

stp, gov's
MN
2000
FHB
39

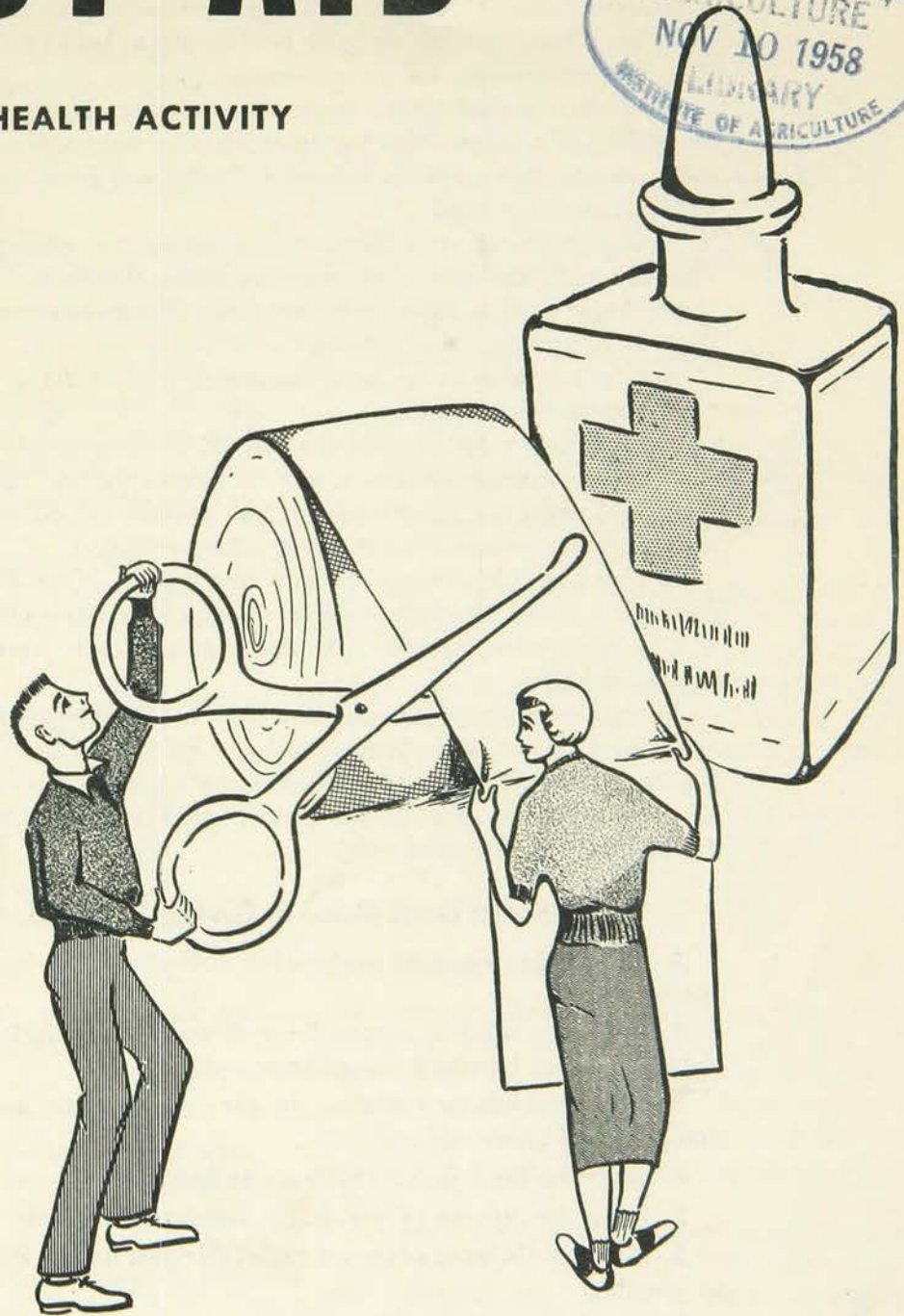
October 1958

2

FIRST AID



A 4-H HEALTH ACTIVITY



UNIVERSITY OF MINNESOTA ①

AGRICULTURAL EXTENSION SERVICE • U. S. DEPARTMENT OF AGRICULTURE

2

This archival publication may not reflect current scientific knowledge or recommendations.
Current information available from University of Minnesota Extension: <http://www.extension.umn.edu>.

FIRST AID is a part of the Illinois 4-H health activity (the other parts are a complete physical examination and a dental examination). Every club member should take part in the health activity, since every time you recite the pledge, you are pledging your health to better living for your club, your community, and your country.

First aid is the immediate temporary treatment given before the doctor arrives to a person who has an accident or sudden illness. Properly given, it may save a life. It reduces suffering and gives comfort to the suddenly ill and injured.

In your home, on your farm, in your camp, or at other places where you may work and play, accidents may occur. When they happen, you should know *what to do* and *what not to do*. Doing the wrong thing may do more harm than doing nothing.

You will be able to use your knowledge of first aid at many times besides during an emergency.

At every club meeting, some time should be given to first aid. You or some other member can give a talk or demonstration. You will learn better and enjoy the lessons more if you practice the different first aid methods when someone else is giving a demonstration.

In your home, be prepared to meet emergencies. Many accidents take place there. Make a good first aid kit and put it in a safe place so that it will be ready when needed. It is also a good idea to have a first aid manual at home.

In your community, you can take part in Civilian Defense activities and Red Cross courses. What you have learned of first aid in your health activity will help you to learn more advanced techniques. Learn all you can about first aid so that you will always be ready to help out if disaster strikes your community.

Some Basic Rules in Giving First Aid

1. Do not get excited; act quickly but calmly. Do not try to do too much.
2. Keep the injured person lying down. If unconscious, let him lie quietly with his head turned to one side.
3. Give immediate attention to serious bleeding and asphyxia (stoppage of breathing).
4. Examine for injuries that may be hidden.
5. Keep the injured person warm, but not too warm.
6. Make the injured person comfortable and handle him as gently as possible.
7. See that someone calls the doctor, the parents or nearest relatives, and, if necessary, an ambulance.
8. Never pour liquids into the mouth of an unconscious person.

DRESSINGS AND BANDAGES

Dressings are put directly over wounds to help keep the wounds free from dirt and germs. Dressings also help to control bleeding and absorb liquid material from the wound.

Bandages are used to hold dressings in place. They may also be used to keep splints in place, to make slings, and to give pressure over dressing to help stop bleeding.

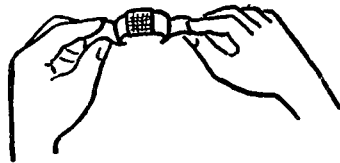
Kinds of dressings

Gauze is the best material to use for dressings. It is more absorbent and allows more air to circulate than any other cloth. Dressings must be clean and sterile (free from germs) or as nearly sterile as possible.

Sterile gauze squares may be purchased for the first aid kit. They are usually 2 x 2 inches and larger and are sealed in individual wax paper packages. They may be used on any wound, and fastened with adhesive tape.

