Digestion Nutrition And SAFETY

Part 3: Safety

An NAD S.M.A.R.T. Unit

By Rebecca K. Fraker and Kim Kaiser

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Essential Learning Elements

STRAND 5: HEALTH

Cycle: 2 Lower

SUB-TOPIC: Reducing Health Risks
Focus: Public Safety **Pacing: 2 days**

ESSENTIAL LEARNING ELEMENTS:

Identify safety hazards and ways to prevent injuries/accidents (K, 1st, 2nd)

LEARNING POINTS:

1. Identify safe practices at home, school and play
2. Demonstrate fire safety rules
3. Demonstrate safe precautions with regard to extreme weather
4. Demonstrate safe practices for motor vehicles
5. Demonstrate safe practices for pedestrians
6. Demonstrate safe practices when dealing with strangers
7. Understand that it is all right to say no to inappropriate behavior

SPIRITUAL APPLICATIONS:

Romans 13: 1-7

RESOURCES:

Scott Foresman Science, '03
– Gr. 1, Unit D, Ch. 3
– Gr. 3, Unit D, Ch. 3

ASSESSMENT/INSTRUCTIONAL IDEAS:

1. Develop awareness for Internet safety.
2. Organize a school or church wide poster contest on public safety.
3. Graph safe versus unsafe public safety practices.
4. Conduct a survey to determine how frequently your classmates wear bicycle helmets.
5. Gather pamphlets from local law enforcement offices, transportation centers, etc.

STRAND 5: HEALTH

Cycle: 2 Lower

SUB-TOPIC: Reducing Health Risks
Focus: Recreational Safety **Pacing: 3 days**

ESSENTIAL LEARNING ELEMENTS:

Identify safety procedures for natural disasters (3rd, 4th)

LEARNING POINTS:

1. Identify rules for safety in and around water
2. Identify safe camping practices
3. Identify rules for safe hiking
4. Demonstrate safe practices when riding a bicycle
5. Demonstrate and practice appropriate behaviors for contact with the sun
6. Identify common natural disasters
7. Analyze reasons for Seventh-day Adventist involvement in disaster relief

SPIRITUAL APPLICATIONS:

Understand the concept that God created human beings with the ability to think and act in a safe way.

RESOURCES:

Scott Foresman Science, '03
- Gr. 1, Unit C, Ch. 2
- Gr. 1, Unit D, Ch. 3
- Gr. 2, Unit C, Ch. 2
- Gr. 3, Unit C, Ch. 4
- Gr. 3, Unit D, Ch. 2
- Gr. 4, Unit C, Ch. 1

ASSESSMENT/INSTRUCTIONAL IDEAS:

Make a list of ""What if…" questions and explore multiple possible answers or explanations.

STRAND 5: HEALTH

Cycle: 2 Lower

SUB-TOPIC: Careers and Service

Pacing: 1 day

ESSENTIAL LEARNING ELEMENTS:

Investigate careers and service opportunities related to health

LEARNING POINTS:

1. List health careers
2. Provide opportunity for exposure to careers in the health sciences

SPIRITUAL APPLICATIONS:

Testimonies, Vol. 7 – p. 132

RESOURCES:

Scott Foresman Science, '03
There are no specific references for these objectives. See *Discover God's Creation,* p. 392.

ASSESSMENT/INSTRUCTIONAL IDEAS:

1. Invite a doctor or nurse to talk about good health and safety.
2. Invite a firefighter or police officer to discuss emergency situations and safety practices.

STRAND 5: HEALTH

Cycle: 2 Upper

SUB-TOPIC: Health Information, Products, and Services
Focus: Safety/First Aid **Pacing: 3 days**

ESSENTIAL LEARNING ELEMENTS:

Explain the appropriate first aid procedures to follow in emergencies (5th, 6th)

LEARNING POINTS:

1. Define first aid
2. Explain why some emergency procedures should not be attempted without training
3. Identify ways of responding to medical emergencies
4. Explain why some injuries should be given priority
5. Describe first aid procedures for blocked air passage, bleeding, poisoning, and shock
6. Describe the Heimlich maneuver
7. Describe first aid treatment for burns, fractures, concussion, fainting, insect bites or stings, snake bite, seizures, and eye injury
8. Describe first aid procedures for the effects of extreme temperatures

RESOURCES & INSTRUCTIONAL IDEAS:

1. *Discover God's Creation* – Ch. 20, p. 373-391
2. Demonstrate skill mastery for the first aid procedures and treatments listed in the objectives.

SPIRITUAL APPLICATIONS:

1. Numbers 21:6-9
2. II Kings 4:32-37
3. Luke 22:49-51

NAD ESSENTIAL UPDATE:

- Spongebob ™ in the Lab
- CPR Techniques (Updated)
- DE: Safety and First Aid
- DE: First Response: Head, Spinal and Bone Injuries
- GO: Heimlich maneuver on oneself

STRAND 5: HEALTH

Cycle: 2 Upper

SUB-TOPIC: Careers and Service

Pacing: 1 day

ESSENTIAL LEARNING ELEMENTS:

Investigate careers and service opportunities related to health

LEARNING POINTS:

1. Define health science
2. Explain the importance of health science
3. Identify branches of health science
4. List the health careers
5. Explore careers in the health services
6. Critique racial and gender biases as they relate to health science careers

SPIRITUAL APPLICATIONS:

Matthew 25:32-46

RESOURCES & INSTRUCTIONAL IDEAS:

1. *Discover God's Creation* – p. 392-393
2. Explore careers relating to nutrition/weight and safety.

NAD ESSENTIAL UPDATE:

Day 9 First Aid

Objectives

Lower grades: define first aid; explain why some emergency procedures should not be attempted without training.

Upper grades: define first aid; explain why some emergency procedures should not be attempted without training; identify ways of responding to medical emergencies;

Materials needed

Lower grades: chalk board or chart paper for recording student ideas; injury cards; copies of the activity book, *What to Do in an Emergency*, available inexpensively from www.positivepromotions.com/ (optional)

Upper grades: copies of the first aid quiz, one per student; copies of the Pathfinder first aid honor requirements (basic for 5th and 6th graders; standard for 7th and 8th graders)

Review/Introduction

Use a cooperative structure to review previously taught skills and concepts.

Read the following questions to all students and have them indicate whether they believe the statement is true (thumbs up) or false (thumbs down), but don't tell students the correct answers.

- First aid refers to treatment given to serious injuries. (F)
- In many emergencies knowing what not to do is just as important as knowing what to do. (T)
- The most important thing to do in an emergency is to call a doctor immediately. (F)
- If someone has stopped breathing, it is important to start CPR. (F)
- A compound fracture is a life-threatening injury. (F)
- A victim should be moved away from the scene of an accident. (F)
- Most students can correctly do CPR after watching paramedics demonstrate the procedure. (F)
- Artificial respiration involves breathing for the individual by blowing air into his or her lungs. (T)
- Only those seriously injured should be treated for shock. (F)
- The most important thing to do in an emergency is to stay calm. (T)

Explain to upper grade students that they will be taking the same quiz after they read the assignment and that it will graded.

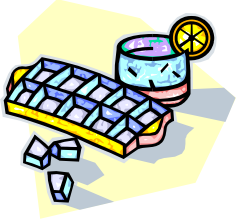
Procedure

Have upper grade students read pages 374-376 in *Discover God's Creation* and take the accompanying quiz. Then have them begin work on the Pathfinder first aid honor at the appropriate grade or ability level (first aid, basic for fifth and sixth graders; first aid, standard for seventh and eighth graders). The information for Basic First Aid can be found near the end of this unit.

Meanwhile, have lower grade students brainstorm a list of accidents resulting in injuries and record this list on the chalkboard or chart paper. Explain that first aid is what needs to be done first when a person has been injured. For each injury listed on the board or chart paper, discuss first aid for minor injuries which a lower grade student might help to provide (usually an ice pack, ointment or Bandaid). Explain that if a person is not properly trained s/he might cause further injury to the injured person. Shuffle the accompanying injury cards, place them face down and have students in turn reveal the top card. Discuss whether this is an injury they are skilled to help provide first aid for. Sort the cards into two piles, identified as minor injuries and serious injuries. Incorporate the activity book *What to Do in an Emergency* as deemed appropriate.

Evaluation

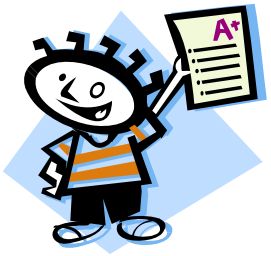
Evaluate lower grade students based on their participation in the discussion and activities. Evaluate students based on their completed assignments including the written quiz.



Injury Cards

Knee scraped on pavement	Finger pinched in car door	Arm burned on oven door
Heads banged in gym	Tooth knocked against jungle gym	Heart attack
Electrocution	Snake bite	Wild animal bite
Broken arm	Deep cut with knife	Baby swallowed poison
Hit by a car	Bit by a dog	Choking

Name _____



What Do You Know?

Write T following the statement to indicate that it is true or F following the statement to indicate that it is false.

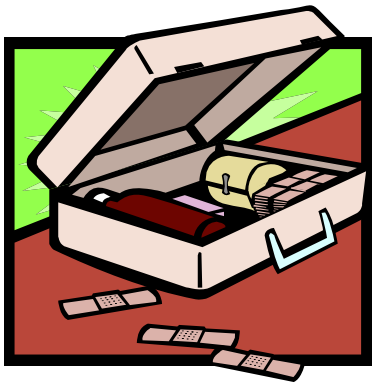
1. First aid refers to treatment given to serious injuries. _____
2. In many emergencies knowing what not to do is just as important as knowing what to do. _____
3. The most important thing to do in an emergency is to call a doctor immediately. _____
4. If someone has stopped breathing, it is important to start CPR. _____
5. A compound fracture is a life-threatening injury. _____
6. A victim should be moved away from the scene of an accident. _____
7. Most students can correctly do CPR after watching paramedics demonstrate the procedure. _____
8. Artificial respiration involves breathing for the individual by blowing air into his or her lungs. _____
9. Only those seriously injured should be treated for shock. _____
10. The most important thing to do in an emergency is to stay calm. _____

Day 10 First Aid

Objectives

Lower grades: understand procedures to follow in case of an emergency; identify the appropriate first aid procedures for minor injuries; describe first aid procedures for the effects of extreme temperatures.

Upper grades: explain why some injuries should be treated before others; describe first aid procedures for blocked air passages, bleeding, poisoning, and shock; describe the Heimlich maneuver.



