

<b>COURSE:</b> Health	<b>GRADE:</b> 8 <sup>th</sup> Grade
<b>UNIT:</b> First Aid - Injuries and Sudden Illness	<b>TIMEFRAME:</b> 6 Lessons

<p><b>NATIONAL STANDARDS:</b></p> <p><b>STANDARD 1:</b> Students will comprehend concepts related to health promotion and disease prevention to enhance health.</p> <p><b>STANDARD 3:</b> Students will demonstrate the ability to access valid information and products and services to enhance health.</p> <p><b>STANDARD 4:</b> Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.</p> <p><b>STANDARD 5:</b> Students will demonstrate the ability to use decision-making skills to enhance skills.</p> <p><b>STANDARD 7:</b> Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.</p>
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<p><b>STATE STANDARDS:</b></p> <p><b>10.2. Healthful Living</b>  10.2.9.D. Analyze and apply a decision-making process to adolescent health and safety issues.</p> <p><b>10.3. Safety and Injury Prevention</b>  10.3.9.A. Analyze the role of individual responsibility for safe practices and injury prevention in the home, school and community.  10.3.9.B. Describe and apply strategies for emergency and long-term management of injuries.</p> <p><i>Reading Assessment Anchors:</i></p> <p><b>R8.A.2 Understand nonfiction appropriate to grade level.</b>  R8.A.2.1 Identify and apply the meaning of vocabulary in nonfiction.  R8.A.2.3 Make inferences, draw conclusions, and make generalizations based on text.  R8.A.2.4 Identify and explain main ideas and relevant details.</p> <p><b>R8.B.1 Interpret, compare, describe, analyze, and evaluate components within and between text.</b>  R8.B.3.2 Distinguish between essential and nonessential information within or across text.</p>
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<p><b>UNIT OBJECTIVES</b></p> <p>Students will demonstrate how to apply step-by-step care procedures to a victim.</p> <p>Students will analyze the emergency care of the victims' injuries.</p>	<p><b>CONTENT:</b></p> <p>I. Emergency Care of Injuries</p> <ul style="list-style-type: none"> <li>- <i>Bleeding and Wounds:</i> An injury resulting from a break in the skin or underlying tissue.</li> <li>- Types of wounds: <ul style="list-style-type: none"> <li>o <u>Open (external):</u> A break or tear in the skin and bleeding can be seen.</li> <li>o <u>Types of Open Wounds:</u></li> <li>o <u>Laceration:</u> A skin wound with jagged edges.</li> <li>o <u>Incision:</u> A skin wound with smooth edges.</li> <li>o <u>Puncture:</u> This is a stab wound from a pointed object.</li> <li>o <u>Avulsion:</u> A partial or complete tearing of a patch of skin or tissue.</li> </ul> </li> </ul>
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Students will evaluate the victim and provide proper treatment.

- Amputation: Involves the cutting or tearing off of a body part such as finger, toes, hands, feet, arms, or legs.
- Abrasion: Caused by skin that has been rubbed or scraped away.
- Types of External Bleeding
  - Arterial blood spurts from the wound. This is the most serious because blood is being pumped at a faster rate, leading to greater blood loss.
  - Venous blood flows or gushes. It is easier to control than arterial bleeding. Most veins collapse when cut.
  - Capillary bleeding: blood oozes from capillaries. This is the most common type of bleeding and is easily controlled.
- Care for *Minor* Open Wounds
  - Remember to protect yourself against disease by wearing disposable latex gloves. If disposable gloves are not available, use several layers of gauze pads, plastic wrap or bags, or have the victim apply pressure with his hand.
    - *Steps*:
      - Wash wound with soap and water
      - Dry wound
      - Apply sterile dressing
      - Wash your hands after care
- Care for *Major* Open Wounds
  - Do not disturb the clotting process by washing area or removing blood soaked gauze.
  - **REMEMBER**: Protect yourself against disease by wearing disposable latex gloves.
    - *Steps*:
      - Apply direct pressure by placing a clean covering such as a sterile dressing, over the wound.
      - Elevation of the injured area if you do not think the wound involves a broken bone.
      - Pressure Points if bleeding cannot be controlled. Arm is brachial pressure point, leg is femoral

pressure point.

