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Responding to Farm Accidents[1]

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Most rural and farm family members are aware of potential hazards on farms. But they may not always know what actions to take if they arrive first at a farm accident scene.

The problems farm accident victims encounter often are compounded by other factors. These may include time lapses between the accident and discovery by another person; accident sites that may hinder rescue personnel; long distances accident discoverers may have to travel, sometimes on foot, to seek medical assistance; and the need for discoverers, who probably are untrained in emergency procedures, to make decisions quickly as to what to do first and how much first aid to give before summoning help. More often than not, the shock of the situation hinders an untrained person's thinking and decision-making ability.

Because of these problems, a basic understanding of rescue procedures and first aid methods is extremely important for farm families and employees. Human nature leads us to ignore the possibility that disaster could strike our lives-it always happens to "the other guy." Playing the odds with an accident requiring first aid is not a smart move.

The ability to make quick decisions and take proper action could be the difference between the victim recovering from an accident or having a permanent disability or worse. The first step in preparing for an emergency is for everyone on the farm to take a first aid and cardiopulmonary resuscitation (CPR) course.

The following information gives general recommendations and procedures to follow for the person arriving first on the scene.

SITE ASSESSMENT

Always remain calm when responding to any emergency situation. First, size up the situation from a position that does not put you at risk of injury. Is the victim alive? Is he conscious? Is she having difficulty breathing? Is the victim trapped in or under the piece of equipment, or in danger of further harm? Is the equipment still running? Are potentially hazardous fluids such as gasoline leaking from the equipment? Will approaching the victim endanger your life? Because overturned machinery may not be stable, it should be approached from the uphill side.

BREATHING

Whether you immediately go for help or begin rendering aid depends on the type of accident, the severity of the injury and your ability to correctly administer first aid and/or CPR. If you provide aid first, your immediate concern should be respiration. Responsiveness can be determined by shouting, "Are you OK?" This prevents unnecessary resuscitation of a person who is sleeping.

If the victim does not respond, call for help. Call out in the hope that someone will hear who can assist or summon a rescue squad.

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Always approach a victim from the direction in which he or she is looking. Otherwise, victims may risk further injuries by moving to watch you. You should then put your ear within an inch of the victim's mouth to listen for breathing while you are watching for the rise and fall of the chest. Unconscious persons can lose their ability to keep their airway clear by the normal methods of coughing, swallowing and so on.
If there is absolutely no chance of neck or spinal injury, the head generally can be tilted back to make a better airway. However, always keep the neck and head in normal alignment and do not move the head where it is comfortable for you.

Sometimes people are trapped so that their lungs cannot expand. This can cause suffocation. When possible, anything that prevents normal chest expansion should be removed. An example of providing for chest expansion would be removing earth from below the chest area of someone pinned beneath a tractor or cutting away clothing that is tightly wrapped, as is common in power-take-off entanglements.

Great caution should be exercised not to disturb the balance of the tractor when it could further injure the victim. Tightly wrapped clothing that is not restricting breathing may actually be beneficial by restricting blood loss. Carefully evaluate this potential, especially when an amputation is involved.

BLEEDING

The next concern is bleeding. Many farm accidents involve lacerations or partial or complete amputations. The best method to control bleeding is to put direct pressure on the wound and to elevate it above the heart. If this fails and you know the extremity pressure points (inside of the upper arm midway between the elbow and shoulder, or the upper inside of the leg in the groin area), you can use them to stop bleeding by pressing the artery tightly against the bone above the wound.

For severely bleeding extremity wounds that cannot be controlled by any other method, the last option is a wide tourniquet, such as a belt, clothing or anything else that is strong and wide enough not to damage the tissues underneath (3-4"). It should be applied snugly 2 to 4 inches above the injury. A thick stick or long slender wrench (screwdriver, ratchet handle) may be needed as a twister to tighten the tourniquet.

All other methods of controlling bleeding should be tried before a tourniquet is applied. Once applied, it must stay snug until the victim arrives at the hospital. Using a tourniquet is an extremely serious choice, since it may mean sacrificing an arm or leg to save a life.

If skin or an appendage has been removed, try to locate the amputated tissue for possible reattachment. However, do not delay the transport of a severely injured victim to look for amputated tissue. It can be sent to the emergency facility after it is found. The steps to follow in an effort to properly preserve amputated tissue are:

- Do not try to clean the tissue.
- Wrap appendage in a dry, sterile dressing or towel. Secure the towel with adhesive tape.
- Place the wrapped part in a clean plastic bag and label it with the victim's name, the date and the time. Seal the bag.
- Place the package in a cooler on top of a sealed bag of ice for transport to the hospital.
- Never allow an amputated part to be submerged in or even come into contact with ice or water. Never use dry ice to keep an amputated part cool.

ACTIVATING EMS

Once the situation is stabilized, or if you choose to go for help before rendering aid, seek help from trained medical professionals through the Emergency Medical Services (EMS). Even if you are not sure that medical attention is necessary, it is better to activate the emergency medical service and later cancel the request when you are positive they are not needed.

