

WILDERNESS FIRST AID

By George E. Dvorchak, Jr., M.D.

I began work on this presentation after receiving a call from Pennsylvania Hunter Education Instructor Ed Soyke who asked if I would be interested in presenting basic first aid information to his class at the White Oak Rod and Gun Club, Inc.

This request came from the same group of dedicated instructors who volunteered their time and talents when I took this course two years earlier. Although I have been a hunter for nearly 30 years and was a one-time certified handgun instructor when a cadet at Valley Forge Military Academy, I learned a lot I probably would have missed without Hunter Education.

Besides, this would be an opportunity for me to "give a little back" which hopefully would help someone else.

I was soon to learn that much of what I took for granted would be hard to put into a presentation that would only touch on basics but would challenge students to enroll in an accredited first aid course. Wilderness first aid also meant that basic medical equipment found in many homes would be non-existent when and where an emergency would be likely to occur.

Pennsylvania's well written manual for this 10-hour course recommends that students should enroll for additional information in an accredited first aid course as offered by the American Red Cross. These are available through local rescue/ambulance and fire-fighting organizations. This is the proper approach, but as human nature has it, I felt that few would enroll due to time, interest and the common feeling that an accident can not happen to me.

Knowing this, the instructors wanted some added information presented that would review what was covered as well as to possibly put a different perspective on a topic that should be familiar to all. In my opinion, first aid should be a part of every schools elementary and high school curriculum. I believe that the school boards and educational planners are sleeping on this one.

The following is what I feel is important and basic knowledge a hunter should have concerning the Disorder, Prevention, Signs & Symptoms, Field Treatment & Concerns.

HEAD INJURIES - Any injury to this part of the body should be considered serious because of the delicate structure within, meaning the brain and its blood supply.

SKULL FRACTURE: By its name this is a break in a bone of the head. Because the skull bones are strong and fairly protective of the structures under them, most fractures as from a fall are usually simple ones.

Since the bone is only cracked and not punched through the skin, bacteria and dirt from the outer layer of skin does not enter in the picture. An open or depressed fracture is much more dangerous since the broken bones can cut blood vessels which then leak blood. The result is increased pressure on the brain from the leaking blood which is now called an epidural or subdural hemorrhage.

Concerning *PREVENTION*, there is not a lot one can do except to be sure of the surface to be walked-on and to walk slowly when in unfamiliar territory or where there are logs, vines and stones to trip-on.

SIGNS & SYMPTOMS: This is tricky since an injury that may appear only as a bump on the head may be serious where one that looks bad due to blood loss may not have caused damage to the brain. Any signs of a skull fracture could be a deformity of a bone at or around the injury site, black eyes caused by torn vessels and therefore blood collecting in an area under the skin or blood and/or clear watery fluid better known as cerebrospinal fluid leaking from the nose, mouth and/or ears. The pupils or the black center of the eyes can be of different sizes.

These signs as well as being knocked unconscious are serious and the victim should be taken to a physician immediately. This could be the start of a deadly hemorrhage! There is nothing a first-aider can do here except to keep the victim quiet and keep the head flat and slightly turned away from the injured side. This is done to possibly relieve some pressure to that area. It is important to get the injured person to a medical facility as soon as possible.

CONCUSSION: This is a condition associated with brief unconsciousness following an injury with the head or neck involved. Even though there was a disturbance in the electrical activity to the brain which resulted in the loss of consciousness, there is usually no other damage. Yet, due to the dangers of head injuries, call your doctor for advice.

SIGNS & SYMPTOMS: lack of memory, confusion, blurred vision and vomiting. Even though the victim comes out of it without any apparent problems, for the first 24 hours bed rest and constant observation for drowsiness and other symptoms as above are important.

BROKEN NOSE: The only sure way to know if the nose is broken besides an obvious deformity is with an X-ray. Get to your doctor and during transportation, put cold packs or snow on the injury to decrease the swelling.

EYE - Injuries are common here, especially when in the woods or thick brush when it is dark.

PREVENTION: Wear yellow or clear shooting glasses in low light for protection. When there is a lot of snow in conjunction with bright sunlight, wear sunglasses to cut down on glare and to protect the eyes from wind burn or snow blindness.

FOREIGN BODY IN THE EYE: Do not rub the eye since rubbing may push the fragment of whatever into the soft tissue or cause it to scratch the eye's surface or cornea. To remove a foreign body, have someone use the top of a wet handkerchief to gently remove it.

SURFACE OR CORNEA OF THE EYE SCRATCHED: Get to your doctor. If something is still in the eye, hold a handkerchief lightly over the injured eye to prevent movement. Your doctor will probably give you antibiotic eye drops to prevent the possibility of a bacterial infection during the healing process.

An infection could lead to a corneal ulceration which could progress to blindness. When in the field, you will know when and if your eye has been scratched. Walking into a twig is a good way to cause this injury. I did that once an hour before day light on the one day I forgot my glasses.