- Apply a pressure bandage over the wound.

- Closed (internal): Injury involving underlying tissues without a break in the skin.
- *Internal Bleeding*: Occurs when skin is unbroken and blood is not seen. It can be difficult to detect and can be life-threatening.
  - o *What to look for*: These may take days to appear.
    - Bruise or contusion of the skin
    - Painful, tender, rigid, bruised abdomen
    - Fractured ribs or bruises on chest
    - Weakness, dizziness, and fainting
    - Rapid pulse
    - Cold, moist skin
    - Vomiting or coughing up blood
  - o *What to do*:
    - Check the ABC's of the victim.
    - Keep victim lying on his or her side to prevent vomiting, for drainage, and to protect lungs from inhaling the vomit.
    - Treat for shock by raising the victim's legs 8 to 12 inches.
    - Cover the victim with a coat or blanket to keep warm.
    - Seek medical attention immediately.
    - For bruises: Remember "RICE"
      - R = rest
      - I = ice
      - C = compression
      - E = elevation
- *Facts*:
  - o The average-sized adult has about six quarts of blood and can safely lose a pint during a blood donation. However, rapid blood loss of one quart or more can lead to shock and death.
  - o Bleeding is the loss of blood from arteries, capillaries, veins. May be external or internal.
- *Shock*: Refers to circulatory system failure, which happens when oxygenated blood is not provided in sufficient amounts for every

body part. Every injury affects the circulatory system to some degree, so you should automatically treat injured victims for shock.

- Symptoms
  - Restlessness, anxiety, weakness
  - Rapid breathing and pulse
  - Pale or bluish skin, nail beds, lips
  - Moist and clammy skin
  - Thirst
  - Nausea, vomiting
- Treatment
  - Have the victim lie down
  - Control any external bleeding
  - Maintain normal body temperature
  - Reassure the victim
  - Elevate the legs about 12 inches unless you suspect head, neck, or back injuries or possible broken bones involving the hips or legs.
  - Do not give the victim anything to eat or drink.
  - Call local emergency number right away.

- *Infection:* When an injury breaks the skin, the best initial defense against infection is to clean the area.

- For minor wounds, wash the area with soap and water. Most soaps are effective in removing harmful bacteria.
- You do not need to wash wounds that require medical attention because they involve more extensive tissue damage or bleeding. It is more important to control the bleeding.
- Symptoms:
  - The area around the wound becomes swollen and red.
  - The area may feel warm or throb with pain.
  - Some wounds may discharge pus.
  - A fever and a general ill feeling may develop.
  - Red streaks may develop that progress from the wound in the direction of the heart.
- Treatment:
  - Keep the area clean.
  - Soak the area in warm water.
  - Elevate the affected area.
  - Apply ointment such as Neosporin
  - Change the coverings over the

wound daily.

- o *West Nile Virus* Carried by mosquitoes.
  - Symptoms of West Nile Virus (if any): headache, sore throat, backache and fatigue.
  - No cure; only treatment for symptoms such as swelling of brain and bacterial pneumonia.
  - Prevention:
    - ▲ Apply insect repellent
    - ▲ Spray clothing with repellent; can get bit through clothes.
    - ▲ Wear long-sleeve shirts and long pants (weather permitting).
    - ▲ Consider staying indoors at dawn, dusk and early evening.
    - ▲ Install or repair window/door screens.
    - ▲ If fever or red streaks develop, seek medical help.
- *Burns*: A burn injures the skin and sometimes underlying tissue.
  - o Sources of burns:
    - Heat
    - Chemical
    - Electrical
    - Radiation
  - o Classification of Burns: The size of the area burned is an important factor for determining the seriousness of burns. Medical personnel often use the "Rule of Nines" to explain the percentage of body burned. In this plan specific areas of the body are given a certain percentage of total body area. To determine the extent of the body burned, the percentages are added. *Burns are also rated according to depth of tissue damage.*
    - 1st Degree: Involves only the epidermis, which may look red and be painful, as with sunburn for example.
    - 2nd Degree: The epidermis and dermis are affected, causing blisters from the fluid loss. Most second degree burns are painful, but very deep burns may be painless.
    - 3rd Degree: Involves all layers of

the skin and damages nerves and blood vessels. The skin appears pearly white or charred. Often, this burn is not painful because the nerves that relay pain messages have been destroyed. Third degree burns are usually accompanied by first and second degree burns in the surrounding areas.