You can also buy small dressings on strips of adhesive tape (band-aids). They are very good to use on small cuts, scratches, and wounds of the fingers and toes.

Small bandage on adhesive.



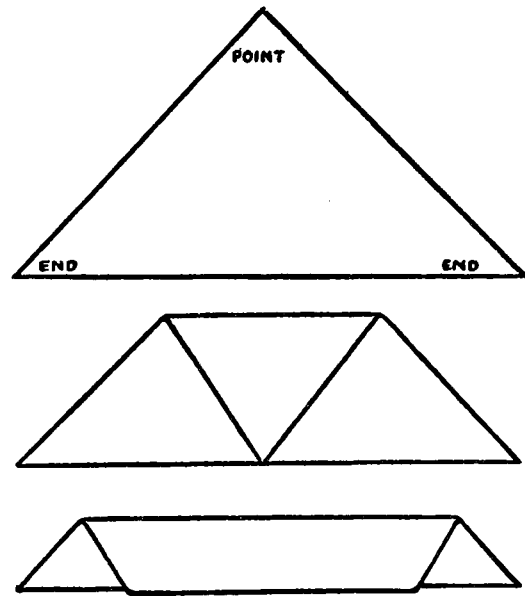
If sterile gauze dressings are not available, the next best material is freshly washed and ironed old white cotton cloth, such as sheets or pillow cases.

When you handle a dressing, do not touch the part that will be put next to the wound.

Kinds of bandages

Bandages can be made from gauze or other cotton cloth, such as muslin. In an emergency bandages may be made from a large handkerchief or scarf, a piece of sheet, a napkin, or a towel. Sometimes adhesive tape is used instead of a bandage to hold a dressing in place.

There are several kinds of bandages. The triangle bandage is one of the best to use for first aid and is easy to make. The triangular bandage is made from a firm piece of cloth 36 or 40 inches square. It is folded diagonally. Or it may be cut diagonally to make two bandages.



Steps in making a cravat bandage.

A cravat or necktie bandage can be made from a triangular bandage or from a strip of cloth. To fold a triangular bandage as a cravat, bring the point of the cloth to the middle of the base. Make another fold in the middle of the cloth as you see in the picture. Continue to fold the cloth until the bandage is the right width.

Roller bandages are often used by doctors, but they are difficult to use properly. It is hard to keep them from being too tight; and it is hard to keep them on without using adhesive tape.

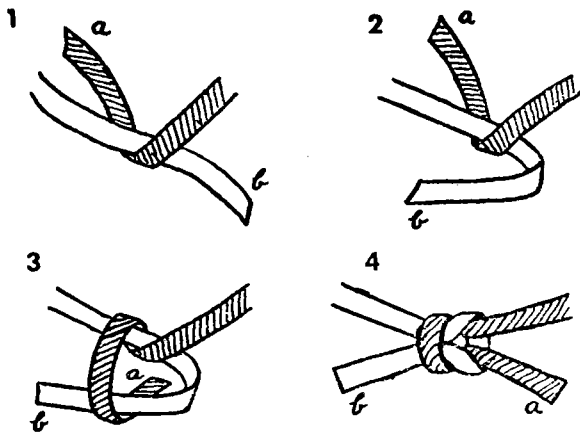
How to use bandages

A bandage should be snug but not tight. If it is too tight it may cause swelling and pain. If it is too loose it may slip. Be sure to put it on smoothly.

Do not cover the ends of the fingers or toes unless they have been injured. Never use a wet bandage because it may shrink and become too tight as it dries.

A square knot is usually used to tie bandages. Or the end of the bandage may be fastened down with adhesive tape. Learn to tie a square knot properly. Tie the knots where they are easy to reach and are comfortable.

To tie a square knot. A square knot is easy to tie. It does not matter with which end you do the tying. If you are right-handed you will use one end; if left-handed, the other.



Tying a square knot.

Step 1. Cross one end (*a*) over the other, turn it under and up.

Step 2. Turn the lower end (*b*) back in the opposite direction from which it is pointing.

Step 3. Bring the first end (*a*) down over the other end (*b*) then under it and out the loop or opening that is formed.

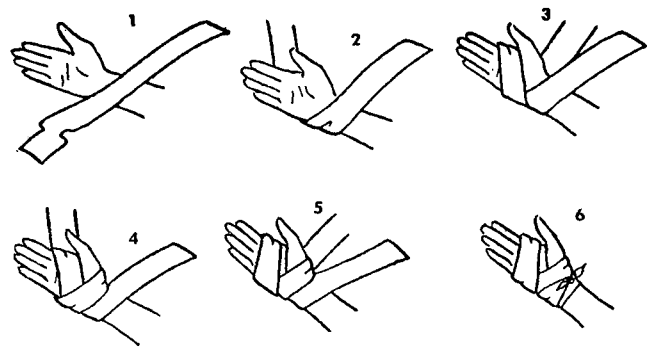
Step 4. Pull on both ends to tighten the knot.

To make an arm sling. An arm sling is good to use for a serious injury to the wrist or hand. Put one end of a triangular bandage over the shoulder



Making an arm sling.

on the uninjured side. Let the other end hang straight down over the chest. Have the point of the bandage behind the elbow. Bring the lower end up over the shoulder on the injured side. Tie the two ends together at the side of the neck. Fold the point of the bandage over and pin it to the sling.



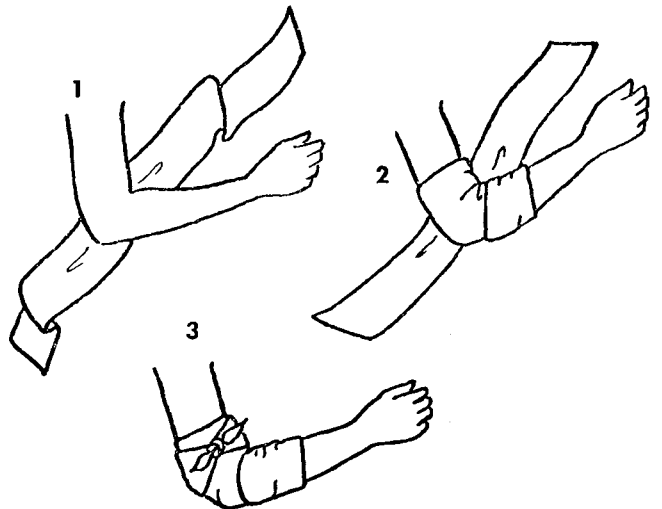
Bandaging a hand.

To bandage the hand. Turn the hand palm up and lay a narrow cravat bandage across the wrist. Have one end extended about 12 inches past the thumb.

Bring the other end around the back of the hand, then between the thumb and index finger, across the palm, and up to the wrist. Encircle the wrist. Then bring the bandage across the back of the hand, between the thumb and index finger and across the palm again. Wrap both ends around the wrist and tie them in a square knot.

