

WILDERNESS MEDICINE NEWSLETTER
P. O. BOX 2072
CONWAY, NEW HAMPSHIRE 03818

For the recognition, treatment, and prevention
of wilderness medical problems.

November 1988

Number 7

With this issue we begin the second half of our first year as publishers. Every month we have tried to meet the needs of our readers by printing the information you have let us know you wanted. Thank you for your support, and please continue to keep us wise to the subjects you would like to see covered in this Newsletter.

LEGAL ASPECTS OF WILDERNESS MEDICINE

Every one of the United States, and Canada, has a Good Samaritan Act or Law that reads something like this:

A person who renders immediate aid on the scene of an accident or illness to an injured or ill person is not liable for damages for injury to or death of that person caused by his act or failure to act in rendering the medical service or aid unless he is grossly negligent.

This does not apply to persons who give service or aid where 1) they are expressly employed for that purpose, or 2) they do so with a view to gain.

You are not a Good Samaritan if you are in an outdoor leadership role and the victim is under your care at the time of the accident or illness. The opposing lawyer will look for expert witnesses who will go over every detail of your treatment searching for the tiniest substandard act upon which to build a case of negligence.

For negligence to be proven it must be shown beyond reasonable doubt that 1) an incident or incidents caused physical, mental or emotional injury, and that 2) you had a duty to act toward the plaintiff and failed to do so. Your failure can be one of commission (you did something) or omission (you didn't do something).

Here are some suggestions for minimizing your liability:

1. Clearly state the objectives of the program to the participant (and parents or guardians), informing them of the

risks that are inherent in the activity. Put it all in writing and have everyone concerned sign this assumption-of-risk- and-release form.

2. To the best of your ability, prepare the participants for the course objectives, being sure they have adequate clothing and gear, checking their level of physical and emotional fitness with a Medical Form that includes a medical history, insurance information, and an emergency contact person.

3. Provide at least two well-prepared leaders for every trip. One can take care of the victim while the other takes care of the rest of the group. One can assume leadership if the other is injured. (We will discuss "well-prepared leaders" in a future issue of the Newsletter.)

4. At least one of the leaders should have made the trip before. They should know the availability of water, campsites, emergency escape routes, emergency telephones, and local emergency services. If permission is required for areas you are using, get it in writing.

5. A Trip Plan should be left with an outside contact person.

6. Make sure the leaders have adequate equipment, especially specific gear for any high-risk activity, and a first aid kit. More importantly, the leaders should carry the knowledge and ability to use the equipment. The safest leaders know how to use their brains.

7. In case of an accident or illness, thoroughly document everything that happened, including all treatment given, and have it signed by witnesses. Litigation often goes to court years after a mishap.

Sadly, all of today's outdoor activities include potential plaintiffs and potential defendants. Taking the time to prepare for each trip, with safety for all participants in mind, reduces the risk of legal action to its minimum.

buck tilton

SPINE . . . LESS

We have recently discovered a couple of recommended methods for removing cactus spines from your bod, and thought we'd share'em with you folks out there in desertland.

For a cactus or prickly pear that's still attached to you (or your dog), a simple hair comb is an effective tool. Rather than get your bare fingers stabbed repeatedly, or break the spines off with pliers or tweezers, try slipping the teeth of the comb between the spines and the impaled part, and pull the cactus

free. This "comb technique" is practically painless, and tends not to leave busted spines in your skin.

A more sticky problem are those tiny, hair-like spines from smaller and less obvious cacti. Typically you have what seems like hundreds of them in you, and you can feel them a lot easier than you can see them! Begin by removing as many spines as you can with tweezers. Then apply a thin frosting of Elmers Glue to the entire area, and cover that with a layer of gauze. Allow the glue to dry, then peel off the gauze, pulling both the glue and the spines with it. This method would probably also work for splinters, thorns, etc. It is especially effective with young or frightened people. In fact, it was recently reported on in the American Journal of Diseases of Childhood.

bobby dery

WILDERNESS DRUGSTORE: BENADRYL

Benadryl falls into the category of drugs known as antihistamines. A simplistic peek into your immune system will help us understand the actions and uses of this drug.