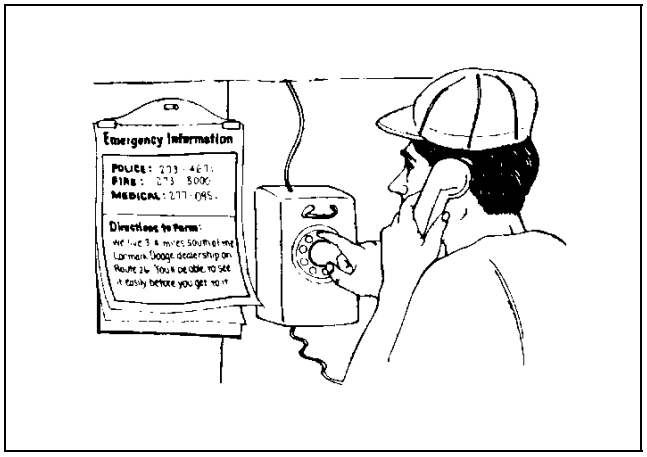

Figure 1. Posted phone numbers and information help this man to quickly activate EMS and provide clear directions to the accident site.

Reporting the emergency yourself from the nearest telephone is probably the surest way of getting the necessary information to the proper authorities. If you are a passerby and are unfamiliar with the area, the person

whose phone you are using should be able to give directions. Keep in mind that not all areas have access to 911 services. If you do not know the number, you may have to call for operator assistance (see Figure 1).

If you are alone and a telephone is not available, you may need to find a roadway and flag down a passing motorist. Perhaps a farmer is working in a nearby field. You also could look for a vehicle with a CB antenna and use its radio for summoning help. CB or other two-way radios are common on tractors, and a quick check of the machinery involved in the accident may reveal an operational radio.

KEY POINTS FOR PRE-PLANNING

Planning whom to call and how to give easy-to-follow directions in advance is the most effective preparation for farm accidents. Giving directions to any part of your farm may seem a simple task, but experience has shown that mileage estimates, landmarks, road and bridge conditions, and turning directions do not come easily when people are highly excited or distraught.

Location of ambulance and rescue squads. Do not assume all ambulance and rescue vehicles will come from the same direction, or that they are housed together. Know specifically where each person you call is located and have specific instructions for each.

Mileage figures. The only way to be sure of distances you always thought you knew is to check them with an odometer. Emergency personnel may only have mileage figures to guide them, so the figures must be accurate. For a driver who may not be familiar with the area, "about 2 or 3 miles" is poor instruction. When describing turns, say "left" or "right" rather than giving compass directions.

Many in rural areas give and receive instructions with reference to landmarks. Landmarks can be effective guideposts if everyone is aware of them. But some problems that can arise with landmarks are: new people can move into an area; a landmark structure can be torn down; or new subdivisions or roadways can alter traffic patterns away from old, established landmarks. Many rural roads now have road signs. Their use greatly reduces confusion for all involved. For these reasons and more, citing landmarks may not be the best way to give directions. If you do use landmarks, make sure they are well known, easily visible and permanent. They must meet these requirements whether it is day or night and regardless of the time of year.

Critical time can be saved by having someone meet the rescue personnel at the entrance to your farm or another specified point and lead them to the accident site. Be sure the EMS knows of your intentions.

RETURN TO THE SCENE

If someone is trapped, it is important that you use the time before the emergency team arrives to further assess the situation. If you are familiar with the piece of machinery, your ideas for removal of the victim could be extremely helpful to emergency workers.

If you were not alone when you discovered the accident and another person went for help, control blood loss and make sure the victim can breathe. This may be all you should attempt if you are not familiar with rescue procedures. If you try to remove an entangled person from a machine, you may cause even more blood loss or aggravate injuries you cannot see, such as an injured spine or ruptures of internal organs. Removal and rescue should be conducted under controlled conditions by trained personnel.

The most likely reason for attempting to remove a trapped victim is to avoid further injury from a clear and immediate hazard. More probable is a situation where fire or explosion is a possibility, but the odds could be significantly reduced without moving the victim. Recommended actions include turning off the ignition and any other electrical accessories such as lights; keeping fire sources such as cigarettes and flares well away from the area; and disconnecting the machinery’s battery ground. If you carry a fire extinguisher, have it on the scene.

Watch for battery fluid leaking onto the victim. Leaking fuel could be channeled or dammed up away from the victim. These methods also could be used to keep battery acid or other dangerous liquids out of contact with the victim. Hot oil from the hydraulic systems or transmission also may pose a problem.

If you have determined that it is necessary to move a victim that you even suspect has a spinal or back injury, keep the midline of the body as straight as possible and pull in a direction that is in a straight line with the victim’s spine.