To bandage an elbow or knee. Use a cravat bandage 8 inches wide for the elbow and wider for the knee. Put the middle of the cravat over the bent elbow. Smooth it out and bring the ends around, crossing them in the hollow of the elbow. Bring the upper end entirely around the arm above the elbow. Bring the lower end entirely around the arm below the elbow. Tie the ends on the outside of the arm just above the bend of the elbow.

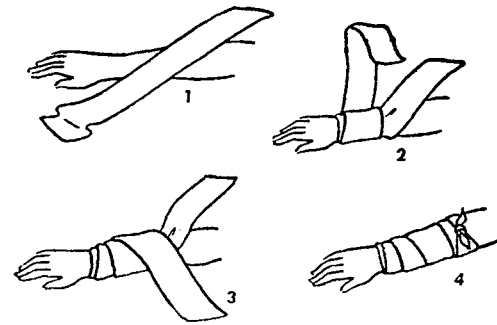
The knee is bandaged the same way.



Bandaging an elbow.

To bandage an arm or leg. An injury above or below the elbow or the knee can be bandaged with a cravat. Make it 2 inches wide for a small injury, wider for a larger injury. Place it diagonally across the arm or leg over the injury. Have the longest end down. Hold the upper end firmly as you bring the lower end down around the arm or leg and back up again using a spiral motion. Tie the ends in a square knot.

See the "American Red Cross First Aid Text-book" for other kinds of bandaging.

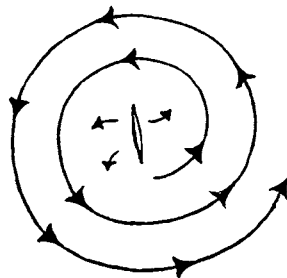


Bandaging an arm.

TREATING WOUNDS

Cuts and scratches

The smallest cut or scratch needs care just like any other injury. Even a pin prick breaks the skin and allows germs to enter and cause infection.



Washing around a small wound.

Wash around small wounds with clean water and clean soap, using sterile gauze or cotton. Always start at the edge of the wound and clean around and away from the edges until you have washed 2 or 3 inches around the wound. If necessary, wash again, using fresh gauze or cotton, soap, and water. Do not wash inside the wound. Put a sterile dressing over it and hold it in place with a bandage.

Antiseptics are sometimes used to clean the inside of the wound, but do not use one without a doctor's permission.

Never touch a wound with your fingers, mouth, or clothing, or with material that is not sterile.

Puncture wounds

These are caused by pointed things such as wire, nails, sharp sticks, or tines and are serious because of the danger of lockjaw. Wash the wound well with soap and water and soak with Epsom salts. Get the patient to a doctor. If the patient has not been immunized against tetanus (lockjaw), he will need a dose of tetanus antitoxin. If he has been immunized against tetanus, he will need only a dose of tetanus toxoid.

Bruises

A bruise is an unopen wound. It is caused by a blow that breaks the small blood vessels under the skin. As a result, the area becomes discolored and swollen.

Cold wet cloths on the bruise will keep down the swelling and ease the pain. If first aid is not given at once and the bruised area becomes swollen after several hours, apply warm wet cloths.

Animal bites

Bites from dogs, cats, or any other warm-blooded animals are dangerous. Most animals carry germs that may cause the wound to become infected. If the animal has rabies, the bitten person will get hydrophobia. This is a fatal disease unless properly treated. The Pasteur treatment prevents hydrophobia effectively if started early enough.

When giving first aid to a person who has been bitten by an animal, wash the wound thoroughly to remove the animal's saliva. A good way to do this is to use a gauze pad and soap and water. Rinse the wound with clear water under a running faucet. Dry it with clean gauze and apply an antiseptic like iodine. When the iodine has dried, dress the wound as you would any other.

Minor scratches caused by animals as well as more severe bites, should be treated by a doctor as soon as possible. The doctor will treat the wound further and will give the Pasteur treatment to protect the person against hydrophobia if he thinks it is necessary.

The animal that has bitten the patient should not be killed, but should be locked up or chained securely for 14 days and observed carefully by a veterinarian. If the animal does not develop rabies during this period, the bitten person will not be in danger. Hydrophobia usually develops 2 weeks to 3 months after a person has been bitten. Generally,

the doctor will consider it safe to delay starting the treatment for several days while waiting to see if the animal is diseased, except when the patient's head, face, or hands have been bitten.

If the animal is killed or dies during the 14-day period, its head should be sent to a laboratory for examination. For further information on rabies, see Illinois Circular 475.

You can protect your pets from rabies by having them vaccinated once a year, as required by Illinois law.

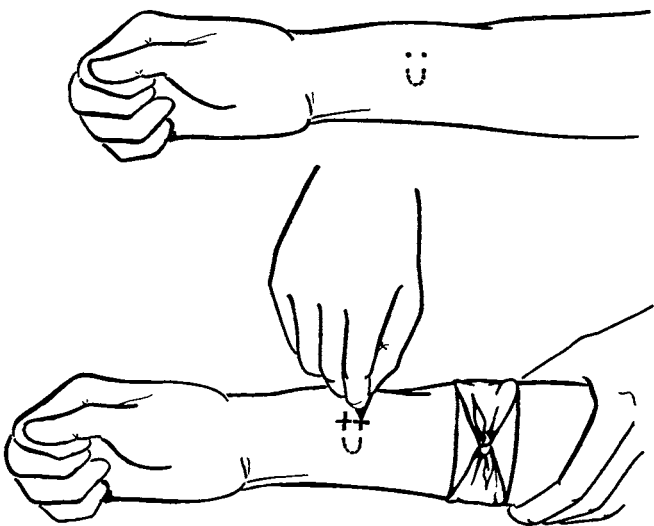
Snake bites

A bite from a poisonous snake is very dangerous and may cause death if not properly treated at once. Poisonous snake bites look like two small punctured wounds plus the teeth marks. Bites of nonpoisonous snakes are horseshoe-shaped rows of teeth marks or scratches; treat these like other wounds.

Pain is severe when a person has been bitten by a poisonous snake. The injured area becomes swollen quickly. The patient starts showing symptoms of shock soon after he is bitten.

Call a doctor and then start first aid treatment at once. Have the patient lie down and keep him quiet. Apply a handkerchief, necktie, or bandage about an inch or two above the wound to keep the poison from spreading. It should be moderately tight, just enough to stop the blood flowing back through the veins, but not tight enough to stop the blood flowing through the arteries. If there is too much swelling from the venom (poison), loosen the band and move it higher up the limb.

As soon as you apply the band, sterilize a sharp



Top — the bite of a poisonous snake. Bottom — giving first aid for the bite.

knife or razor blade with a match flame, iodine, or alcohol. Make a cut about 1/4 inch long through each fang mark. The cuts should be as deep as the bite — about 1/4 inch. After the cut is made allow the blood to flow freely.