Materials needed

Lower grades: copy of the accompanying "poster" listing 5 steps to take in an emergency; paper for illustrating concepts; copies of the activity book, *What to Do in an Emergency*, available inexpensively from www.positivepromotions.com/ (optional)

Upper grades: copies of Pathfinder first aid honor requirements

Both: Consider inviting a medical professional or Red Cross representative to teach updated procedures for choking or other first aid situations;

Review/Introduction

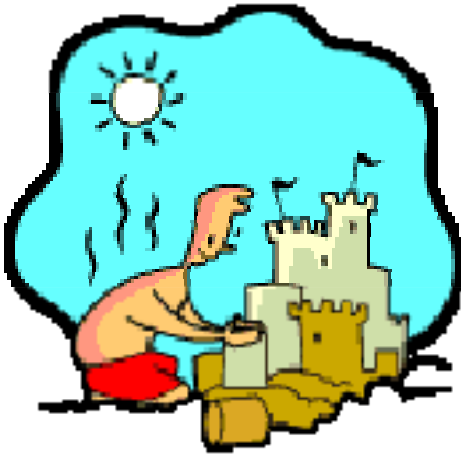
Use a cooperative structure to review previously taught terms and concepts.

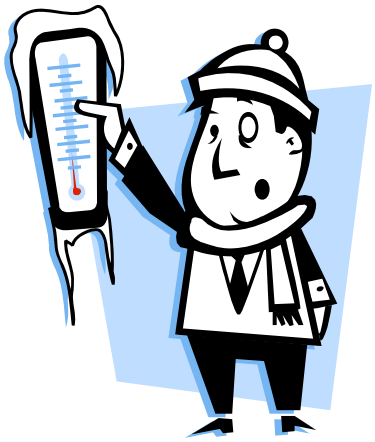
Ask students what it means to choke (food or other object gets stuck in breathing passage and it may be difficult or impossible to breathe). Ask if anyone has experienced this. Demonstrate for students the procedure which should be followed in such a situation being sure to include the first step of blows to the back.

Procedure

Have upper grade students read pages 378-381 in *Discover God's Creation* and then continue to work on the Pathfinder first aid honor at the appropriate grade or ability level.

Discuss how to respond to emergencies involving extreme temperatures. (For extreme heat, move the victim to a cool area, have him or her lie down and raise his/her legs and head, remove extra clothing, rinse the person with cool water, get medical help. For extreme cold, do not put the person in a hot shower or bath; replace wet clothes with dry ones or blankets; give the person warm, not hot, liquids to drink; if you can't go indoors, put the person in a sleeping bag, blanket or coat.) Display the accompanying "poster" describing five responses to emergencies. Have students practice these steps through role modeling. Have students work together to create posters illustrating each of these concepts as well as how to respond to the effects of extreme temperatures. It may be helpful to provide pages with one concept on each page and then have students choose the concept they will illustrate. Incorporate the activity book *What to Do in an Emergency* as deemed appropriate.





Evaluation

Evaluate lower grade students based on their ability to role model responses to emergencies and on their completed assignment. Evaluate upper grade students based on their completed assignments.

Emergency Response

*STAY CALM

*DO NOT MOVE THE VICTIM

*TRY TO MAKE THE VICTIM COMFORTABLE

*CALL 9-1-1

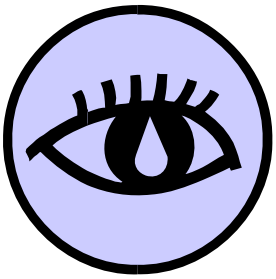
*TRY TO KEEP THE VICTIM CALM

Day 11 Using 911 / Common Hazards at Home

Objectives

Lower grades: demonstrate how to use 911 for emergency help; understand that medicines should not be taken without adult supervision; identify common hazards at home.

Upper grades: describe first aid treatment for burns, fractures, concussion, fainting, insect bites or stings, snake bite, seizures, and eye injury; describe first aid procedures for the effects of extreme temperature.



Materials needed

Lower grades: a disconnected telephone; copies of the activity book *What to Do in an Emergency*, available inexpensively from www.positivepromotions.com/ (optional)

Upper grades: copies of the Pathfinder first aid honor requirements

Both: eye cup, larger container, water;

Review/Introduction

Have lower grade students teach upper grade students the first aid responses to the effects of extreme temperatures.

Have students list common things that can get into the eye and injure it. Explain that if something gets into the eye it should be flooded with water. If it does not wash out, a clean tissue or soft cloth can be used to lift it out. If neither of these suggestions work, the eye should be covered with a soft cloth and the person taken to a doctor. Use the eyecup to demonstrate how to flood the eye with water. Use the larger container to demonstrate the same. (adapted from *Discover God's Creation* TE p. 382)

Procedure

Have **upper grade** students read pages 382-387 in *Discover God's Creation* and continue working on their Pathfinder first aid honor at the appropriate grade or ability level.

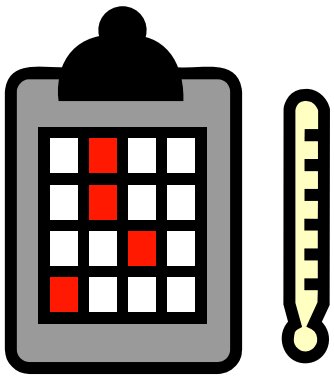
Meanwhile explain to **lower grade** students the principles for using 9-1-1 as described on the website http://www.york.ca/kidszone/911.htm "911 for Kids". Ask students to suggest a situation which requires the use of 9-1-1 and then model the steps for doing so. Ask for a volunteer who thinks he or she knows how to do it. Have the group suggest another situation requiring 9-1-1 and allow the student to try the procedure. Have the group describe what things the volunteer did well and make suggestions for anything which needs to be done differently. Include among the situations one in which a child takes medicine without an adult's assistance. Explain that this is a dangerous thing to do and often leads to poisoning. Review school policies with regard to students having medications in their possession. Incorporate the activity book *What to Do in an Emergency* as deemed appropriate.

Evaluation

Evaluate lower grade students based on their ability to role play the procedure for using 9-1-1 to report an emergency. Evaluate upper grade students based on their completed assignments.

Homework

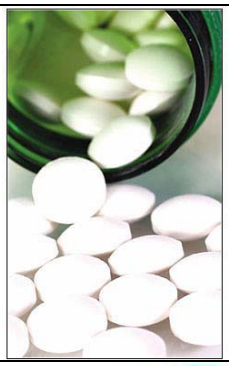
Have lower grade students look for hazards at home and record them on the accompanying worksheet.

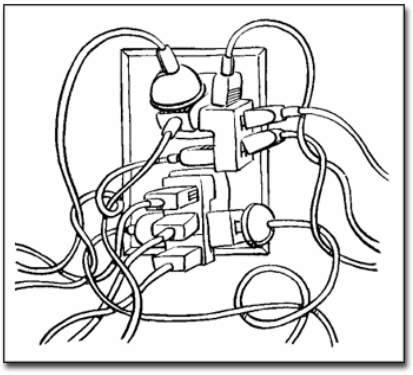


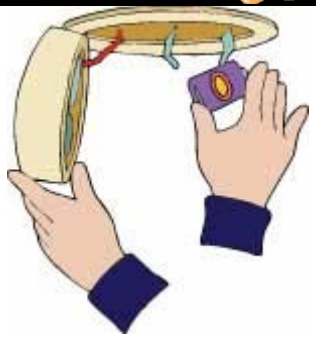
Dangers Around Home

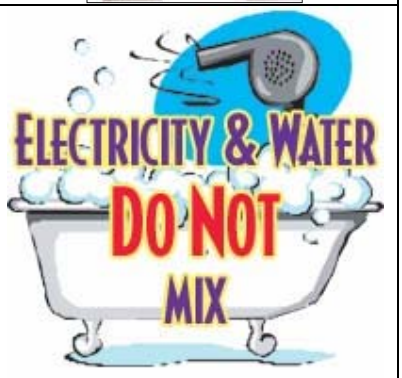
Name _____

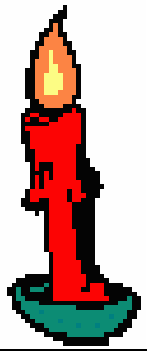
Circle any of the following dangers you see in your home. Talk to an adult about fixing the problems.

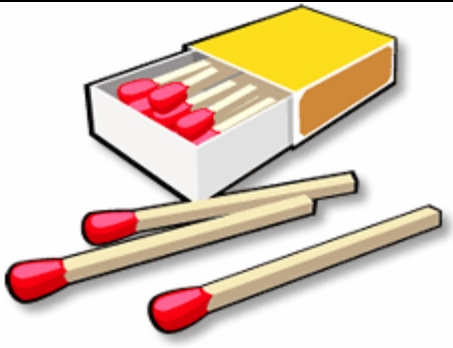












Other

Day 12 Fire and Weather Safety

Objectives

Lower grades: identify safe practices at home, school and play; demonstrate fire safety rules; demonstrate safe precautions with regard to extreme weather; demonstrate safe practices for motor vehicles; demonstrate safe practices for pedestrians.

Upper grades: identify major causes of accidental death; describe ways of preventing falls; describe how to prevent injuries caused by fire; identify ways of preventing suffocation.

Materials needed

Upper grades: copies of the Pathfinder first aid honor requirements

Both: floor tile, chair, cup of water, extension cord, ladder.

Review/Introduction

Use a cooperative structure to review previously taught terms and concepts.

Display the tile, chair, cup of water, extension cord and ladder. Ask students what all of these items have in common (they are found at home) and what danger do they pose (they are responsible for people falling). Explain that falls are the most common accidents that occur at home. Discuss how each of the items can contribute to a fall. (Adapted from *Discover God's Creation* TE p. 350).

Procedure

Have **upper grade** students read *Discover God's Creation*, pages 350-354. Have them continue to work on the Pathfinder first aid honor at the appropriate grade or ability level.

Meanwhile, have **lower grade** students share their findings from the homework assignment for day 11. Have them take a brief tour around the school facility looking for safety hazards. They should discuss how to correct these situations and should take action where appropriate. Include a discussion of playground, fire and street safety.

Home work

Have upper grade students complete "Try This 19-1" found on page 350 of *Discover God's Creation*.

Parent Homework

For the last several days, your child has been learning the importance of fire safety. Now I'd like to ask you to do your part. Please go to www.firefacts.org, select the "Parent" tab, then click on the "Parent Homework" link. It only takes a few minutes. When you're finished, you'll know how to make your home more fire safe, and understand how to teach your family what to do in the event of a fire in your home. When you're finished, remember to print the page showing that you completed your *homework*.

Due date: _____

Model of Fire Engine

Cutout Model of Engine 18

Instructions

1) Fold paper along fold lines
2) Cut out engine (make sure to include tabs)
3) Fold tabs under
4) Glue or tape tabs to attach sides

Junior Fire Marshal Certificate

USFA Kids
U.S. Fire Administration for Kids
www.usfa.dhs.gov/kids

JR. FIRE MARSHAL CERTIFICATE

JR. FIRE MARSHAL

Be it acknowledged that

_____
CHILD'S NAME

has successfully completed the
U.S. Fire Administration Jr. Fire Marshal Quiz
and has proven to be better prepared and
more knowledgeable about how to help prevent fires.