Pull the body from the feet or shoulders. Use both feet, both shoulders or both arms pulled over the shoulders. If arms are used, assess for broken bones. It also is possible to pull by the victim’s clothing. Grab the collar of the shirt and support the victim’s head with your forearms while pulling.

The "clothes drag" method is preferred because the head is supported while being moved. Do not pull the body sideways. When providing care, it may be necessary to roll the victim over onto his back to clear an airway or evaluate breathing. When rolling the victim over, the head, neck and

torso should be moved together so that no twisting occurs. This can be difficult for one person to accomplish (see Figure 2).

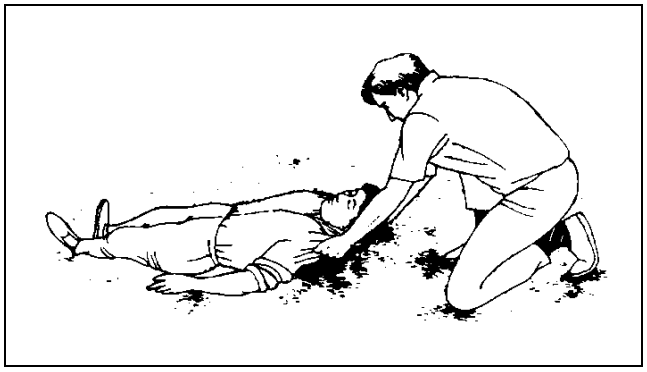

Figure 2. "Clothes drag" method for moving a victim.

If you do discover someone trapped in or under a piece of farm machinery, realize that each situation is unique. Do not expect miracles from yourself, emergency personnel or anyone else. It is important that would-be rescuers do not become victims themselves, adding complications to an already bad situation.

BE PREPARED

Finding an accident scene is a traumatic experience for anyone, but even more so when the victim is a close friend, neighbor or family member. This is often the case with farm accidents. What you do in the seconds following the discovery may mean the difference between total recovery and death. Are you prepared?

There are a number of first aid and CPR courses available through public service organizations that help prepare you for emergency situations. The intensity of these courses is broken down into three levels: basic, half-day sessions; intermediate, one-day sessions; and advanced, multiple-day sessions.

For specific information, contact your local Red Cross, fire department or local University Extension center.

GENERAL FIRST AID SUPPLIES

Many types of first aid kits are available to the public. Place a small, regularly maintained kit on every major piece of farm equipment, truck, or auto. Display a larger kit at each farm building, shop, or home.

- Red Cross First Aid Manual and The American Academy of Pediatric Surgeons First Aid Chart.
- Syrup of ipecac and activated charcoal (to be used under direction of Poison Control Center only).
- Sterile first aid dressings in sealed envelopes, 2" x 2" for small wounds; 4" x 4" for larger wounds and for compress to stop bleeding (Do not make your own).
- Two trauma dressings for covering large areas.
- Small sterile compress with adhesive attached in sealed envelopes.
- Roller bandages; 1", 2", and 6" cling bandages.
- Adhesive tape: rolls of assorted widths to hold dressings in place.
- Triangle bandages for slings or as a covering over a large dressing.
- Soap for cleaning wounds, scratches and cuts.
- Tongue depressors.
- Bandage scissors; heavy-duty scissors to cut clothing.
- Tweezers to remove stingers from insect bites or to remove small splinters.
- Splints 1/4" thick x 3" wide x 12"-15" long for splinting broken arms and legs.
- Sterile saline solution (8 ounces for small kits, 2 quarts for large kits).
- Safety pins.
- Ice packs (chemical ice bags) to reduce swelling.
- A pocket mask for resuscitation.
- Three small packages of sugar for diabetics.
- Disposable rubber gloves; eye goggles.

PESTICIDE FIRST AID KIT

Make your own first aid kit using a sturdy box with a tight-fitting cover that can be securely latched. Store the kit where it will not become contaminated by pesticides. Label all containers clearly. Use a waterproof marker or nail polish to label plastic bottles. You should include the following items in your kit:

- A one-ounce bottle of syrup of ipecac for inducing vomiting. Note: Never induce vomiting unless the pesticide label, EMS dispatcher, or poison control center recommends it.

- One teaspoon.
- A small package or pint bag of activated charcoal to be mixed with water and swallowed. Activated charcoal absorbs many pesticides.
- Two one-quart containers of clean water. If bottled water is unattainable in an emergency, use pond or stream water.
- Disposable rubber gloves; eye goggles.
- A supply of plastic bandages and tape to cover cuts and scrapes to prevent them from becoming contaminated by pesticides.
- Tongue depressors to mix materials.
- Two small, plastic, empty jars with tight-fitting lids. One can be used for a drinking glass or for mixing activated charcoal, the other to collect a sample of vomit for the doctor.
- A can of evaporated milk to give to the patient to help dilute the poison; a can opener.
- A blanket for treating shock, which must be kept where it will not become contaminated by pesticides. A "space blanket" is excellent for first aid use.