Some of the poison may be drawn out by suction. Suction may be applied with the mouth by sucking the wound and spitting out the blood. If mouth suction is difficult to keep up and there are no suction devices available, use a bottle or jar that has been heated by burning paper inside it. Hold the mouth of the bottle directly over the cuts. Continue making cuts at the outer edge of the swelling above the bite and apply suction until the doctor arrives.

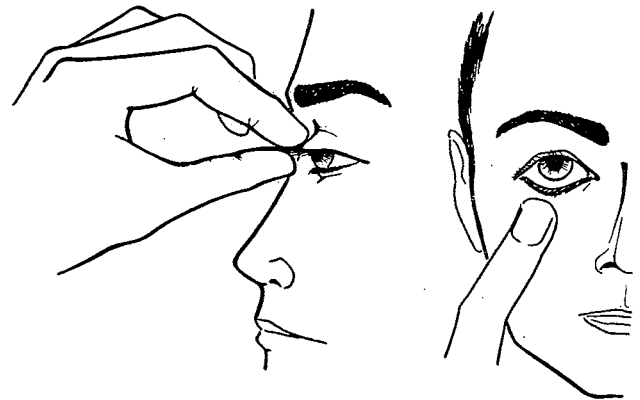
Treat the patient for shock while taking care of his wound (see page 10).

Eye injuries

Often bits of dust or other tiny particles lodge on the surface of the eye or eyelid. Do not rub the eye, for you may make it worse.

Sometimes tears will wash the particles out. If not, wash your hands before you try to remove the particle. Never use a toothpick, match or other hard object to remove particles from the eye.

Pull down the lower eyelid. If the material is on the surface of the lid, lift it off carefully with the corner of a clean cloth. Do not use paper cleansing tissue or cotton.



Removing particles from the eye.

Gently pull the upper eyelid out and down over the lower eyelid. This may remove a particle from the upper eyelid.

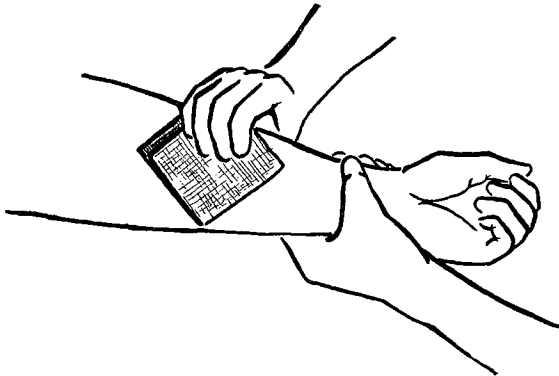
If the particle is still there or imbedded in the eyeball, or if the eye is injured, put one or two drops of mineral oil on the lower eyelid. This will relieve pain and keep the eyeball from being scratched. Cover the eye with a dressing and call a doctor.

CONTROLLING BLEEDING

Blood is pumped by the heart to all the parts of your body through blood vessels. There are three kinds of blood vessels: arteries, capillaries, and veins. Arteries carry the blood from the heart to the capillaries. Veins carry blood from the capillaries back to the heart.

When a person has a small cut, usually only the capillaries are injured. When there are larger wounds, veins or arteries may be cut. Blood from an artery comes in spurts and is a brighter red than blood from a vein. In actual first aid work, however, it is very hard to tell whether an artery or a vein is bleeding. The most important thing for you to know is that the bleeding must be stopped at once.

Loss of a quart of blood by an adult or a proportionately smaller amount by a child is serious. This amount of blood can be lost within less than a minute if a large blood vessel is cut, so serious bleeding must be stopped immediately. You must give first aid without wasting even a second.



Stopping bleeding by pressure.

In most cases you can stop the bleeding by putting pressure directly on the wound. Apply pressure with a sterile dressing or any other clean cloth that is available. Fold the dressing to form a wad and bandage it tightly against the wound. Do not remove it when it becomes reddened by blood, just add more dressing.

Pressure points

Pressure directly over the wound may not stop bleeding if a large artery is injured. In such cases, you should also apply pressure at one of the pressure points. These are points in the body where arteries lie close to bones. By applying pressure with your fingers at these points you may be able to stop bleeding by collapsing the artery. These are the pressure points:

For wounds on head and scalp, apply pressure just in front of the ear.

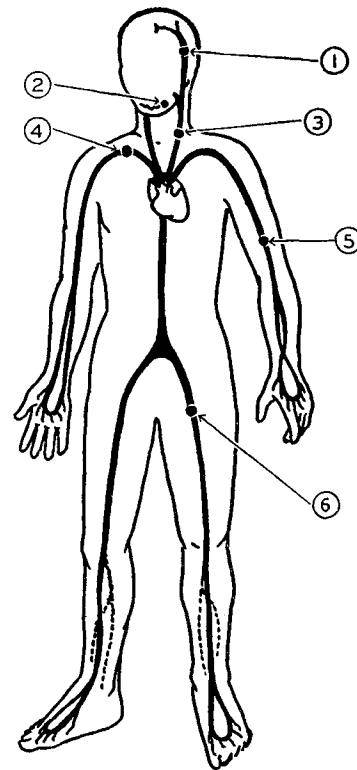
For wounds on the face below eye level, apply pressure along the jawbone.

For wounds on the neck or throat, place fingers at the side of the windpipe and carry the thumb around to the back of the neck. Apply pressure with the ends of the fingers and the thumb so that the artery is pushed toward the spinal column.

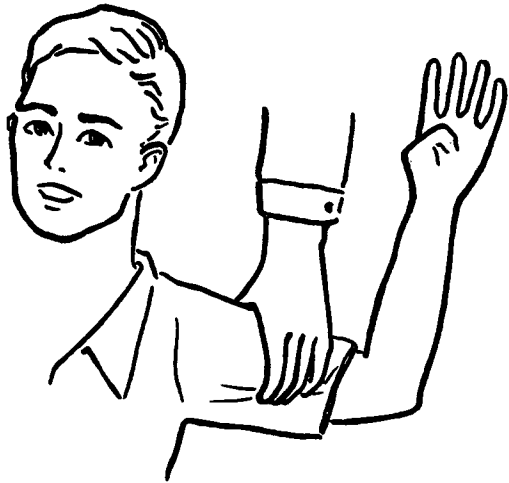
For wounds on the upper arm, armpit, or shoulder, apply pressure behind the inner third of the collarbone against the first rib.

For wounds on the hand, forearm, and upper arm, grasp the arm about halfway between the shoulder and elbow with the fingers well up on the inside of the arm and the thumb on the outside. With fingers press the artery against the armbone.

For wounds on thigh, leg, and foot, apply pressure with the heel of the hand in the middle of groin. Press the artery against the pelvic bone.



Where the pressure points are located on the body. Each point is of course duplicated on the opposite side of the body.



Applying pressure at the pressure point on the upper arm.

Tourniquets

When bleeding cannot be stopped by any other method, a tourniquet can be used. But remember that a tourniquet should only be used when the patient is very seriously injured and is losing a great deal of blood.