- o Care for 1<sup>st</sup> & 2<sup>nd</sup> Degree Burns (no open blister):
  - Stop the burning. Put out flames or remove the victim from the source of the burn.
  - Cool the burn. Use large amounts of cool water to cool the burned area. Do not use ice or ice water other than on small superficial burns. Ice causes body heat loss. You can apply soaked towels, sheets, or other wet cloths to a burned face or other areas that cannot be immersed.
  - Cover the burn. Use dry, sterile dressings or a clean cloth. Loosely bandage them in place. Covering the burn helps keep out air and reduces pain.
- o Care for 2nd degree (open blisters) and 3rd degree burns:
  - Cover the burn. Use dry, sterile dressings or a clean cloth. Loosely bandage them in place.
  - Treat for shock by elevating the legs and keeping the victim warm with a clean sheet or blanket.
  - Seek medical help.
- o *Improper* Burn Care:
  - Do not apply ice directly to any burn unless it is very minor.
  - Do not touch a burn with anything except a clean covering.
  - Do not remove pieces of cloth that stick to the burned area.
  - Do not try to clean a severe burn.
  - Do not break blisters.
  - Do not use any kind of ointment on a severe burn.

- *Sprains vs. Strains:* Whether an injury is a sprain or a strain is often confusing.

- Sprain: A sprain is the partial or complete stretching or tearing of the special soft tissue bands that hold bones together at a joint.
- Strain: A strain is a stretching or tearing of muscles or the strong fibers that attach muscle to bone, called tendons.
  - *In short*, injuries to **joints** are usually **sprains**; injuries to the **soft tissue** between joints, the muscles and tendons, are **strains**.
- What to Look For:
  - Significant deformity
  - Bruising and swelling
  - Inability to use the affected part normally
  - Bone fragments sticking out of a wound
  - Victim feels bones grating; victim felt or heard snap or pop at the time of injury.
  - Injured area is cold and numb.
  - Extreme tenderness when the area is felt.
- What to do? Use the RICE procedures.
  - **R = rest** Victim should stop moving the injured part. Any injury heals faster if rested.
  - **I = ice** An ice pack should be applied to the injured area for 20 to 30 minutes every 2 to 3 hours during the first 24 to 48 hours. After removing an ice pack, keep the part compressed with an elastic bandage and elevated.
  - **C = compression** Start the elastic bandage several inches below the injury and wrap in an upward, overlapping spiral, starting with even and somewhat tight pressure, then gradually wrapping looser above the injury.
  - **E = elevation** Elevating the injured area in, combination with ice and compression limits the circulation to that area, helping to limit internal bleeding and minimize swelling. Do not elevate an extremity if a fracture is suspected until it has been stabilized with a splint. Even then, some fractures should not be elevated.

- Splinting:
  - o Only used if the victim must be moved or transported by someone other than emergency medical personnel.
  - o Only if you can do it without causing more pain and discomfort to the victim.
  - o Splint an injury in the position you find it.
  - o Splint the injured area and the joints above and below the injury.
  - o Check for proper circulation before and after splinting.
  
- *Sudden Illness:*
  - o Symptoms
    - feeling light-headed
    - dizzy
    - confused
    - weak
    - changes in skin color (pale or flushed skin)
    - sweating
    - nausea or vomiting
    - diarrhea
  - o Sudden Illness may also include:
    - Changes in consciousness
    - Seizure
    - Paralysis or inability to move
    - Slurred speech
    - Difficulty seeing
    - Severe headache
    - Breathing difficulty
    - Persistent pressure or pain
  - o Care for any Life Threatening Condition  
First, then:
    - Help the victim rest comfortably
    - Keep the victim from getting chilled or overheated
    - Reassure the victim
    - Watch for changes in consciousness and breathing.
    - Do not give anything to eat or drink unless the victim is fully conscious.
  - o Care for Specific Sudden Illnesses
    - Vomiting: Place the victim on his or her side.
    - Fainting: Position the victim on their back and elevate the legs 8 to 10 inches if you do not suspect a head or back injury.
    - Diabetic Emergency: Give the victim some form of sugar
    - Seizure: Do not hold or restrain the person or place anything between the victim's teeth.