Your body has a complex process by which it identifies and evicts trespassers. When your systemic burglar alarm goes off, because there is a suspected bad guy onboard, a substance known as histamine is released by special cells distributed throughout your body. Histamine's job in life is to find the invader, latch on to it, and scream like crazy for the cops! The Highway Patrol (your white blood cells), who have also been aroused by the alarm, come cruising along and round up the antigen that the histamine has rattled on. The cops take the bad guy downtown (your lymphatic system) and he is never heard from again.

Now, let's make things a little more complex. Some immune systems, when they come in contact with certain trespassers, over-react. Instead of releasing an appropriate quantity of histamine, they liberate a surplus. This over-abundance of histamine has a variety of effects on various body systems, and is what causes you to have those classic allergy symptoms of sneezing, watery eyes and nose, itchy throat, and hives. Benadryl, once absorbed into your system, chemically blocks the effect of the extra histamine, thus providing some symptomatic relief. The itch itches less, your nose runs less, your throat feels more open.

Anybody suffering from an allergic (over-histamine) reaction may feel better by taking Benadryl. It doesn't matter if the reaction is from pollen, food, poison ivy, or a bee sting. They are all variations on the same theme. Severe, airway threatening reactions can occur, but that discussion is for another time.

Few drugs are without side-effects. Benadryl's big one is drowsiness and disturbed coordination. This effect is so pronounced Benadryl is often used as a sleeping medication. Be sure that you do not give this drug to anyone whose safety depends on their being alert. Benadryl is a CNS depressant, and should be avoided in combination with alcohol or another sedative.

Interestingly, Benadryl precipitates excessive sweating, and prolonged use has been an underlying factor in cases of heat illness due to dehydration. Also, it thickens bronchial secretions, and its use is cautioned for folks with asthmatic histories. Bendaryl is effective in treating motion sickness by taking it 30 minutes prior to exposure, and every 4 - 6 hours while exposed to motion.

Adult dose: Tablets - 25 to 50 mg/4 - 6 hours (400 mg max/day).
Liquid - 2 to 4 tsp/4 - 6 hours (160 ml max/day).

bobby dery

ANNOUNCING A NEW MAGAZINE

We don't know what it's like because the first issue hasn't arrived yet. It claims to be a magazine "like no other you've seen before". The publishers are the same people who have been producing the very popular Journal of Emergency Medical Services (JEMS). RESCUE 89 will delve into topics such as extrication, technical rescue, hazardous and remote environments, and basic life support. It comes out every other month, and subscriptions are \$ 14.95. For more information, or a sub, write JEMS, P. O. Box 1026, Solana Beach, CA 92075-9905.

BAD MOUTHING

You've probably heard that the bite of a human is just as bad, or worse, than the bite of other animals. It's true! A human bite can produce a nasty infection, which may develop into a life-threatening problem. Treat a wound from your fellow man's, or woman's, teeth with the same seriousness that you give to all animal bites, especially if the injury is to the hand (where infections are most prone to grow). Immediately scrub the wound vigorously. Scrub with an iodine solution, if possible, or use any soap. Rinse it thoroughly. Cleaning is the most important step in preventing future problems. Leave the wound open to drain, but covered with a sterile dressing. Watch closely for the signs of infection, and see a physician if there is any suspicion.

MAJOR WOUND MANAGEMENT

Significant bleeding is any bleeding that is either spurting or looks serious to your eye. Use your judgment and make your error on the side of caution. Your most effective tool for controlling blood loss is direct pressure. That means put your hand on or in the wound, and push. Eventually getting some sterile, or at least absorbent, material under your hand is a good idea. The clotting mechanism usually takes 6 - 10 minutes to get control of the situation. I have aggressively worked on an arterial wound for the better part of an hour before it slowed. The point is that you continue direct pressure until it works . . . and it will work!

You will probably have to make a decision about uncovering the thing to clean it, or just to take a look at it. Sometimes pulling the dressings off can restart bleeding. So when in doubt give the clotting process an hour or two. Any bleeding you initiate then will be mostly superficial, the clots having extended quite deep into the vasculature.

An interesting twist to backcountry bleeding is that it's often not as obvious as on the street. Pavement does a wonderful job of pooling blood. Folks who are bleeding while lying on snow, sand, scree, or in the water, can dump lots of the precious fluid but show little physical evidence of it! You have got to train yourself to look harder out there. Indeed, someone can bleed greatly into a down parka or other bulky clothing and mask it. Feel'em, touch'em, slide your hands under them, and inside their clothing when in doubt.