On this day, _____
DATE

Kelvin J. Cochran
Fire Administrator

JR. FIRE MARSHAL

Day 13 General Safety Topics

Objectives

Lower grades: identify symbols used for poisonous substances; identify rules for safety in and around water; identify safe camping practices; identify rules for safe hiking; demonstrate safe practices when riding a bicycle; demonstrate and practice appropriate behaviors for contact with the sun.
Upper grades: identify household poisons; describe ways of preventing poisoning; describe gun safety; explain how to be safe when involved in recreational activities.

Materials Needed

Lower grades: posterboard or large sheets of paper, markers
Both: copy of poison symbol (below)

Introduction/Review

Have upper grade students review with lower grade students what they learned previously about poison prevention. Show students the warning symbol for poisons and discuss items which are poisonous.

Note from Rebecca Fraker: Some years ago my little niece, Kyla, drowned in a pool accident. She somehow got out of the house (we think through a doggy door) while her mother was distracted. She was not quite two years old. We don't know if she fell in or jumped in as she was used to do when her family was in the pool together. In honor of her, I have enclosed some water safety tips in the hopes of perhaps preventing one tragedy.

- IF YOUR CHILD IS MISSING, LOOK IN THE POOL FIRST !!
- Never leave your children alone in or near the pool, even for a moment.
- You must put up a fence to separate your house from the pool. Most young children who drown in pools wander out of the house and fall into the pool. Install a fence at least 4 feet high around all 4 sides of the pool. This fence will completely separate the pool from the house and play area of the yard. Use gates that self-close and self-latch, with latches higher than your children's reach.
- Keep rescue equipment (such as a shepherd's hook or life preserver) and a telephone by the pool.
- Remove all toys from the pool after use so children aren't tempted to reach for them.

- After the children are done swimming, secure the pool so they can't get back into it. Have "layers of protection": locked doors, fences and gates, pool alarms. **Just because your child can swim DOES NOT mean your child is safe in water!**

An accessible pool is more dangerous for your toddler than a loaded gun lying out on your coffee table. If a gun goes off, there is a chance that the bullet will not strike the child. The outcome with a toddler falling into a pool undetected is almost certain death.

Drowning is the number one cause of death for children under age five in Florida, Arizona, and California. In over another dozen states, it has a ranking of number two. In the nation overall, it ranks as the number two killer. For every drowning, there are at least eleven other near drownings. Many of these children suffer totally disabling brain damage.

The great majority of these parents were responsible people who never could have imagined that it could happen in their families. They were careful and had close supervision over their children.

If drowning were a disease it truly would be referred to as an epidemic with all the public attention and awareness possible focused on an epidemic of such proportion.

A STUDY OF HOW IT HAPPENS

A study conducted by the U.S. Consumer Product Safety Commission to find out how child drowning incidents occur indicates that SUPERVISION CAN AND DOES FAIL.

Findings of this study:

Who was in charge of supervision at the time of drowning?

- 69 percent of the accidents occurred while one or both parents were responsible for supervision.
- 10 percent were adults other than the parents.
- 14 percent were sitters.
- 7 percent siblings

What was the location of the pool drowning?

- 65 percent were in a pool owned by the child's family.
- 22 percent at a relative's
- 11 percent happened at a neighbor's.

Drowning happens quickly and without warning. There is no cry for help.

77 percent of the children had been seen 5 minutes or less before being missed and subsequently discovered in the pool.

Where were they last seen?

- 46 percent WERE LAST SEEN IN THE HOUSE prior to being found in the pool. Of these, 15 percent were thought to be sleeping.
- 23 percent were last seen in the yard, porch or patio, not in the pool area. ***That's a total of 69 percent that were thought not to be in the pool area.***
- 31 percent were last seen in the pool or pool area.

What activity was the person responsible for supervision involved in at the time of drowning?

- 39 percent were doing chores.
- 18 percent socializing.
- 9 percent were busy on the telephone.

The suddenness of this type of accident and the results it yields are devastating to anyone it touches. When you think *pool*, think hard core. Even if this is not your personality, you must be an absolute dictator. Let your children know that rebellion against the safety rules shuts the pool down.

THERE CAN BE NO COMPROMISE ON POOL SAFETY. YOU ARE DEALING, LITERALLY, WITH A LIFE AND DEATH SITUATION.

Procedure

Assign one of the following safety topics to small mixed age groups: water safety, camping safety, hiking safety, bicycle safety, sun safety. Have the students brainstorm a list of safety rules for the assigned topic. Rotate through groups to add, as necessary, to the lists of safety rules. Once the list of rules have been made have upper grade students complete their work on the first aid honor while lower grade students produce a poster which lists and illustrates the relevant safety rules.

Evaluation

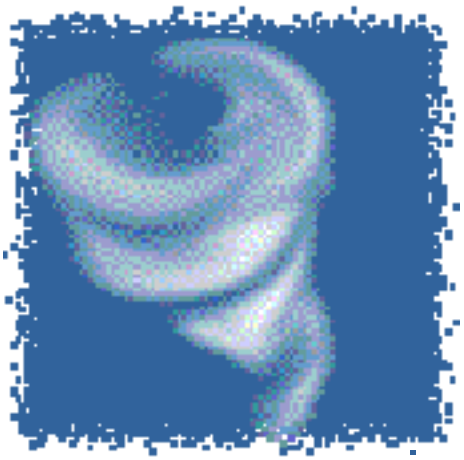
Evaluate lower grade students based on their completed posters using the accompanying rubric.

Evaluate upper grade students based on their complete first aid honor.

Poison Symbols

Day 14 Natural Disasters

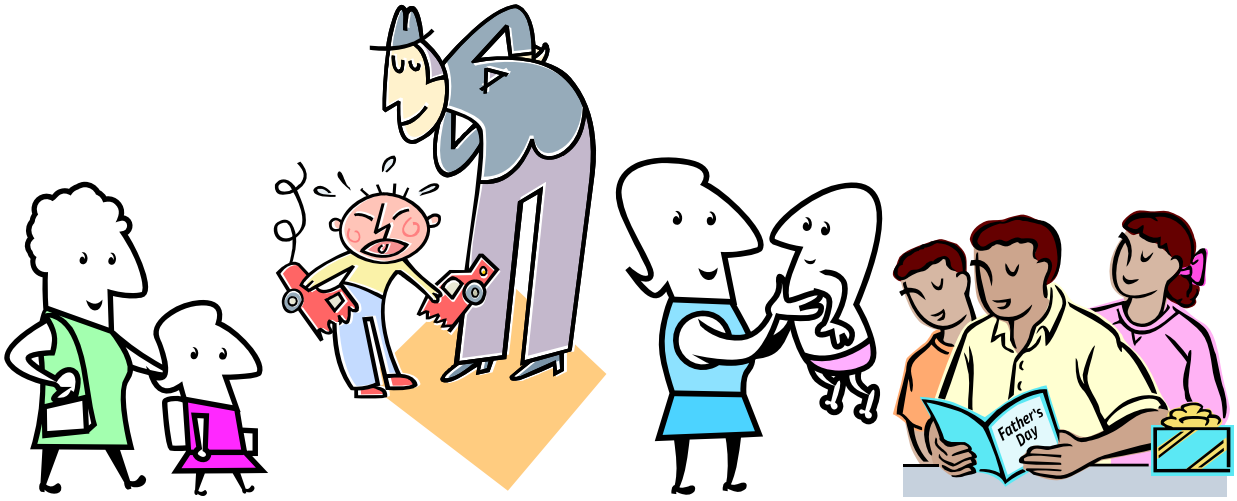
Objectives



Lower grades: identify common natural disasters; identify appropriate safety procedures to prepare for disasters; identify organizations involved in disaster relief; analyze reasons for Seventh-day Adventist involvement in disaster relief.

Upper grades: identify common natural disasters; identify appropriate safety procedures to prepare for disasters; identify organizations involved in disaster relief; analyze reasons for Seventh-day Adventist involvement in disaster relief.

NOTE: **The objectives stated above were covered in the geology unit so they will not be addressed again here. If you did not use the geology unit then lesson plans should be prepared to cover these objectives; otherwise use this day to complete unfinished assignments or to begin the subsequent lessons using the *Gently Leading* curriculum.**



Day 14-18 Abuse and Inappropriate Behavior

Objectives

Lower grades: demonstrate safe practices when dealing with strangers; understand that it is all right to say no to inappropriate behavior.
Upper grades: demonstrate safe practices when dealing with strangers; understand that it is all right to say no to inappropriate behavior.

Materials Needed

Both: Gently Leading Sexual Abuse Prevention lesson plan guide available inexpensively from:

Florida Conference Office of Education
P. O. Box 2626
Winter Park, FL 32790

Phone: 407-644-5000
FAX: 407-644-7550

The materials include an in-service video which should be viewed before providing the instruction. The unit is intended for grades 1-4. In the one room classroom, it is suggested that older students who have not previously received the instruction be included.

Internet Safety Resources

Unfortunately, with the coming of the internet, dangers to children have increased alarmingly. Too many children have access to an unsupervised computer. This makes it easy for predators to come right into the home.

The following websites give information to help combat this problem:

http://www.teenangels.org/
work with safety on the internet

http://www.wiredsafety.org/youth.html
largest and oldest safety site for on line activities

http://www.missingkids.com/
many tips and quizzes.

http://www.missingkids.com/missingkids/servlet/PageServlet?LanguageCountry=en_US&PageId=714
horribly long address, but from missing and exploited children site

Resources For Fire Safety

Firesafety.gov (www.firesafety.gov/kids/flash.shtm)Home safety, Fire escape, Coloring, Games, Puzzles

Sparky the Fire Dog (www.sparky.gov/) Games, Arcade, Questions, Family, News flash

Sprout Online (www.sproutonline.com/SPROUT/Originals/FireSafety.aspx) Video Safety Tips, Activates, Fireman Sam

Safe T. Bear's Firehouse (www.safetbear.com/) Learning, Games, Fun Stuff Photos, Poster contest

Smokey Kids (www.smokeybear.com) Games, Facts, Stories, and research for older folks as well

Survive Alive (www.survivealive.org/main.html) Fire and Life Safety, Kids Club

PBS Kids (http://pbskids.org/arthur/firesafety/index.html) Fire Safety Tips, Games with Arthur

McGruff.org (www.mcgruff.org/Advice/fire_safe.php) Games, Stories, Meet McGruff

http://www.firefacts.org/teaching.htm teacher center

http://www.firesafetyforkids.org/ has nice games

http://www.sparky.org/ really neat site for games

http://www.usfa.dhs.gov/kids/flash.shtm
United States Fire Administration site
Can become a Junior Fire Marshal with certificate

Resources for Water and General Safety

USFA Parents Info about Smoke alarms, Escape planning, and Fire service

Kids Health Fire prevention Tips, Teaching children, House Tips

Firesafety.gov Home Safety, Lesson Plans, Safety Drills

Family Education Activities center, Message boards, Safety tips

Home Safety Council Tips, Checklist, Escape Planning

About.com Fire safety lessons, Tips, Holiday safety

http://www.aap.org/family/tipppool.htm Pool and water safety tips

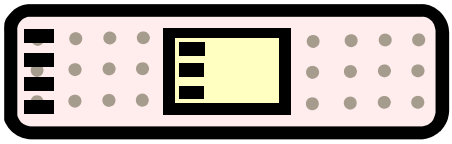
http://www.usa.safekids.org/water/ lots of prevention advice

Child Care Aware Fire Safety Habits, Tips, Prevention

My Child Safety Statistics, Tips and rules, Resources

Staying Alive Home escape Plan, Household safety, Fire safety checklist

Basic First Aid Pathfinder Honor Requirements And Answer Key



This material has come primarily from Wikibooks, and has been reformatted, highlighted, and illustrated by Rebecca K. Fraker.