A tourniquet should be a flat band at least 2 inches wide. You can make one from a triangular bandage, handkerchief, belt, or stocking, but never rope or wire. The most convenient places to correctly apply a tourniquet are around the upper arm and around the thigh.

Place the tourniquet close to the wound, but not at the very edge of the wound. There should be unbroken skin between the tourniquet and the wound. Always apply the tourniquet above the wound, between the wound and the heart. Wrap the tourniquet twice around the limb and tie a square knot. Then insert a pencil or stick and apply pressure by twisting. The tourniquet should be twisted tightly enough to stop the bleeding.

Once the tourniquet is applied, it should not be taken off, no matter how long it has been in place, except by a doctor. A doctor is prepared to control the bleeding that may start again. A notation should always be attached to the patient, giving the location of the tourniquet and the time of application.

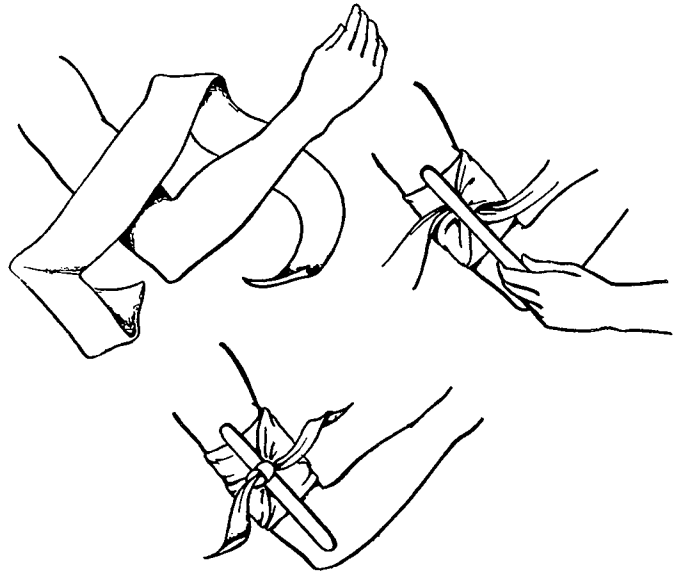
Nosebleeds

Nosebleeds frequently follow injury. They may occur occasionally when 4-H Club members participate in some of the more active sports. Children

often have nosebleeds that are brought on freely, without any injury. Adults who have high blood pressure often have nosebleeds too. Treatment is not usually needed, but if bleeding continues the following methods may be used to stop the bleeding.

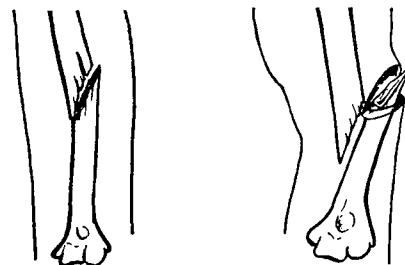
Have the patient sit up with his head tilted back slightly. Apply cold wet compresses over the nose.

The bleeding is usually from one side of the nose only. If the nosebleed is not caused by an injury, press the nostril on the bleeding side against the middle partition of the nose. Apply pressure for at least 4 or 5 minutes.



Three steps in applying a tourniquet on the upper arm.

If the bleeding does not stop in a few minutes, pack a narrow strip of sterile gauze or cotton back into the nostril, allowing one end to be left out so that it can be easily removed. If the patient's nose continues to bleed, a doctor should be consulted.



(Left) A simple fracture, in which the skin is not broken. (Right) A compound fracture, showing both a wound and a break.

FRACTURES AND DISLOCATIONS

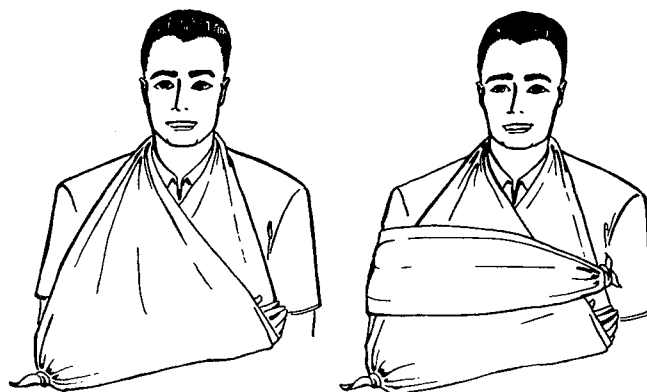
Fractures

A *simple* fracture is a broken bone without a break in the skin (see page 8). A *compound* fracture is both a wound and a broken bone. Handle a simple fracture very carefully during first aid treatment or a compound fracture may result.

In case of fracture, call a doctor at once. Do not move the injured person more than is absolutely necessary. You will know that the patient has a fracture when he complains of great pain at the point of injury. He will find that movement is either impossible or too painful. The injured area may become swollen very quickly.

When an arm or leg is broken, the bones may be overlapping or protruding. If it is necessary to move a person who has a broken arm or leg, apply splints so that the broken bones will be kept in place. Make the splint with a light board or any other piece of hard material. It should be long enough to reach beyond the joints that are above and below the break. Pad the splint with cloth, paper, or any other soft material. Then bandage the splint firmly along the entire length of the broken limb, except at the point of fracture.

When a collarbone is fractured, the patient cannot raise his arm above his shoulder. Often, the injured side is lower than the other. In such cases, place some padding under the patient's armpit. Make a triangular sling bandage about 2½ feet square. Put the arm on the injured side into the sling, and take the patient to a doctor.



Bandage for fractured collarbone.

When the spine is injured, there will be extreme pain in the back. The patient will not be able to move his feet or legs and will probably feel numb. In such cases, keep the patient warm and resting as comfortably as possible until the doctor arrives. Never change the position of the patient. Keep him quiet until the doctor arrives.

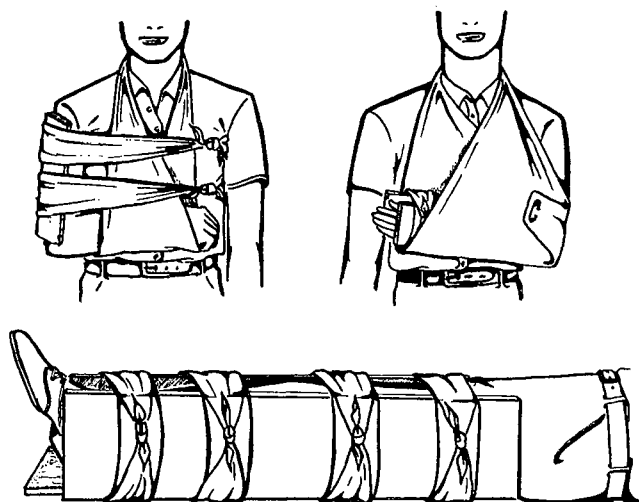
Dislocations

When a bone gets out of place at the joint, it is called a dislocation. The patient feels intense pain and usually cannot move the injured part. You can often feel the end of the bone that is out of place. The injured area swells quickly, and the patient may suffer from shock.