Impaled objects are often major injuries. The short-term treatment is to stabilize the object in place with thick padding and get to a hospital. There are times in the wilderness setting when we stray from this guideline. We are weighing priorities. We'd rather have a physician take care of the mess, but the nature of the impalement prevents us from controlling the bleeding, or packaging the person for transport. Maybe it rattles around so much during the carry that it's tearing things up inside. Ask yourself which is causing more harm, leaving it in or pulling it out. Here are a few mixed guidelines: 1) objects in cheeks are usually safe, and best, removed, 2) objects in eyes should be left in, padded and protected, with both eyes covered and the patient kept lying down, 3) objects in extremities are often worth removing for the long-term, 4) objects in the head, neck, chest, and abdomen should be left in unless complications strongly dictate otherwise.

Amputations are another serious soft tissue injury. Like impalements, they are emotionally as well as physically taxing. An amputated part has lost its blood supply, and has a limited life expectancy. By packaging it cool, moist, and sterile, and evacuating it (and the owner!) as quickly as possible to a

hospital, we provide the best shot at successful reattachment. Wrapping the part in slightly moist gauze, and putting that in several plastic bags, and floating the whole package in a bottle of cold water for the trip out is one method. If the part is too big to fit in your water bottle, then do your creative best.

Large wounds sometimes give rise to the question of closure. There is debate among the experts about whether or not to tape shut a gaping tear in someone's body. It's almost impossible to get a wound free of bacteria in the woods, and closing it may set up the warm, moist, airless environment germs love. But the situation may ask you to make the decision to pull the edges of the wound neatly together and tape them there. Closure should be considered for long-term treatment of facial wounds, and wounds over joints, and simply for patient comfort on an extended evacuation. Don't seal them so tightly that they can't drain. If signs of infection occur, soak the wound to break it open for further scrubbing.

Recall that the priorities for managing soft tissue injuries are controlling bleeding, preventing infection, and promoting healing. Larger, more awkward wounds can present some interesting bandaging and infection problems, but the principles are the same regardless.

bobby dery

COMMON SIMPLE PROBLEMS: EPISTAXIS

Nosebleed is the everyday name for it, and the blood can gush from one or both nostrils, and from the anterior (front) or posterior (rear) of your beak. About 5% of all nosebleeds are posterior, which is fortunate since the blood flows down the throat making it difficult to assess and stop. Rear bleeds are usually the result of prolonged disease in older people. A suspected posterior bleed needs a doctor's attention as soon as possible. Anterior nosebleeds result from various causes including a punch in the snoot, infection in sinus and nasal passages, dryness or increasing air pressure that leads to ruptured surface vessels, or a fractured skull.

If your patient is conscious and you do not suspect a head injury, sit them up and lean them forward to keep the blood running out instead of down inside. Apply direct pressure by pinching the nostrils just below the cartilage, not forgetting to remind the patient to breathe through their mouth. Cold packs can be placed on the nose and forehead. After the bleeding has stopped, they should not return to vigorous activity until clotting has had a chance to become well established. And no nose-blowing for 24 hours.

If the patient is unconscious, or you have assessed a possible head injury, protect their airway and let the blood flow. Attempting to stop it may promote dangerous increasing intracranial pressure. (See Newsletter Number 1.)

buck tilton

BULK UP NOT OUT

According to recent research published in the American Journal of Clinical Nutrition, what you choose to eat may have more influence on your weight than how much you eat. We all have to admit, albeit regrettably, that low-fat high-carbo meal plans are the healthiest. But can we also consume more calories without storing unneeded fat this way?

Harvard and Stanford University Medical Schools, in independent studies, have directly related excess weight to fat consumption, regardless of calorie intake. In fact, the Harvard study found very little link between number of calories eaten and body weight. Weight gain was relative to fat consumption independent of calorie intake. We only require one daily tablespoon of dietary fat to stay healthy, but the average American shovels in 6 - 8 per day. We are approximately 30% fatter than at the turn of the century, yet our overall caloric consumption is less. (con't on page 8)

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PLEASE SHARE THIS

Our commitment is to keep you up to date on the topics and issues key to the performance and development of wilderness medicine today. We are mailing out monthly issues, 12 each year, on or near the first of each month. Special introductory rates are \$15/year or \$28/two years. Please make check payable to: Wilderness Medicine Newsletter.

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