes No 5. Check for breathing before giving any breaths to the victim.

Yes No 6. Continue CPR until an AED becomes available or EMS personnel arrive.

Check Your Knowledge

Directions: Circle Yes if you agree with the statement; circle No if you disagree.

Yes No 1. Gasping is not considered breathing.

Yes No 2. After you determine that an adult victim is unresponsive, the next step is for someone to call 9-1-1.

Yes No 3. Tilting the head back and lifting the chin helps move the tongue and open the airway.

Yes No 4. If you determine that a victim is not breathing, begin chest compressions.

Yes No 5. Do not start chest compressions until you have checked for a pulse.

Yes No 6. For all victims (adult, child, infant) needing CPR, give 30 compressions followed by two breaths.

Yes No 7. Use two fingers when performing CPR on an infant.

Yes No 8. A sign of choking is that the victim is unable to speak or cough.

Yes No 9. To give abdominal thrusts to a responsive choking victim, place your fist below the victim's navel.

Yes No 10. When giving abdominal thrusts to a responsive choking victim, repeat the thrusts until the object is removed or the victim becomes unresponsive.

Prep Kit End-of-chapter activities reinforce important concepts and improve comprehension.

Check Your Knowledge Questions quiz students on the chapter's core concepts.