Adventist Youth Honors Answer Book/Health and Science/First Aid, Basic

From Wikibooks, the open-content textbooks collection

First Aid, Basic		
Health and Science General Conference	Skill Level 1	
	Year of Introduction: 1951	

The First Aid, Basic Honor is a component of the Health Master Award.

Note: The red oval on the patch designates "basic" level.

If residing in the United States or another country where Red Cross instruction is given, satisfactorily pass the Red Cross Examination in Basic First Aid and receive your certificate. In British countries, pass the examination in St. John Ambulance and receive certificate for the same. Or complete the following requirements:

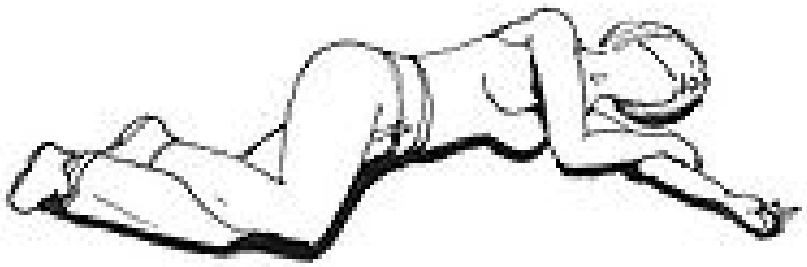
1. Know the causes of shock and demonstrate its proper treatment.

Shock is a medical condition where the delivery of oxygen and nutrients is insufficient to meet the body's needs. The main carrier of oxygen and nutrients in the body is the blood, so any time there is a loss of blood, there is a risk of shock. Shock is a life-threatening emergency.

First aid treatment of shock includes:

- Immediate reassurance and comforting the victim if conscious.
- If alone, go for help. If not, send someone to go for help and someone stay with the victim.
- Ensure that the airway is clear and assess breathing. Place the victim in the recovery position if possible.
- Attempt to stem any obvious bleeding.
- Cover the victim with a blanket or jacket, but not too thick or it may cause a dangerous drop in blood pressure.
- Do not give a drink; moisten lips if requested.
- Prepare for cardiopulmonary resuscitation (CPR).
- Give as much information as possible when the ambulance arrives.

Recovery position



2. Know the proper steps for rescue breathing.

Rescue Breathing. The head of the patient is tilted backward. The rescuer closes the nose with one hand, while pushing the chin downward with the other hand to keep the patient's mouth open.

- If the patient is breathing, do not administer rescue breathing. Rescue breathing is an emergency treatment that may help the victim regain the ability to breathe on his own.
- Tilt the victim's head back, and lift the chin (head-tilt chin-lift). The head will not remain in this position by itself; you must maintain the head-tilt chin-lift throughout.

  In certain cases, you may not be able to give rescue breaths through the mouth - blow into the nose and seal the mouth instead.

- Pinch the victim's nose
- Put your mouth on the mouth of the victim, maintaining a good seal, and blow into the mouth. These breaths should be gentle and last no longer than 2 seconds to prevent air from entering the stomach.

When you have given two rescue breaths, begin compressions if you are trained to do so. Otherwise, continue with rescue breathing: 2 breaths every 5 seconds.

If the victim has recovered spontaneous respiration, put him in the recovery position, cover him, and monitor his breathing on a regular basis until an ambulance arrives.

The following is in addition to the box above for review purposes.This teaches students how to handle live situations they will come upon. In the next revision of the first aid honors the first aider needs to know what to do when he comes across an accident of any type. The correct procedures need to be done in the correct order. This is not addressed anywhere in any of the Basic, Standard, Advanced First Aid Honors. Also the need to find a pulse to check on the heart action would be a must before anyone attempts to carry out CPR. CPR is cardiopulmonary resuscitation. Heart/ lung resuscitation. If the heart is beating you **do not** do CPR. CPR is to maintain the blood flow in place of the heart in order to carry the air you are breathing into the

victim. Usually if the heart not beating there is no breathing, but you may be in time for the heart to be beating but no breathing.

Whenever an accident or emergency occurs and you are the first person to arrive at the scene, there is one important technique to follow first: **Check Call Care**. Then use **DRABC** to care for the victim.

Oh No! There's been an accident! What do I do first?

Check / Call / Care

To **CHECK** for danger, you must first survey the scene to ensure YOUR OWN SAFETY; then, do a primary survey.

After checking the victim, **CALL** an ambulance, giving them a description of the emergency situation as well as the location of the scene.

After calling the ambulance, provide appropriate **CARE** based on your primary survey of the victim until ambulance or advanced medical personnel arrive and take over.

DRACB

Danger

Before you try to help the victim, you must determine if the scene is safe. If anything dangerous is present, such as a live wire, a vicious animal, deep water, or fire, you cannot endanger your own life to try to help the victim. Summon trained medical personnel immediately, and they will handle the situation. If you get hurt at the scene, you end up as just another victim for the ambulance to treat. Once you have called for help, you have done all you can in such a situation.

If the scene is safe, try to determine what may have happened or what caused the accident. Never move the victim to give treatment unless immediate life-threatening danger exists, like a fire or an unstable structure ready to collapse.

Response

After determining that the scene is safe, you must check for a response in the victim. You will look, listen and feel to check to determine if the victim:

1. is conscious 2. has an open, unobstructed airway 3. is breathing 4. has a heartbeat 5. is not bleeding severely.

To check for consciousness, gently tap the victim and ask, "Are you okay?" If the victim can speak or cry, he or she is conscious, breathing, and has a pulse. If the victim is unresponsive, he or she may be unconscious, indicating a possibly life-threatening condition. An unconscious person's tongue relaxes and may fall back to block the airway, stopping breathing and eventually the heartbeat.

Next, if the victim is unconscious, kneel next to the victim's head and check for the **ABC's: Airway, Breathing and Circulation.**

Airway

To open the airway of an unconscious victim, tilt the head back and lift the chin.

Breathing

To check for breathing, you must look, listen and feel. Place your ear above the victim's mouth and nose, so that you can listen and feel for air being exhaled while watching the victim's chest for a gentle rise and fall that occurs when breathing. If the victim is not breathing, you must give 2 slow breaths. This is called rescue breathing. If the breaths do not go in, retilt the head and try again. If the breaths still do not go in, the victim has an obstructed airway, and you may try to clear the airway with a blow between the shoulder blades in the back, or with abdominal thrusts. If the breaths do go in, then continue with your **DRABC.**

Circulation

To check for circulation, you must check the victim's pulse at one of the carotid arteries, located in the neck on either side of the Adam's apple. Using your index and middle finger (Never use your thumb--it has a pulse and you may mistake it for that of the victim!) find the Adam's apple and then slide your fingers toward the side of the neck facing you into the groove in the side of the neck. Take at least 5 to 10 seconds to feel for the pulse. If the victim is an infant, locate the pulse in the brachial artery, on the inside of the upper arm in between the elbow and the shoulder. If the victim has a pulse but is not breathing, you must go immediately to Rescue Breathing. If the victim is not breathing and does not have a pulse, go immediately to CPR (if you have been trained). Check the body for signs of any severe external bleeding. Bleeding is severe when blood spurts from a wound, and it is life-threatening.

3. Know the proper procedures to assist a choking victim.

Coughing is the body's natural defense against choking, and it is generally very effective. If the victim is coughing, do not interfere. If the victim stops coughing (or was never coughing in the first place), ask her "are you choking?" If the victim indicates that she is choking, tell her you are going to help her. To do this, you will need to perform the **Heimlich Maneuver**.

Briefly, a person performing the Heimlich Maneuver uses his/her hands to exert pressure on the bottom of the diaphragm. This compresses the lungs and exerts pressure on any object lodged in the trachea, hopefully expelling it. This amounts to an artificial cough.

(The victim of an obstructed airway, having lost the ability to draw air into the lungs, has lost the ability to cough on his/her own.)

Even when performed correctly, the Heimlich Maneuver can injure the person it is performed on. The Heimlich Maneuver should never be performed on someone who can still cough, breathe, or speak.

4. Know the proper procedures to assist a bleeding victim.

If you see a person who is bleeding heavily, you can do the following:

1. Press hard onto the wound to stop the bleeding.
2. If an arm or leg is cut, elevate the limb.
3. Cover with a clean pad and apply a bandage.
4. Check that the bleeding has stopped. If it has not, add another pad and bandage; **do not** remove previous bandage.
5. If you have bandaged a limb, check frequently that the fingers and toes remain warm. If fingers and toes are getting cold, loosen the bandage to let the blood circulate.
6. For severe bleeding (5 cups of blood or more), get the person to a hospital for stitches (and possibly immunization against Tetanus), keeping the limb raised.