BLEEDING WOUNDS - REMEMBER, USE PRESSURE AND DO NOT PANIC.

LACERATIONS (CUTS): To stop bleeding, apply constant pressure over the wound. This will prevent blood loss and help stop the bleeding or slow it down if a minor cut. If a major one, again apply pressure until you get to a doctor.

You probably will not have bandages with you so if you have a handkerchief, use that even if it is not the cleanest. The immediate concern is to stop the bleeding, worry about infection later. If you have nothing with you, then use your open hand to apply pressure over the wound. How do you know if an artery or vein has been cut: Blood from a vein is bluish red and will simply flow or ooze out. That from an artery will be bright red and will spurt out since its pressure is from a pump, the beating heart. It takes about seven minutes for blood to clot which will slow or stop the bleeding, depending on what was cut and how severe. With a bad laceration you are going to need to be sutured.

BULLET WOUNDS: This is serious trouble!

TREATMENT: Again, apply pressure over the wound if possible. If there is a big hole in the arm or leg, you may have to use a tourniquet to stop the bleeding. This could be a bandage, shirt, belt or deer drag

tightened above the wound. Get help! If pressure or a tourniquet will stop the bleeding, stay with the person and yell for help since blood loss can push the victim into another bad and potentially deadly situation known as shock. The only *PREVENTATIVE* measure for hunting accidents is not to have them happen in the first place. Hunter Education Classes combined with common sense could take care of this category.

PENETRATING WOUNDS: These are also common injuries that are unfortunately accidentally self-inflicted by being careless with an arrow, pointed stick or knife. The thing to remember here is that you usually should not remove the penetrating object in the field. Use a bulky dressing as from materials to stabilize the object and watch for shock. What to do here is a judgment call in the field with considerations as to what is injured and by what, how severe and where is the victim, etc. Again, a first aid class will give you the knowledge to make a correct call on this one. As with any severe wound, you need medical assistance.

SHOCK - There are various types and causes of shock. I will only present information on the type you will most likely encounter in the outdoors, *HEMORRHAGIC SHOCK*. This is induced by a reduction in blood to the body's tissues. It can be caused by cuts or blunt trauma that results in internal bleeding as from a ruptured liver or fractured bone which severed an artery or whatever: blood loss -> collapse -> coma -> death.

PREVENTION: USE pressure to stop or slow the loss of blood from a wound

SYMPTOMS: Cold clammy skin; rapid, shallow breathing; weakness; sweating; pupils of the eye become large or dilate; pulse is weak and rapid; the victim may be very thirsty and could faint. What you can not check without equipment is the blood pressure which becomes very low due to the loss of blood

TREATMENT: As with prevention, stop the bleeding! Make sure the mouth is clear of anything that could interfere with breathing. Let him lay down, keep him warm and get help.

SPRAINS - These are caused by a partial tearing of a ligament around a joint or injury to the joint's capsule. This is usually from a sudden and not anticipated movement.

SYMPTOMS: There is usually immediate pain and then swelling in the area injured.

TREATMENT: To the injured area, apply snow or put it in cold water. It is also important to rest the area and try not to apply weight. NEVER USE HEAT! Its use would be similar to putting fire to fire! Get to your doctor if there could be any chance of the sprain really being a fracture. If in doubt, treat it as a fracture. The only sure way to distinguish between the two is with an X-Ray. In both, the area above the injury will usually become black and blue, bruised. This discoloration is caused from blood leaking into the tissue after the injury.

Careful with bandages! If too tight it will act like a tourniquet by compressing the blood vessels which will greatly restrict the blood flow. If the ankle was sprained, you should not put an ace bandage completely over the toes because they should be visible so that changes in the color of the tips of these could be easily observed for indications that the bandages are too tight.

FRACTURES - Usually a bone is broken across its width. Types; **OPEN (compound):** Here a piece of bone sticks through the skin. **CLOSED (simple):** The broken bones are kept within the skin and due to less movement of the broken part, less tissue is damaged. A chance of infection has been greatly reduced since the skin is intact.

TREATMENT: Do not to put the bone back if a compound fracture. Immobilize the extremity of a fracture to prevent further injury and get the victim to the hospital. It is important that you do NOT move or put pressure on an injured area since you could cause nerve and tissue damage. If it is a spinal injury which is usually in the neck area, DO NOT MOVE the victim. Keep him warm and get help since he should be moved only by professionals. You do not want to do more damage when trying to help.

MYOCARDIAL INFARCTION (HEART ATTACK) - PREVENTION: This is the smart way to present a possible disaster when in the outdoors. Risk factors to consider are some of the following: smoking, overweight, diabetes, hyperlipidemia or a cholesterol problem, high blood pressure, stress, family history of heart disease, lack of physical activity, exertion and cold weather (associated with hunting seasons), being under medical care for a heart condition and not taking the medicine.