The first thing to do in case of a dislocation is to call a doctor. Then splint the injured part and place the patient in as comfortable a position as possible. You can lessen the pain by applying cold wet cloths to the dislocated joint. Fingers, thumbs, and shoulders are most often affected. Dislocations are usually caused by falls and blows.

It is best to have a doctor replace dislocations whenever possible. But you can treat less serious dislocations in emergencies. Hold a dislocated finger firmly with one hand on each side of the dislocation. Slowly pull the end of the finger in a straight line with the hand until it slips into place. Do not continue pulling if unsuccessful. The first-aiders should never attempt to put a dislocated thumb into place.

Never try to replace a dislocated bone if there is an open wound near the joint. Dress the wound and send the patient to a doctor.



(Upper left) Splint for broken upper arm; (upper right) splint for broken forearm; (bottom) splint for broken lower leg.

TREATING SHOCK

Any person badly injured may develop a condition called shock. It may come on immediately after an accident or be delayed for several hours. Shock may be slight, lasting only a few seconds, or it may be very serious and even cause death. Shock is brought on by a disturbance of the nervous system that prevents the blood from circulating through the body properly.

When a person is in shock, his face is pale and his eyes are glassy. Cold perspiration appears on his forehead and the palms of his hands. His pulse is rapid and weak. Sometimes it is so weak that it cannot be felt at the wrist. The patient's body feels very cold and may even shake violently. Usually he lies quietly and takes little interest in what is going on around him. He may vomit or feel like vomiting. His breathing is very irregular.

It is much easier to prevent shock than to treat it. So do not wait for shock to appear. When you give first aid to a badly injured person, always try to prevent shock. The treatment is the same for shock and for shock prevention. These are the things to do when treating or preventing shock:

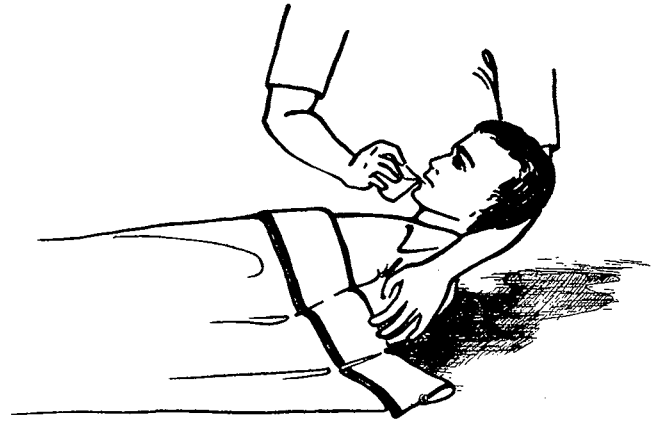
Keep the patient warm. This is most important. Carefully put a blanket under him. If you are outdoors, use a coat or newspapers. Cover the patient with another blanket or coat. If the weather is cold, use several blankets. Be careful not to overheat the patient. Too much heat will cause the patient to sweat too much and lose important body fluids. This can be very dangerous. In some cases of shock, death has been caused by the application of too much heat.

TREATING ASPHYXIA

Certain accidents, such as drowning, choking, gas poisoning, and electrical shock cause people to stop breathing. Death follows a very short time after the person has stopped breathing. The first aider can artificially carry on breathing for the patient. This is known as artificial respiration. Before starting artificial respiration, however, rescue the person from the cause of the asphyxiation.

Rescue

There are many methods and techniques of rescuing a person from drowning. Club members interested in this phase of first aid should consult life-



Giving a shock patient a drink.

Make the patient lie down at once. He should lie on his back with his feet raised and his head lowered slightly. Do not put a pillow under the patient's head or allow him to sit up except when he has a chest or head injury.

Give the patient a warm drink, unless he is unconscious or injured internally. Coffee and tea are both excellent stimulants. The warmth of the drink alone is helpful in treating or preventing shock. Do not give the patient more than one cupful of liquid every half hour. More than this amount may cause vomiting. Do not try to make an unconscious person drink. An inhalation stimulant, such as smelling salts or aromatic spirits of ammonia on a handkerchief, placed near the patient's nose should be used when the patient is unconscious. Do not give a stimulant until bleeding is controlled or when the patient has a fractured skull.

Call a doctor as soon as possible.

guards at local swimming pools and should study the Red Cross Life Saving Methods booklet.

When reviving a person who is choking, quickly cut away anything tight around his neck. If an object is stuck in his throat, a sharp slap between the shoulder blades may remove it. Placing him across a bed on his abdomen with his head and shoulders below the rest of his body may be helpful. When rescuing a person who has been exposed to a poisonous gas, get him into the fresh air as quickly as possible. If he has stopped breathing, give artificial respiration. Be sure to protect yourself from the gas. There are many protective devices on the mar-

ket, but they may not be available when they are needed. Placing a wet cloth over your mouth and nose will give some protection. Before going down into a well or any other closed chamber, tie a rope around your waist and instruct a helper to come to your rescue if necessary.

When rescuing a person who has been shocked by electricity, it is most important to break the contact between the individual and the electric circuit. Do not touch the victim. Turn off the electric current if possible or call the power company and have them do it. If the current cannot be turned off

quickly, insulate your hands and feet with dry newspapers or clothing and then try to pull the victim away from the electrical contact. Another good method of preventing direct contact is to loop a dry rope or a piece of dry clothing around the victim so that you can pull him to safety. Sticks and pieces of dry wood may also be used to move the electric wire or the victim.

In all cases where breathing is stopped, give the patient fresh air and keep him warm. Give artificial respiration until he starts breathing again or until a doctor or pulmotor squad arrives.

Artificial Respiration

If a person's breathing is stopped by an accident, you can try to save his life by giving artificial respiration.

The American Red Cross, the Armed Services, and other organizations have adopted a new method of artificial respiration. It is called the back-pressure, arm-lift method. This is how to practice it with one of your friends or family:

1. Place the person face down. Bend his elbows and place one hand upon the other. Turn his face to one side, placing his cheek upon his hands.

2. Face the person and kneel at his head on one or both knees. You can put one knee at the side of his head close to his arm, and place your opposite foot near his elbow. Or you can put one knee on each side of his head. Put the heels of your hands on the person's back just below a line between the armpits. Have the tips of your thumbs just touching; spread your fingers downward and outward.

3. Rock forward slowly until your arms are directly above your hands. Keep your elbows straight. Push down upon the back with a steady even pressure as you rock forward. This forces air out of the lungs.

4. Then rock slowly backward, sliding your hands along on the person's arms to just above the elbows.

5. Keep rocking backward as you raise his arms up and toward you until you feel a tension or pull at his shoulders. This expands the chest and forces air into it. Then lower his arms.

Begin again with step 2. Continue to do steps 2, 3, 4, and 5 at the rate of 12 times per minute.

Continue artificial respiration until the person is breathing regularly or until the doctor comes. If the person starts breathing, do not let him get up.