5. Know the pressure points and how to correctly apply pressure at these points.

The usual way to control bleeding is to put pressure directly onto the wound, either with the hand directly or with a dressing of some sort (bandage, handkerchief, tea towel etc). *Do not forget that any wound which is not controlled within a minute or two is a medical emergency; and any deep or large wound must receive medical attention as soon as possible.*

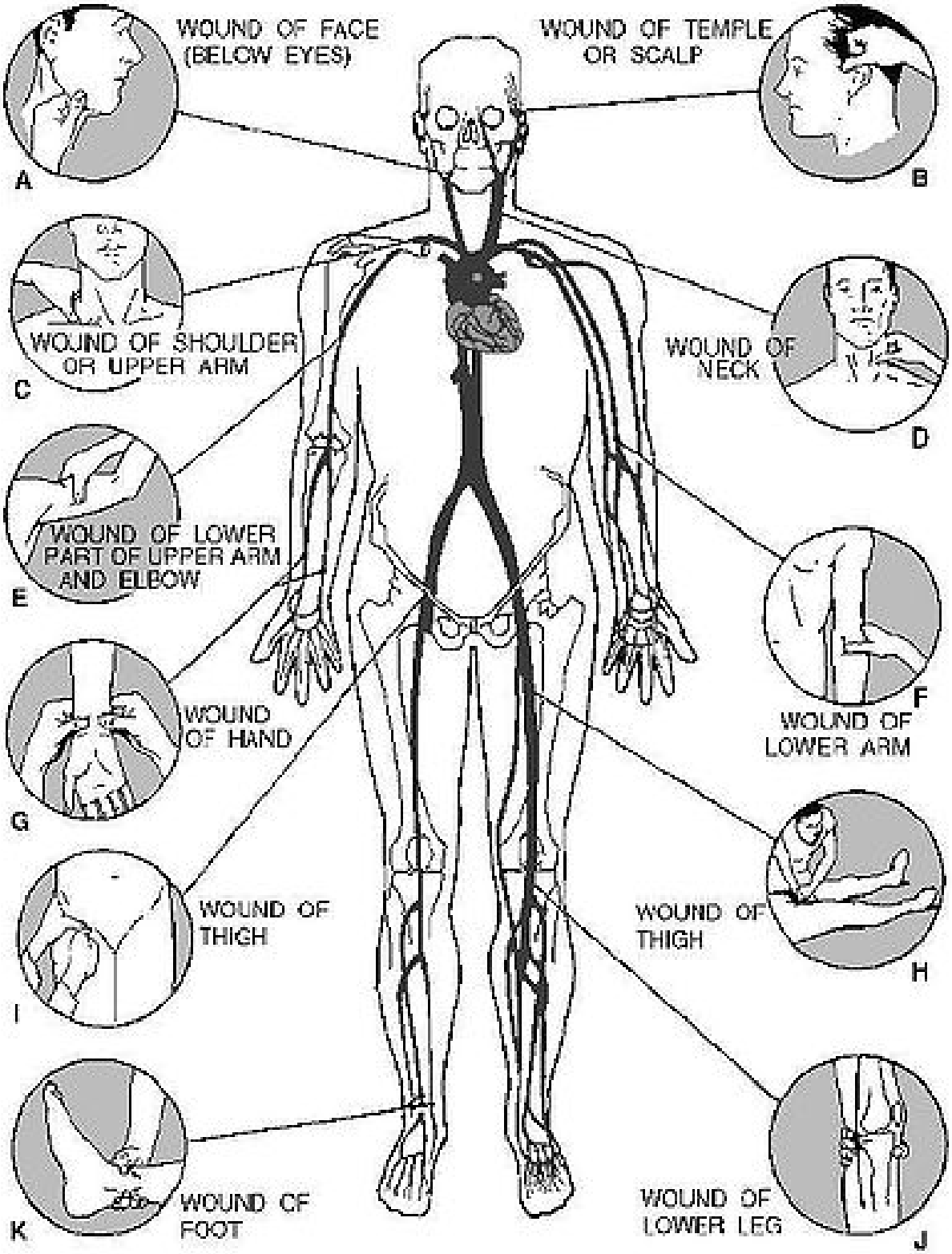
Pressure Points

It is sometimes not possible to press directly on a wound: for example, there may be a foreign object inside the wound, or a broken bone protruding outside, or the wound may be too large or be inaccessible (e.g. if the limb is trapped by some immovable object). In this case, the only way to control the bleeding is to compress blood vessels over particular pressure points (usually where arteries cross over bones near to the surface of the skin). This technique can be used to control external bleeding from arm wounds and leg wounds.

The correct point is determined by finding a pulse on a victim similar to that felt in the wrist when taking one's own pulse. This point could be located in the wrist, the arm (on the soft underside of the elbow), the groin, or behind the knee. This is the position where a rhythmical pulsation can be felt. Pressure can then be applied over this point -- the artery -- to control bleeding.

Once an artery is compressed over a pressure point, it must not be compressed for more than 10 minutes: any longer in one go can cause irreversible damage to the limb. Typically pressure would be applied for 10 minutes, then released for a couple, then reapplied, and so on.

PRESSURE POINTS CHART



6. Know the proper procedure to assist a victim of poisoning.

With poison container in hand, call the local poison control center and do NOT try to make the patient vomit.

Some poisons will cause as much damage coming up as going down.

Only induce vomiting if a poison center worker or a doctor advises you to do so. If the poison is on the skin or clothes, remove the clothing and wash with a large amount of water. If poison gets in the eyes, flush the eyes with clean water for 10 minutes.

Get the victim to a hospital as soon as possible, and if possible, bring the poison container with you.

CHARCOAL if swallowed will absorb any type of poison and is safe to give. Charcoal from a wood fire can be used; however, DO NOT use charcoal briquettes.

7. Demonstrate the proper procedure in splinting various broken bones in the body.

Splints An essential part of the first-aid treatment is immobilizing the injured part with splints so that the sharp ends of broken bones won't move around and cause further damage to nerves, blood vessels, or vital organs. Splints are also used to immobilize severely injured joints or muscles and to prevent the enlargement of extensive wounds.

Before you can use a splint, you need to have a general understanding of the use of splints. In an emergency, almost any firm object or material can be used as a splint. Such things as umbrellas, canes, tent pegs, sticks, oars, paddles, spars, wire, leather, boards, pillows, heavy clothing, corrugated cardboard, and folded newspapers can be used as splints. A fractured leg may sometimes be splinted by fastening it securely to the uninjured leg. Splints, whether ready-made or improvised, must meet the following requirements:

- Be light in weight, but still be strong and fairly rigid.
- Be long enough to reach the joints above and below the fracture.
- Be wide enough so the bandages used to hold them in place won't pinch the injured part.
- Be well padded on the sides that touch the body. If they're not properly padded, they won't fit well and won't adequately immobilize the injured part.
- To improvise the padding for a splint, use articles of clothing, bandages, cotton, blankets, or any other soft material.
- If the victim is wearing heavy clothes, apply the splint on the outside, allowing the clothing to serve as at least part of the required padding.

Although splints should be applied snugly, **never** apply them tight enough to interfere with the circulation of the blood. When applying splints to an arm or a leg, try to leave the fingers or toes exposed. If the tips of the fingers or toes become blue or cold, you will know that the splints or bandages are too tight. You should examine a splinted part approximately every half-hour, and loosen the fastenings if circulation appears to be cut off. Remember that any injured part is likely to swell, and splints or bandages that are all right when applied may be too tight later.

To secure the limb to the splint, belts, neckerchiefs, rope, or any suitable material may be used. If possible, tie the limb at two places above and two places below the break. Leave the treatment of other types of fractures, such as jaw, ribs, and spine, to medical personnel. **Never try to move a person who might have a fractured spine or neck.** Moving such a person could cause permanent paralysis. Don't attempt to reset bones.

Forearm

There are two long bones in the forearm, the radius and the ulna. When both are broken, the arm usually appears to be deformed. When only one is broken, the other acts as a splint and the arm retains a more or less natural appearance. Any fracture of the forearm is likely to result in pain, tenderness, inability to use the forearm, and a kind of wobbly motion at the point of injury. If the fracture is open, a bone will show through. If the fracture is open, stop the bleeding and treat the wound. Apply a sterile dressing over the wound. Carefully straighten the forearm. (Remember that rough handling of a closed fracture may turn it into an open fracture.) Apply two well-padded splints to the forearm, one on the top and one on the bottom. Be sure that the splints are long enough to extend from the elbow to the wrist. Use bandages to hold the splints in place. Put the forearm across the chest. The palm of the hand should be turned in, with the thumb pointing upward. Support the forearm in this position by means of a wide sling and a cravat bandage (see illustration). The hand should be raised about 4 inches above the level of the elbow. Treat the victim for shock and evacuate as soon as possible.

Upper Arm

The signs of fracture of the upper arm include pain, tenderness, swelling, and a wobbly motion at the point of fracture. If the fracture is near the elbow, the arm is likely to be straight with no bend at the elbow. If the fracture is open, stop the bleeding and treat the wound before attempting to treat the fracture.

NOTE

Treatment of the fracture depends partly upon the location of the break.

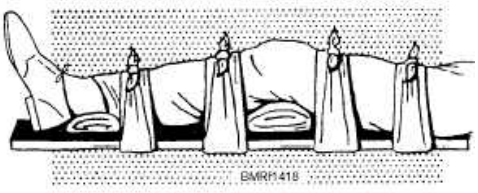
If the fracture is in the upper part of the arm near the shoulder, place a pad or folded towel in the armpit, bandage the arm securely to the body, and support the forearm in a narrow sling.

If the fracture is in the middle of the upper arm, you can use one well-padded splint on the outside of the arm. The splint should extend from the shoulder to the elbow. Fasten the splinted arm firmly to the body and support the forearm in a narrow sling, as illustrated.

Another way of treating a fracture in the middle of the upper arm is to fasten two wide splints (or four narrow ones) about the arm and then support the forearm in a narrow sling. If you use a splint between the arm and the body, be very careful that it does not extend too far up into the armpit; a splint in this position can cause a dangerous compression of the blood vessels and nerves and may be extremely painful to the victim. If the fracture is at or near the elbow, the arm may be either bent or straight. No matter in what position you find the arm, **DO NOT ATTEMPT TO STRAIGHTEN IT OR MOVE IT IN ANY WAY**. Splint the arm as carefully as possible in the position in which you find it. This will prevent further nerve and blood vessel damage. The only exception to this is if there is no pulse on the other side of the fracture (relative to the heart), in which case gentle traction is applied and then the arm is splinted.

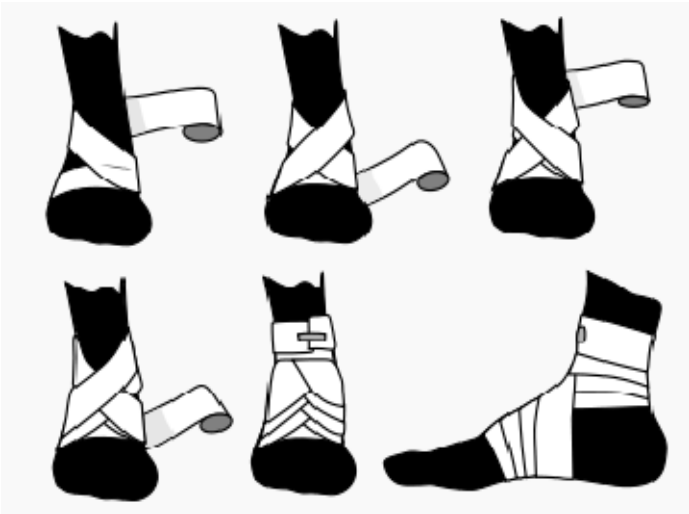
Treat the victim for shock and get him under the care of a medical professional as soon as possible.