What usually causes the death of someone with a heart attack is a type of heart beat called *VENTRICULAR FIBRILLATION*. Its uncoordinated beating and therefore pumping action does not allow the heart, which is a muscular pump, to circulate blood. This can be controlled in a hospital with drugs and electrical defibrillation. Therefore, you have to get the person to the hospital without scaring him to death if conscious.

Stay calm! If the heart has stopped beating, then I hope you know CPR. Now is the time to learn cardiopulmonary resuscitation. Being prepared and not having to use something is a lot better than having to do something to possibly save a life and not knowing what to do.

SIGNS & SYMPTOMS: General findings in someone with a heart attack could be the following; severe pain in the chest, can not get your breath, a feeling of apprehension or simply being afraid, could be sick to your stomach and even vomit, in a sweat or even become unconscious.

HYPOTHERMIA OR DANGERS FROM THE COLD - Hypothermia simply means a fall in the temperature of the body from the normal oral range of between 96.8 to 99.3 degrees Fahrenheit. When the body temperature falls below 95 degrees F., this is a potentially fatal condition known as hypothermia.

Careful, since the belief that to get caught in this situation, you have to be lost in a wilderness area where the temperature is below zero, is false. This condition is possible in about any state where hunting or outdoor activities take place.

PREVENTION: Dress in layers when in the cold outdoors so when stalking, a layer can be removed to prevent overheating which will cause the body to perspire and therefore wet the clothing. When sitting for long periods you want to apply an extra layer of clothing for added protection against the elements. Therefore, if you get lost, do not panic, run around, sweat and eventually freeze.

Instead, stay calm and if it looks as though you are stuck for the night, use the remaining light to build a shelter and dig in for the night.

Also, be particularly careful around water since when wet, the body loses heat fast. Even if in water that does not appear to be that cold as 65 degrees, it will draw heat from that 98.6 degree body and therefore, overtime lower the temperature.

SIGNS AND SYMPTOMS: Shivering, an attempt of the body to warm itself; fatigued, due to the body using energy to stay warm; slurred speech; apathy; you may stumble and fall a lot which is also a good way to get ahead injury; have hallucinations and become disoriented. Later on you want to sleep which due to freezing may be one rest you will not awaken from.

TREATMENT: Find or make a shelter so you can get out of wet clothes and warm up. Give the person some hot water as from melted snow to drink. Rest in bed and you will usually recover.

FROSTBITE - This common injury affects skin parts insufficiently covered as the ears, nose, fingers and toes.

PREVENTION obviously consists of covering exposed areas when in very cold temperatures.

SYMPTOMS AND SIGNS: white and glossy skin caused by the blood vessels constricting to save heat, if pain is present it happens before the skin is numbed by the cold, the fingers get stiff due to a lack of

elasticity in the tissue, blisters form. Later on from the vessels constricting and therefore reducing the amount of blood to the tissue, gangrene is a possibility.

TREATMENT: Warm the tissue in warm water. Do not soak the affected area in cold water, rub the tissue in snow or rub the affected parts hard or you will cause tissue damage. Taking a shot of alcohol only conveys a false sense of warmth. Leave that myth with the movies.

COMMERCIAL FIRST AID KITS

Recently Jon Becker who is the president of AARDVARK Enterprises at 133 Naomi Ave., Unit I Suite 201G, Arcadia, California 91007, (818) 577611; sent me their best medical kit to evaluate. This kit, called the COMPREHENSIVE, is specifically designed to meet the needs of someone traveling or hunting in a wilderness area.

This kit comes with supplies such as A SAM SPLINT, a light weight splint of dense foam padding that can be bent in any direction to secure any fracture; HYPOTHERMIA THERMOMETER that can record the lower body temperatures of this deadly disorder; A SAWYER EXTRACTOR for removing venom from snake or insect bites. Other supplies are oral hydration salts, iodine tablets to disinfect water, various non prescription medications, wound management items and best of all, a handbook and manual well written to guide someone in the use of the items provided. This bag retails for About \$120.

Next in line is one retailing for \$80 and called the BACKCOUNTRY with the FUNDAMENTALS for \$45. And the most compact and lightest called the DAY TRIPPER which sells for \$22. If you still have some reservations about first aid in the outdoors, then there is an AARDVARK video for \$30 called Medicine in the Outdoors.

All those who spend time away from medical care should have such a kit available and obviously know how to use it in the event of an accident.

These kits from AARDVARK are sold at discount to recognized public organizations and outdoor professional as licensed outfitters and guides. It is about time Someone cuts a break to these people!

COMPASS AND MAPS

To avoid getting lost it pays to know how to use a compass so you can get back to base camp or your car. By being properly prepared for low temperatures, you can avoid deadly situations as hypothermia. One of the best video courses I have reviewed on this topic is available from Brunton, 610 E. Monroe Ave., Riverton, WY 81501; (307) 856-6559.

This 25-minute video presents actual outdoor situations as John Street shares his expertise on how to read maps and use a compass. Although originally produced to be used in conjunction with Hunter Safety Instruction courses, it is now available for anyone to use. The video also comes with a compass and workbook that includes instruction and sample questions.