TREATING FAINTING

Fainting may be brought on by pain from an injury, hunger, fatigue, the sight of an injury, or an emotional shock, such as fear or sudden bad news. Any of these things may keep the brain from getting enough blood. Lack of blood in the brain causes fainting.

When giving first aid, try to prevent the patient from fainting. Sometimes an injury more serious than the original will result from a fall during fainting. Keep this from happening by insisting that the patient lie down. A patient who is lying down will not faint. If he is in another safe position, watch him carefully, and at the first sign of fainting, have him lie down.

When a person is about to faint, he feels weak and dizzy and becomes very pale. His forehead is

covered with perspiration and everything looks black. Then the patient slumps in his chair or falls unconscious to the ground. Breathing is shallow and pulse is weak and slow.

When a person feels faint, lower his head between his knees. If he does not feel better at once, he should lie on his back with his head lowered. Loosen tight clothing around his neck and waist and give him plenty of fresh air. Sprinkling cold water or placing a cold damp cloth on his face will help the blood circulate to his brain. Holding smelling salts or a cloth containing aromatic spirits of ammonia to his nose will also help to revive the patient.

If he does not recover very soon, keep the person comfortable and call a doctor.

TREATING SUNSTROKE AND HEAT EXHAUSTION

A person suffering from sunstroke has been exposed to too much heat — especially the sun. The patient is always unconscious. His face is red and the pupils of his eyes are enlarged. His skin is hot and dry. His pulse is strong and rapid and he has a very high temperature.

Move the patient to a shady place or a cool room. He should be lying down with his head elevated. Cool his body by sponging him with cool water, applying cold compresses, or giving him cool baths. Do not give him anything to drink until he is conscious again.

Heat exhaustion is also caused by exposure to

heat, but is due mainly to a deficiency of salt in the body. It may occur either indoors or outdoors. The signs and symptoms are those of shock. The patient's face is pale. His skin is moist and cool and he is sweating. His pulse is weak and his temperature is low. He may faint, but will not remain unconscious for more than a few minutes, except in a very serious case.

Move the patient to a well-ventilated place and treat him as you would for shock. (See page 10.) If he is conscious give him salt water to drink, a little at a time. Call a doctor if the symptoms do not pass quickly.

TREATING BURNS AND SUNBURN

Burns

Burns are one of the worst kinds of injury. They are usually very painful, are easily infected, and heal slowly. Do all that you can to prevent burns, but if someone suffers a burn, follow these suggestions for first aid.

In treating burns, the first aider's duties are to relieve pain, prevent infection, and treat shock. For mild burns use clean vaseline on the reddened area. Cover with a sterile dressing and hold it in place with a bandage.

The burned area may blister. Do not open the blisters. This will help to prevent infection. Put a sterile dressing over the burn. Then if the burn is extensive, the patient should see a doctor.

For deep and extensive burns, use a dry sterile

dressing and bandage. Keep the injured person lying down, and get a doctor as soon as possible.

Never use cotton or apply iodine directly on a burn. While treating the burn, treat the patient for shock.

Sunburn

You can put oils such as vaseline, olive oil, or mineral oil on skin reddened from sunburn. This will help relieve some of the pain.

If there are blisters, do not break them. Cover them with a sterile dressing. You can use a dressing wet with soda-water solution as for other burns.

Severe sunburn causes swelling of the skin, a fever, and headache. It should be treated by a doctor.

BLISTERS CAUSED BY PRESSURE

Blisters may be caused by pressure or pinching of the skin. For example, raking leaves or rowing a boat may cause blisters on the hands, or poorly fitted shoes may cause blisters on the feet.

Wash carefully with soap and water over and around the blister. Then cover it with a sterile dressing and protect it from further pressure.

IVY, OAK, AND SUMAC POISONING

Poison ivy, poison oak, and poison sumac plants are common causes of skin poisoning. 4-H Club members often come in contact with these plants at camp or in the woods.

Skin poisoning can often be prevented by washing the exposed areas immediately after exposure. Make a thick lather using plenty of hot water and soap. Wash the area 5 or 6 times, but do not use a brush or any other rough material. These will irritate the skin and increase the danger of poisoning. After washing thoroughly, rinse with rubbing alcohol and then with clear warm water.

A rash may develop in spite of this preventive treatment. The skin will become red and swollen and will itch violently. Wash the areas as described

above. Then apply dressings wet with an Epsom salts solution. Keep the dressing wet. Or buy some calamine lotion to which a 2-percent solution of carbolic acid has been added. Apply it with a cotton sponge and let it dry. This is a good lotion to take to a camp where poison ivy, poison oak, and poison sumac exposure occurs often.

Some people are especially susceptible to ivy, oak, and sumac poisoning, and the swelling may become uncomfortably great. If this happens, get the patient to a doctor. Those who are susceptible in this way need to be especially careful about coming in contact with the plants; it may be advisable also for them to consult with a doctor about preventive treatments.

POISONS TAKEN INTERNALLY

Sometimes little children swallow poisonous materials that have been left in their reach. Or they may get hold of some common medicines (aspirin, laxative pills, and the like) that can have the same effect as poison if taken in an overdose. Even older people sometimes take poison accidentally when they carelessly mistake it for their medicine.

Whatever the cause, you must move fast to stop the action of the poison before it spreads through the entire body or damages the stomach.

Get the patient to a doctor or a hospital at once. If this is impossible and you are sure that poison has been taken, give the victim water to drink at once. This will dilute the poison in the stomach so that it is not absorbed as rapidly as when it is concentrated. Then induce vomiting, *unless it is an acid or lye poisoning.*

There are several ways you can get the patient to vomit. You can give several glasses of water containing two teaspoonfuls of baking soda. You can also give soapy water, lukewarm water, or milk. Tickling the back of the throat with the finger will help to make the patient vomit.

When the stomach is well washed out, you can give an antidote, if you know what it is and have it available. But don't waste time with an antidote before you wash out the stomach. You can give a heaping tablespoonful of Epsom salts after the stomach is emptied; it is good treatment for almost any poison.

For acid or lye poisoning, do not cause vomiting. For acids, first give several glasses of baking soda in water to neutralize the acid, and then give milk. For lye poisoning, give several glasses of water containing lemon juice or vinegar to neutralize the lye and then give milk. Keep the patient warm.

Remember that poisoning is usually completely unnecessary and can be prevented. You can help to see that poisons that small children might get into are kept out of their reach. Sometimes people take poisons in mistake for medicine; you can help prevent this by suggesting that all such bottles be clearly labeled and kept in a separate place away from other medicines. Keep in mind also when taking or giving medicine to read the label carefully both before and after it is given.

PROBLEMS

Now that you have studied the material in this pamphlet and information from other sources, you are ready to tackle some practical problems in first aid. Several problems are given on this page. You can think of others, or your leader may give you others from time to time.

To solve these problems you need to do two things. First you need to diagnose the difficulty — that is, you need to recognize what is wrong from the symptoms. Then you need to demonstrate the correct first aid treatment.