Kneecap



Carefully straighten the injured limb. Immobilize the fracture by placing a padded board under the injured limb. The board should be at least 4 inches wide and should reach from the buttock to the heel. Place extra padding under the knee and just above the heel, as shown in the illustration. Use strips of bandage to fasten the leg to the board in four places: (1) just below the knee; (2) just above the knee; (3) at the ankle; and (4) at the thigh. DO NOT COVER THE KNEE ITSELF. Swelling is likely to occur very rapidly, and any bandage or tie fastened over the knee would quickly become too tight. Treat the victim for shock and evacuate as soon as possible.

Ankle



The figure-eight bandage is used for dressings of the ankle, as well as for supporting a sprain. While keeping the foot at a right angle, start a 3-inch bandage around the instep for several turns to anchor it. Carry the bandage upward over the instep and around behind the ankle, forward, and again across the instep and down under the arch, thus completing one figure-eight. Continue the figure-eight turns, overlapping one-third to one-half the width of the bandage and with an occasional turn around the ankle, until the compress is secured or until adequate support is obtained.

8. Know the proper procedure to assist a first, second, and third degree burn victim.

Burns should be immediately immersed in cold running water, or shower for large area. Do not wait to remove clothes. This should be maintained for at least 10-15 minutes.

Continue for at least 1 hour with cold pack, partially insulated with clean fabric (cotton, thin toweling), or further immersion in iced water. Blistered or open burn wounds should be cleaned and covered with non-adhesive gauze (preferably bactericidal) and cotton dressing. DO NOT use butter, oils or any similar treatment which can trap heat and increase risk of infection. Also do not use antiseptics that may aggravate sensitive skin.

Consult a medical physician immediately for any large, deep, infected or otherwise serious burn.

Aloe vera extract, silverdene (Silver Sulfazdiazine), topical analgaesics and NSAID are commonly used medications. Consult a doctor before use.

Burns can be caused by electricity, heat, chemicals or radiation (sunburn). There are three levels of burns, including first degree burns (superficial burns), second degree burns (partial thickness burns) and third degree burns (full thickness burns). A first degree burn is a typical sunburn with symptoms such as redness of the skin and pain. Second degree often has blisters and severe pain. Third degree can be caused by fires and caustic chemicals. Often the victim will feel no pain because the nerves have been destroyed, even though the skin is deeply charred.

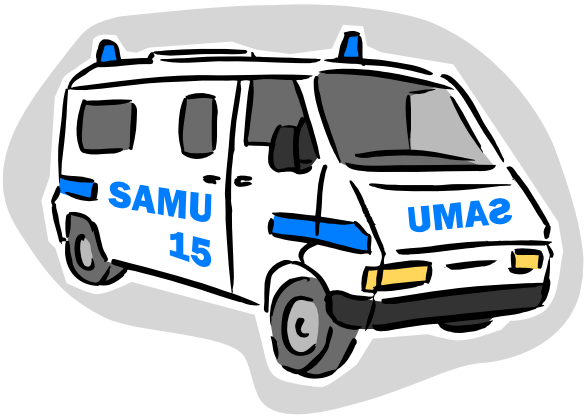
Burns that cover more than ten percent of the body or are larger than the casualty's palm are medical emergencies and need to be treated as such. Also ANY burns to the face, hands or groin should be considered critical and require a physician to look at them.

9. Know the proper procedure to assist a victim of a chemical burn.

1. **For wet chemicals**, immediately flush the area with large amounts of water, using a shower or hose, if available. Do not apply water too forcefully. Continue to flood the area while the clothing, including shoes and socks, is being removed. Continue to flush with running water for at least 20 minutes.

2. For dry chemicals, brush off the chemical, *then* flush with water as above. For acid burns caused by phenol (carbolic acid), wash the affected area with alcohol because phenol is not water soluble; then wash with water. If alcohol is not available, flushing with water is better than no treatment at all.

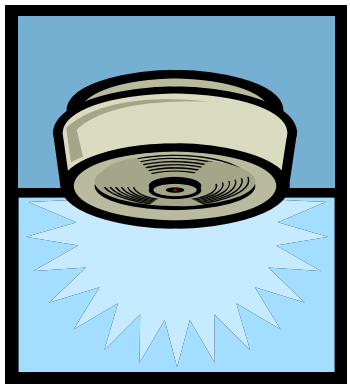
3. Call an ambulance.



10. Know what situations are likely to cause carbon monoxide poisoning and the rescue and treatment techniques for such poisoning.

Carbon monoxide is present in exhaust gases of internal combustion engines as well as in sewer gas, lanterns, charcoal grills, and in manufactured gas used for heating and cooking. It gives no warning of its presence since it is completely odorless and tasteless. The victim may lose consciousness and suffer respiratory distress with no warning other than slight dizziness, weakness, and headache. The lips and skin of a victim of carbon monoxide poisoning are characteristically cherry red. Death may occur within a few minutes.

The first stage of treatment for an inhalation poisoning is to remove the victim from the toxic atmosphere immediately. **WARNING:** Never try to remove a victim from the toxic environment if you do not have the proper protective mask or breathing apparatus or if you are not trained in its use. Too often, well intentioned rescuers become victims. When in doubt, call for trained personnel. If help is not immediately available, and if you know you can reach and rescue the victim, take a deep breath, hold it, enter the area, and pull the victim out. If the victim is not breathing, begin CPR. Get the victim to a hospital as soon as possible.



11. Know the proper procedure for giving assistance to the victim of a head injury.

Head wounds must be treated with particular care, since there is always the possibility of brain damage. The general treatment for head wounds is the same as that for other fresh wounds. However, certain special precautions must be observed if you are giving first aid to a person who has suffered a head wound.

1. **NEVER GIVE ANY MEDICINE.**
2. Keep the victim lying flat, with the head at the level of the body. Do not raise the feet if the face is flushed. If the victim is having trouble breathing, you may raise the head slightly.
3. If the wound is at the back of the head, turn the victim on his or her side.
4. Watch closely for vomiting, and position the head to avoid getting vomit or saliva into the lungs.
5. Do not use direct pressure to control bleeding if the skull is depressed or obviously fractured.

12. Know the proper procedure for giving aid to a victim of internal injuries.

Internal soft-tissue injuries may result from deep wounds, blunt trauma, blast exposure, crushing accidents, bone fracture, poison, or sickness. They may range in seriousness from a simple bruise to life-threatening hemorrhage and shock.

Visible indications of internal soft-tissue injury include the following:

- Vomiting or coughing up bright red blood.
- Excretion of tarry black stools.
- Excretion of bright red blood from the rectum.
- Passing of blood in the urine.
- Nonmenstrual vaginal bleeding.
- Nosebleed.
- Pooling of the blood near the skin surface.

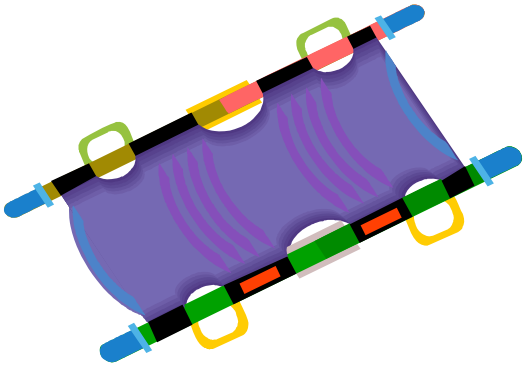
More often than not, however, there will be no visible signs of injury, and you will have to infer the probability of internal soft-tissue injury from other symptoms such as the following:

- Pale, moist, clammy skin.
- Subnormal temperature.
- Rapid, feeble pulse.
- Falling blood pressure.
- Tinnitus (ringing in the ears).
- Fainting.
- Dehydration and thirst.
- Yawning and air hunger.

First aid's goal must be to obtain the greatest benefit from the victim's remaining blood supply.

The following steps should be taken:

1. Treat for shock.
2. Keep the victim warm and at rest.
3. DO NOT give the victim anything to drink
4. Splint injured extremities.
5. Apply cold compresses (ice packs) to identifiable injured areas.
6. Transport the victim to a medical treatment facility as soon as possible.



13. Know the difference between a heart attack, stroke, epilepsy, and simple fainting, and the treatment for each.

Heart Attack

A heart attack is when blood supply to part of the heart is interrupted causing heart tissue to die. Symptoms of a heart attack include severe chest pain, looking pale, sweating, and feeling sick. A heart attack is a medical emergency, and it is a leading cause of death for both men and women.

First aid includes the following:

- Seek emergency medical assistance immediately.
- Help the patient to rest in a position which minimizes breathing difficulties. A half-sitting position with knees bent is often recommended.
- Give access to more oxygen, e.g. by opening the window and widening the collar for easier breathing; but keep the patient warm, e.g. by a blanket or a jacket
- Give aspirin, if the patient is not allergic to aspirin. Aspirin inhibits formation of further blood clots.
    - Non-coated or soluble preparations are preferred. These should be chewed or dissolved, respectively, to facilitate quicker absorption. If the patient cannot swallow, the aspirin can be placed under the tongue.
    - U.S. guidelines recommend a dose of 160 – 325 mg.
    - Australian guidelines recommend a dose of 150 – 300 mg.
- If it has been prescribed for the patient, give nitroglycerin tablets under the tongue.
- Monitor pulse, breathing, level of consciousness and, if possible, the blood pressure of the patient continually.
- Administer CPR if the victim is unconscious and non-breathing.

Stroke

A stroke is caused by an interruption of the arterial blood supply to a portion of the brain. This interruption may be caused by hardening of the arteries or by a clot forming in the brain. Tissue damage and loss of function result. Onset of a stroke is sudden, with little or no warning. The first signs include weakness or paralysis, especially on one side of the body. Muscles of the face may be particularly affected. The victim's level of consciousness varies from alert to unresponsive. Difficulty speaking or understanding language; dizziness; sudden, severe headache; distorted, dim or patchy vision are all symptoms of stroke.

If the victim has sudden onset of any 2 or more of these signs and symptoms, call an ambulance immediately. First aid for a stroke is mainly supportive. Special attention must be paid to the victim's airway, since he may not be able to keep it clear.

- Call an ambulance
- Place the victim in on the side, with the *affected* side down
- Act in a calm, reassuring manner, and keep any onlookers quiet since the victim may be able to hear what is going on.
- Carefully monitor the victim's vital signs and keep a log. Pay special attention to respirations, and pulse strength and rate. (Take the pulse in the neck).

Epilepsy

Epilepsy, also known as seizures or fits, is a condition characterized by an abnormal focus of activity in the brain that produces severe motor responses or changes in consciousness. Fortunately, epilepsy can often be controlled by medications. Grand mal (tonic-clonic) seizure is the more serious type of seizure. Grand mal seizures may be--but are not always--preceded by an *aura*. The victim soon comes to recognize these auras, which allows him time to lie down and prepare for the seizure's onset. A burst of nerve impulses from the brain causes unconsciousness and generalized muscular contractions, often with loss of bladder and bowel control. The primary dangers in a grand mal seizure are injuries resulting from falls and the convulsions as well as a cessation of breathing. A period of

unconsciousness or mental confusion follows this type of seizure. When full consciousness returns, the victim will have little or no recollection of the seizure.