	<p>Remove any nearby objects that might cause injury. Cushion the victim's head using folded clothing or a small pillow.</p> <ul style="list-style-type: none"> <li>▪ <u>Poisoning</u>: Call your local emergency number or the <i>Poison Control Center</i>. Follow their directions.</li> <li>▪ <u>Heat-Related Illness</u>: Move the victim to a cool place. Elevate legs 8 to 12 inches. Sponge with cool water and fan. Give cold water mixed with salt. If no improvement, seek medical attention.</li> <li>▪ <u>Cold-Related Illness</u>: Get the victim out of the cold and move to a warm place. Remove clothing that could impair circulation or is wet. Add insulation beneath and around victim. Maintain in a horizontal position. Seek medical help. Give nothing to drink.</li> </ul>
<p><b>ACTIVITIES</b></p> <p><i>Videos:</i>  “Introduction to First Aid Section” , American Red Cross Community CPR Video</p> <p>“Bleeding Section” , American Red cross Community CPR Video</p> <p><i>Handout:</i>  Definitions of Wounds and Types of external bleeding</p> <p><i>Worksheet:</i>  Blood and Disease Transmission</p> <p><i>Skill Sheet:</i>  American Red cross, Control of Bleeding”</p> <p>Teacher/student discussion on how to prevent and care for infection</p> <p><i>Worksheets:</i>  Type, Signs, Treatments of Burns, Sources of Burns</p> <p>Sprains vs. Strains  Rice to the Rescue for Minor Burns</p> <p><i>Video:</i>  “Splinting and Sudden Illness Section” , American</p>	<p><b>ASSESSMENTS</b></p> <p>Teacher/peers score group presentations on chosen sudden illnesses with a teacher designed rubric.</p> <p>Students will analyze types of wounds and describe proper care for the injury through role play or teacher provided scenarios.</p> <p>Students will peer evaluate each group’s sudden illness board game according to assignment criteria.</p> <p>Students will design a brochure for injuries and sudden illness with step-by-step care procedures.</p> <p><b>REMEDIATION</b></p> <p>Teacher shows students’ example of previously completed projects.</p> <p>Allow students more time to complete the projects.</p> <p><b>ENRICHMENT</b></p> <p>For extra-credit, students may create a board game on their own.  Students may display their project(s) during the “Night of Excellence”.</p>

<p>Red Cross Community CPR Video</p> <p><i>Worksheet:</i> Signals of Sudden Illness (Self-Management)</p> <p><i>Jigsaw:</i> In groups, students research then present information on a chosen sudden illness to the rest of the class (may also be done as a research group project) (Accessing Information)</p> <p><i>Teacher directed differentiated instructional projects and activities are ongoing and based on student need.</i></p> <p><b>RESOURCES:</b> <i>American Red Cross</i> Retrieved on June 22, 2006 from: <a href="http://www.redcross.org/services/hss/resources/">http://www.redcross.org/services/hss/resources/</a></p> <p><i>American Heart Association</i> Retrieved on June 22, 2006 from: <a href="http://www.americanheart.org/presenter.jhtml?identifier=3002913">http://www.americanheart.org/presenter.jhtml?identifier=3002913</a></p> <p><i>West Nile Virus: Question and Answer (2005)</i> Retrieved on June 21, 2006 from: <a href="http://www.cdc.gov/NCIDOD/DVBID/WESTNILE/qa/prevention/html">http://www.cdc.gov/NCIDOD/DVBID/WESTNILE/qa/prevention/html</a></p>	<p>Students can do projects on more in depth sudden illnesses.</p> <p>Write up their own first aid scene and the actions they would take to provide care for the injured.</p>
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