Problem 1

While Nancy and Elaine are doing dishes together, a dish breaks in Nancy's hand and gives her a fairly deep cut at the base of the right index finger. It is bleeding freely.

Demonstrate how the bleeding should be stopped and how the wound should be dressed. What other treatment may be necessary?

Problem 2

While helping with the chores around the farm, Bill fails to notice a pitchfork which has been left lying in the barnyard. He steps on it and gets a puncture wound in his left foot.

Show what first aid should be given. Explain the particular danger from this type of wound. What should be done immediately with a wound of this sort in regard to medical treatment?

Problem 3

Charley is at the bottom of a pileup in a football game after the meeting. He comes up with a bleeding nose and also complains of his shoulder. Upon examination, his left shoulder is found to be much lower than the right.

What is wrong? Demonstrate the first aid treatment Charley should receive.

Problem 4

While getting the cows from the back pasture, which joins Neighbor Brown's farm, after a heavy rain and wind storm, you find Mr. Brown lying on the ground. A high-tension electric wire is lying across his back, and a fork with which he had been cleaning debris from a nearby swollen stream is at his side. The ground is damp all around him. Except for a slight movement, he appears lifeless beneath the wire.

Explain what has happened and demonstrate the rescue and first aid methods you would use.

Problem 5

It is a hot night and the club meeting, which is being held in a small crowded room, has lasted longer than usual. Mary notices Betty, who is sitting next to her, slump forward. At first she thinks Betty is asleep, but then she notices that Betty's color is a ghastly white and that she is not breathing as a person does who is asleep. Mary remembers that Betty had said earlier that she felt weak and dizzy.

What is wrong with Betty? What first aid should Mary give her?

Problem 6

Two of your city cousins go with you to watch the 4-H Club softball team practice on Saturday afternoon. Not all the players come, so your cousins are asked to fill in. They are not used to such strenuous exercise in the sun, especially after a morning of chores, bicycling, and other activities. Don, who has been asked to play roving short, feels faint but is too good a sport to quit playing. While chasing a fly, he loses his speed and sinks to the ground. Most of the boys think he has tripped and fallen and are surprised when he does not get up right away. They find that he is unconscious, his face is flushed, his skin is dry and hot, and his eyes seem to stare and the pupils are enlarged.

Tell what is wrong with Don and demonstrate the first aid treatment he should have.

Problem 7

During a hike while in camp, Bob sits down on an old log to rest for a few minutes. He hears a peculiar rattle in the grass nearby but pays no attention to it, thinking the noise was made by one of his friends. Suddenly he feels a sharp pain in his leg just above the shoes and sees a grayish-black snake with a diamond-shaped head crawl away.

Demonstrate the first aid treatment Bob should have. (You can use a colored crayon to show fang and knife marks.)

Problem 8

While in camp you develop an intense itchiness on your left arm. You scratch to relieve it and notice that your skin is fiery red and that there are eruptions on your arm, which seem to grow and spread as you rub and scratch them.

Explain what has happened and specify the treatment.

SUGGESTIONS FOR CLUB MEETINGS

Some time should be given to the health activity at each 4-H meeting. Each member may earn points for honors in 4-H:

	<i>Points</i>
1. By having a health examination	
a. Complete physical	3
<i>or</i>	
Simple health check.....	1
b. Dental examination	2
2. By participating in a health activity such as first aid.....	5
Total	8 or 10

Some clubs have a doctor, nurse, or dentist give examinations to all members. Others let the members make their own arrangements. Club leaders should make plans to see that each member is examined during the year.

At each club meeting, members should participate in first aid by giving talks or demonstrations. Try to solve the problems in this manual. Other talks, demonstrations, and group activities in which all of the club might participate are:

- Talks:**
 - Importance of First Aid
 - Supplies for the First Aid Kit
 - Kinds and Uses of Dressings
 - Kinds and Uses of Bandages
 - What to Do for Shock
 - What to Do for Fainting
 - Treating Cuts and Scratches
 - Treating Burns and Sunburns
 - How to Stop Bleeding
 - What to Do for Eye Injuries
 - What to Do for Bruises and Blisters
- Demonstrations:** How to Make and Fold a Triangular Bandage
How to Tie a Square Knot
- Group activity:** All members practice folding triangular bandages and tying square knots
- Demonstrations:** How to Make an Arm Sling
How to Bandage a Hand
- Group activity:** All members practice making an arm sling and bandaging a hand
- Demonstration:** How to Bandage an Arm, Elbow, Leg, or Knee
- Group activity:** All members practice bandaging an arm, elbow, leg, or knee
- Demonstration:** How to Give Artificial Respiration
- Group activity:** All members practice giving artificial respiration
- Demonstration:** Applying Splints to an Arm or Leg
- Group activity:** All members apply splints to an arm or leg



ITEMS FOR YOUR FIRST AID KIT

- | | |
|--|--|
| <p>Adhesive tape, 1 roll 2"</p> <p>Antiseptic, as advised by doctor</p> <p>Aromatic spirits of ammonia, small bottle</p> <p>Bandages: 2 triangular; pieces of clean, soft, white rags for large bandages and for cover over other bandages</p> <p>Dressings: assorted sizes of adhesive dressings; square gauze (folded), 3½" and 4" in individual packages</p> <p>First aid book of the American Red Cross</p> <p>Mineral oil, small bottle, for use in eyes</p> <p>Needles and tweezers for removing splinters</p> <p>Ointment for burns, plain sterile petrolatum or vaseline</p> | <p>Small scissors with blunt points</p> <p>Splints: two 3 inches wide, 17 inches long, and ¼ to ½ inch thick for fractures of the forearm wrist; two 4 inches wide, 30 inches long, and ⅜ to ½ inch thick for fractures of the leg or ankle; two 4 inches wide, 60 inches long, and ⅜ to ½ inch thick for fractures of the thigh and knee.</p> <p>Sterile cotton, 1 package</p> <p>Swabs, plain cotton</p> <p>Tourniquet, inelastic (triangular bandage could be used); use of a tourniquet is not recommended unless absolutely necessary</p> |
|--|--|

EMERGENCY DIRECTORY

Besides knowing what to do in an emergency, you need to know where you can get help. Keep a list of the telephone numbers and addresses of the following:

- Parents or nearest relative
- A doctor
- The nearest hospital
- An ambulance
- Fire Department
- Police Department
- Nearest Office of Civilian Defense

Put these down on a small card and carry it in your billfold or purse. It is a good idea to keep a duplicate of the list near your telephone.

This bulletin has been reprinted for Minnesota use from Illinois 4-H Pamphlet 117, through the courtesy of the Extension Service in Agriculture and Home Economics, College of Agriculture, University of Illinois, Urbana. It was prepared by O. F. Gaebe, Extension Specialist in 4-H Club Work, and Pauline Brimhall, Extension Specialist in Health Education, University of Illinois. Material is based on information and illustrations in the "American Red Cross First Aid Textbook" and the "American Red Cross First Aid Textbook for Juniors."