First aid is aimed at preventing the patient from injuring himself or herself. **Nothing** should be placed between the patient's teeth for any reason. Never try to restrain a victim during convulsions; however, do not leave them alone.

Fainting

Fainting is a self-correcting, temporary form of shock. It often is the result of a temporary gravitational pooling of the blood as a person stands up. As the person falls, blood again rushes to the head, and the problem is solved. Usually, the serious problems related to fainting are injuries that occur when falling down from the temporary loss of consciousness. Fainting may be caused by stressful situations.

If a person faints (or feels he is about to faint), do the following:

- Lay victim down
- Elevate feet
- Loosen tight clothing
- Maintain an open airway

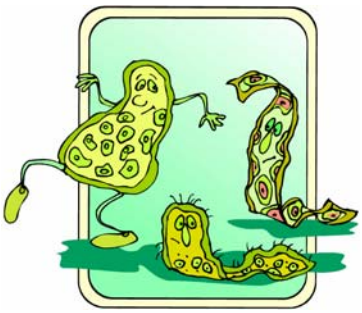
14. Know how to prevent infection.

Although infection may occur in any wound, it is a particular danger in wounds that do not bleed freely, in wounds in which torn tissue or skin falls back into place and prevents the entrance of air, and in wounds that involve the crushing of tissues. Incisions, in which there is a free flow of blood and relatively little crushing of tissues are the least likely to become infected.

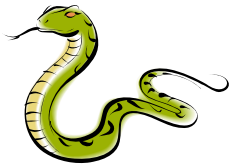
There are two types of bacteria commonly causing infection in wounds—aerobic and anaerobic. The former bacteria live and multiply in the presence of air or free oxygen, while the latter are bacteria that live and multiply only in the absence of air.

The principal aerobic bacteria that cause infection, inflammation, and blood poisoning are streptococci and staphylococci, some varieties of which destroy red blood cells. The staphylococci and streptococci may be introduced at the time of infliction, or they may be introduced to the wound later, at the time of first aid treatment or in the hospital if nonsterile instruments or dressings are employed.

Wash minor wounds immediately with soap and clean water; then dry and paint them with a mild, nonirritating antiseptic. Apply a dressing if necessary. In the first aid environment, do not attempt to wash or clean a large wound, and do not apply an antiseptic to it since it must be cleaned thoroughly at a medical treatment facility. Simply protect it with a large compress or dressing and transport the victim to a medical treatment facility. After an initial soap and water cleanup, puncture wounds must also be directed to a medical treatment facility for evaluation.



15. What is the proper treatment for a snake bite?



In a snakebite situation, every reasonable effort should be made to kill or at least to positively identify the culprit, since treatment of a nonpoisonous bite is far simpler and less dangerous to the victim than treatment of a poisonous bite.

Snake venom is a complex mixture of enzymes, peptides, and other substances. A single injection can cause many different toxic effects in many areas of the body. Some of these effects are felt immediately while the action of other venom components may be delayed for hours or even days. A poisonous bite should be considered a true medical emergency until symptoms prove otherwise.

The venom is stored in sacs in the snake's head. It is introduced into a victim through hollow or grooved fangs. An important point to remember, however, is that a bitten patient has not necessarily received a dose of venom. The snake can control whether or not it will release the poison and how much it will inject. As a result, while symptoms in a poisonous snakebite incident may be severe, they may also be mild or not develop at all.

It is essential that you be able to quickly diagnose a snakebite as being envenomated or not. Usually enough symptoms present themselves within an hour of a poisonous snakebite to erase any doubt. The victim's condition provides the best information as to the seriousness of the situation. The bite of the pit viper is extremely painful and is characterized by immediate swelling and excess fluid about the fang marks, usually within 5 to 10 minutes, spreading and possibly involving the whole extremity within an hour. If only minimal swelling occurs within 30 minutes, the bite will almost certainly have been from a nonpoisonous snake or from a poisonous snake that did not inject venom.

The aim of first aid for envenomed snakebites is to reduce the circulation of blood through the bite area, delay absorption of venom, prevent aggravation of the local wound, maintain vital signs, and transport the victim as soon as possible to a medical treatment facility.

Other aid will be mainly supportive:

1. Apply a constricting band (i.e., rubber tubing, belt, necktie, stocking) above and below the bite. Each band should be approximately 2 inches from the wound, but NEVER place the bands on each side of a joint. If only one constricting band is available, place it above the wound. It should be tight enough to stop the flow of blood in the veins, but not tight enough to shut off the arterial blood supply. The victim's pulse should be palpable below the band.
2. If the victim cannot reach a medical treatment facility within 30 minutes of the time of the bite, and there are definite signs of poisoning, use a sterile knife blade to make an incision about 1/2 inch (13 mm) long and 1/4 inch (6 mm) deep over each fang mark on the long axis of the extremity. This technique is done only on the extremities, not on the head or trunk. Apply suction cups to help remove some of the injected venom. Suction by mouth is recommended only as a last resort, because the human mouth contains so many different bacteria that the bite could become infected. Incision and suction later than 30 minutes from the time of the bite is not recommended.

3. Check the pulse and respiration frequently. Give artificial ventilation if necessary.
4. Calm and reassure the victim, who will often be excited or hysterical. Keep the victim lying down, quiet, and warm. **DO NOT** give alcohol or any other stimulant to drink.
5. Treat for shock.
6. Use a splint to immobilize the victim's affected extremity, keeping the involved area at or below the level of the heart.
7. Cover the wound to prevent further contamination.
8. Give aspirin for pain.
9. Telephone the nearest medical facility so that the proper antivenin can be made available.
10. Transport the victim (and the dead snake) to a medical treatment facility as soon as possible. All suspected snake bite victims should be taken to the hospital, whether they show signs of envenomation or not.

16. What is the proper treatment for animal bites?

A special kind of infection that must be guarded against in case of animal bites is rabies (sometimes called "hydrophobia"). This disease is caused by a virus that is present in the saliva of infected animals. The disease occurs most commonly in wild animals, but it has been found in domestic animals and household pets. In fact, it is probable that all mammals are susceptible to it. The virus that causes rabies is ordinarily transmitted by a bite, but it can be transmitted by the saliva of an infected animal coming in contact with a fresh wound or with the thin mucous membrane of the lips or nose. The virus does not penetrate normal unbroken skin. If the skin is broken, **DO NOT** attempt wound closure.

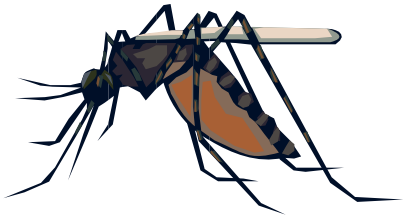
If rabies develops in man, it is usually fatal. A preventive treatment is available and it is very effective, but only if it is started shortly after the bite. Since the vaccine can be obtained only at a medical treatment facility, any person bitten by an animal must be transferred quickly to the nearest treatment facility for evaluation, along with a complete report of the circumstances surrounding the incident.

Remember, prevention is of utmost importance. Immediate local treatment of the wound should be given. Wash the wound and the surrounding area carefully, using sterile gauze, soap, and sterile water. Use sterile gauze to dry the wound, and then cover the wound with a sterile dressing. **DO NOT** use any chemical disinfectant. All of the animal's saliva must be removed from the victim's skin to prevent further contamination of the wound. **CAUTION: DO NOT** allow the animal's saliva to come in contact with open sores or cuts on your hands.

When a person has been bitten by an animal, every effort must be made to catch the animal and to keep it confined for a minimum of 8 to 10 days. **DO NOT** kill it if there is any possible chance of catching it alive. The symptoms of rabies are not always present in the animal at the time the bite occurs,

but the saliva may nevertheless contain the rabies virus. It is essential, therefore, that the animal be kept under observation until a diagnosis can be made. The rabies treatment is given if the animal develops any definite symptoms, if it dies during the observation period, or if for any reason the animal cannot be kept under observation. Remember that any animal bite is dangerous and **MUST** be evaluated at a treatment facility.

17. What is the proper treatment for insect and spider bites?



Insect Bites

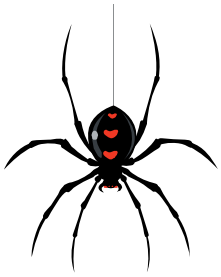
Though ticks and leeches are not technically insects, we will deal with them here as if they are. Most of the time insect bites and stings will not require first aid. However, you should be aware that there are many insect-borne diseases including Lyme's disease, Rocky Mountain spotted fever, malaria, yellow fever, bubonic plague, etc. Be on the alert for any sickness following an insect bite, and contact a doctor if you suspect transmission of an insect-borne disease.

First aid is aimed at reducing the discomfort caused by an insect bite or sting and preventing infection:

- Get away from the insects to avoid additional bites or stings.
- For stings, scrape the stinger away - do not use tweezers or otherwise pinch a stinger, as this will cause more venom to be injected into the wound.
- Place an ice pack over the affected area to reduce pain and swelling.

- Apply hydrocortizone, calamine lotion, or make a paste from three parts baking soda and one part water and apply that to the affected area.
- Give the patient an antihistamine such as Benadryl.
- Remove ticks by pulling them straight out with a pair of tweezers. Be careful not to break a tick's mouth parts off beneath the skin. Contact the child's doctor, who may ask you to save the tick and bring it in for testing. Do not try to remove a tick by touching it with a hot match head or by covering it with petroleum jelly.
- Do not scratch.
- Wash the affected area with soap and water.

Spider Bites



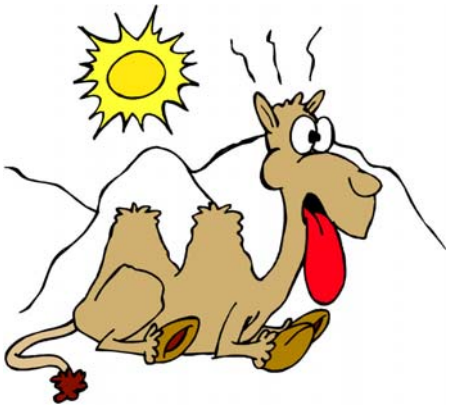
Spiders in the United States are generally harmless, with several exceptions. The most notable are the black widow and brown recluse spiders. Their bites are serious but rarely fatal.

Bites by non-poisonous spiders should be treated the same as insect bites. Bites by poisonous spiders should be treated as follows:

1. Place ice over the bite to reduce pain.
2. Hospitalize victims who are under 16 or over 65 for observation.
3. Be prepared to give antivenin in severe cases.

18. What is the difference between heat exhaustion and heat stroke, and what is the treatment for each?

Heat stroke



Heat stroke is a less common but far more serious condition than heat exhaustion, since it carries a 20 percent fatality rate. The main feature of heatstroke is the extremely high body temperature, 105° F (41° C) or higher, that accompanies it. In heatstroke, the victim has a breakdown of the sweating mechanism and is unable to eliminate excessive body heat built up while exercising. If the body temperature rises too high, the brain, kidneys, and liver may be permanently damaged.

Sometimes the victim may have preliminary symptoms, such as headache, nausea, dizziness, or weakness. Breathing will be deep and rapid at first, later shallow and almost absent. Usually the victim will be flushed, very dry, and very hot. The pupils will be constricted (pinpoint) and the pulse fast and strong.

When you provide first aid for heatstroke, remember that this is a true life-and-death emergency. The longer the victim remains overheated, the higher the chances of irreversible body damage or even death occuring. First aid treatment for heatstroke is designed to reduce body heat. Reduce body heat immediately by dousing the body with cold water, or applying wet, cold towels to the whole body. Move the victim to the coolest possible place and remove as much clothing as possible. Maintain an open airway. Place the victim on his/her back, with the head and shoulders slightly raised. If cold packs are available, place them under the arms, around the neck, at the

ankles, and in the groin. Expose the victim to a fan or air-conditioner since drafts will promote cooling. Immersing the victim in a cold water bath is also effective. Give the victim (if conscious) cool water to drink. Do not give any hot drinks or stimulants. Get the victim to a medical facility as soon as possible. Cooling measures must be continued while the victim is being transported.

Heat Exhaustion

Heat exhaustion is the most common condition caused by working or exercising in hot spaces. Heat exhaustion produces a serious disruption of blood flow to the brain, heart, and lungs. This causes the victim to experience weakness, dizziness, headache, loss of appetite, and nausea.

Signs and symptoms of heat exhaustion are similar to those of shock: the victim will appear ashen gray; the skin will be cold, moist, and clammy; and the pupils of the eyes may be dilated (enlarged). The vital (blood pressure, temperature, pulse, and respiration) signs usually are normal; however, the victim may have a weak pulse together with rapid and shallow breathing.

Body temperature may be below normal. You should treat heat exhaustion victims as if they were in shock. Loosen the clothing, apply cool wet cloths, move the victim to either a cool or an air-conditioned area, and fan the victim. Do not allow the person to become chilled. If the victim is conscious, administer a solution of 1 teaspoon of salt dissolved in a quart of cool water. If the victim vomits, do not give any more fluids. Transport the victim to a medical facility as soon as possible.

19. What should you do if your clothes catch fire?

Get the person to the ground and roll him over and over on the ground. Another option is to wrap the victim with a blanket, coat, or jacket if one is handy. If your own clothes catch on fire, **stop, drop, and roll** - do the same thing to yourself as you would to someone else.

STOP

DROP

ROLL

20. What are the basic fire prevention principles for the home?

- **If your home lacks smoke detectors, install them (it's not that hard).**
- **Replace the batteries and test your smoke detectors on a regular basis** (when adjusting your clocks for daylight savings time, for example).
- Do not smoke or allow anyone else to smoke in your home.
- **Never overload circuits or extension cords.** Do not place cords and wires under rugs, over nails or in high traffic areas. Immediately shut off and unplug appliances that sputter, spark or emit an unusual smell. Have them professionally repaired or replaced.
- **When using appliances follow the manufacturer's safety precautions.** Overheating, unusual smells, shorts and sparks are all warning signs that appliances need to be shut off, then replaced or repaired. Unplug appliances when not in use. **Use safety caps to cover all unused outlets,** especially if there are small children in the home.
- **Keep anything combustible** at least three feet away from a portable heater.
- **Keep fire in the fireplace.** Use fire screens and have your chimney cleaned annually. The creosote buildup can ignite a chimney fire that could easily spread.
- **Kerosene heaters should be used only where approved by authorities.** Never use gasoline or camp-stove fuel. Refuel outside and only after the heater has cooled.
- **Practice an escape plan from every room in the house.** Caution everyone to stay low to the floor when escaping from fire and never to open doors that are hot. Select a location where everyone can meet after escaping the house. Get out then call for help.
- **Keep your home clean and neat.** Clutter is combustible.

21. What are the basic water safety principles?

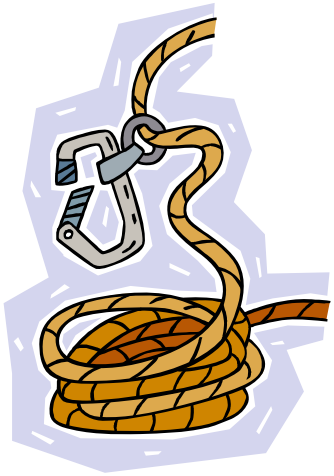
- Learn to swim.
- Swim in areas where a lifeguard is on duty
- Young children and weak swimmers should wear a personal floatation device (PFD) when they are around water.
- Set limits for inexperienced swimmers, such as not allowing them to enter water that is more than chest-deep.
- Inspect swimming areas for hazards such as underwater trees, holes, and swift currents.
- Swim parallel to the shore if caught in a rip tide.
- Get out of the water if there is a risk of a lightning strike.

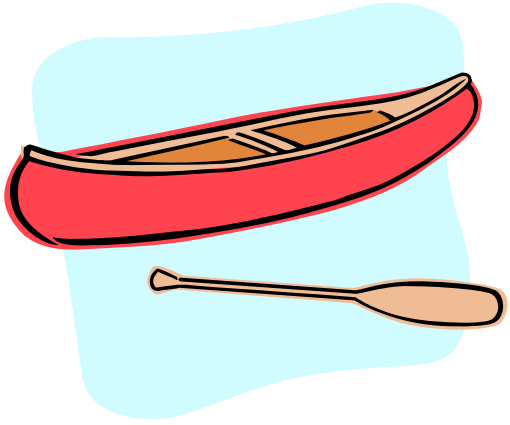
22. What are the ways to save a drowning victim without swimming?

Unless you have been trained to properly do so, avoid swimming to the assistance of a person who is drowning. A drowning non-swimmer is typically in a panic, and may grab onto anyone or anything he can reach in an effort to support his airway above the surface of the water. If the victim submerges the rescuer, the rescuer's life is endangered; and the original victim has nobody to assist him.

Instead of entering the water, do one of the following:

- Talk the victim in; coach them to kick their legs.
- Throw life ring, life jacket, or some other flotation device to the victim.
- Reach an item such as a rope, pole, oar, or paddle to the victim; and once the victim grabs it, pull her in.
- Wade into shallow water attempt the above
- Row out to the victim in a boat, or use powered craft if possible; try the above from within the boat.

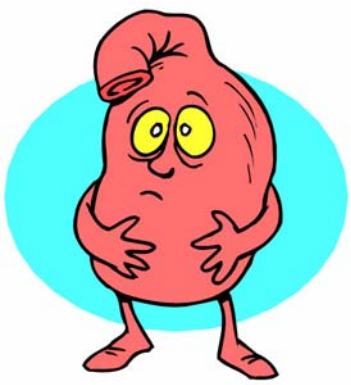




23. What are the basic electrical safety principles?

- Do not overload circuits or extension cords.
- Only use an extension cord that is rated to handle the current an appliance will use. An appliance's amperage is listed on the outside of the appliance.
- Shut off the power before working on a circuit.
- Unplug an appliance before servicing it.
- Water and electricity do not mix. Do not use an electric appliance when standing in a puddle of water or while in a bathtub or shower.
- Do not use a land-line telephone or touch any "wired" appliance during an electrical storm.
- Do not insert anything into an electrical socket other than an electrical plug which is in good condition.
- Replace broken or frayed electrical cords.

24. How can you prevent food poisoning?



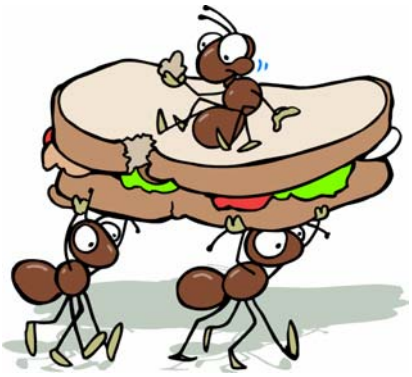
Food poisoning is caused by eating food which is contaminated with any infectious or toxic agent such as bacteria or parasites. The two main ways food becomes contaminated are by improper storage, or by coming into contact with contaminated food (cross-contamination).

Food Storage

The basic rule for storing food is to pay attention to the temperature. Keep hot foods hot, and keep cold foods cold. Most bacteria will not grow in food that is hotter than 140°F (60°C), and bacterial growth is greatly slowed at temperatures below 40°F (4°C). It is unsafe to store foods susceptible to bacteria growth between these temperatures.

Food poisoning is often caused by eating left-overs that were not promptly refrigerated. As soon as the food temperature falls below 140°F (60°C), it should be refrigerated. The longer food is left in the "danger zone", the more bacteria will multiply in it. If it contains enough bacteria, it will overwhelm the body's immune system and sickness will result.

Be careful about refrigerating large quantities of hot food. For instance, the potato salad in the center of a two-gallon container can remain warm for *hours* after refrigeration - providing ample time for bacteria to multiply. Divide large quantities of food into smaller containers prior to refrigeration so that the food can cool throughout.



Cross Contamination

Cross contamination usually happens during food preparation. Raw meat and raw eggs should always be treated as if they were contaminated. Cooking them kills the bacteria and makes them safe to eat. Do not allow other food to come into contact with raw meat or eggs, or that food will become contaminated. Do not use the same utensils to handle raw meat and food that is ready to eat.

Wash your hands before you eat or cook, and always wash your hands after handling raw meat or eggs--before handling any other food.

Do not allow pets to walk on food preparation surfaces (i.e., don't let the cat walk on the counter top or dining table). Animals pick up many types of bacteria on their feet, and this is easily transferred to food. If you do catch your pet walking on the countertop, be sure to disinfect the countertop before using it as a food preparation surface.

References for First Aid Honor

Some material for this chapter was copied directly from the following public domain resources:

- U.S. Navy Training Manual, HOSPITAL CORPSMAN 3 & 2 (http://www.tpub.com/content/medical/10669-c/)
- U.S. Navy Training Manual, Hospital Corpsman Revised Edition (http://www.tpub.com/content/medical/14295/index.htm)
- Department of Homeland Security, Fire Safety Tips (http://www.usfa.dhs.gov/citizens/)

Other references:

- Basic First Aid (http://www.expage.com/page/lacieking), http://www.expage.com/page/laciekingLinked by Jeruel B. Ibañez)

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