

Roundtable 5/1/03

Moderated by Steve Zeiler (78gator@mchsi.com)

Agenda:

Announcements:

Upcoming events:

Future roundtables:

6/5/03 – planned topics may include Emergency Preparedness and Merit
Badge Counseling

OA Spring Encampment – 5/2-4/03 (Camp Arrowhead)

Introduction to Outdoor Leader Skills – Highlandville, 5/30-6/1/03

Show and Tell –

Monthly program theme – **Health Care**

Scoutmaster/Committee training topic – **Climb On Safely**

Guide to Safe Scouting Moment – **VI. First Aid, IX. Sports and Activities, & XI.
Medical Information**

Scouter's Minute – Alcohol use in Scout-age youth



<http://www.usscouts.org/mb/mbbooks.html>

Many Merit Badge pamphlets are in the process of being rewritten, with the goal of updating all of them within 4-5 years (a rate of around 25 per year). As new pamphlets are issued, when they contain new requirements, Scouts will have the option of starting with the new requirements as soon as the pamphlets are issued, or they may start work using the old requirements until the next edition of Boy Scout Requirements is issued.



Scouting and Climbing

<http://www.scouting.org/factsheets/02-578.html>

Background

During the summer of 1995, youth participants in the National Junior Leader Instructor Camp held at Philmont Scout Ranch identified climbing as an increasingly popular activity. They requested the development of program literature by the Boy Scouts of America in support of climbing. In May 1997, the first edition of the Climbing merit badge pamphlet was released and proved to be extremely popular.

In September 1997, a national climbing task force was organized, and members met for the first time to discuss suggestions they received regarding climbing techniques and appropriate safety measures. Their vision was to develop climbing literature and training for units and councils. As a result, **Climb On Safely was developed and made available in fall 1998**. Similar to Safe Swim Defense and Safety Afloat, Climb On Safely is designed to orient adult leaders with the proper procedure for organizing and managing BSA climbing/rappelling activities for their units.

In the two years following Climb On Safely's introduction, the climbing task force developed additional materials for use by Scouts and leaders. These included the *Climb On Safely Training Outline*, a revised *Climbing* merit badge pamphlet, *Climbing/Rappelling National Standards*, *Topping Out: A BSA Climbing/Rappelling Manual*, and a Climbing Lesson Plan for a new Climbing section at National Camping School.

Climb On Safely

Designed for unit climbing/rappelling, *Climb On Safely* (No. 20-099) is the BSA's recommended procedure for organizing and managing climbing and rappelling activities at all levels of the Scouting program: Tiger Cubs BSA, Cub Scouting, Webelos Scouting, Boy Scouting, Varsity Scouting, and Venturing. It offers guidance for climbing and rappelling at national sites and at specifically designed facilities, including climbing towers and fixed and portable walls. Climb On Safely has eight points to help ensure the safety and well-being of participants.



1. Climb On Safely Qualified Supervision
2. Qualified Instructors
3. Physical Fitness
4. Safe Area
5. Equipment
6. Planning
7. Environmental Conditions
8. Discipline

Climb On Safely is not designed to prepare leaders to instruct BSA youth in the skills of climbing or rappelling. Teaching climbing or rappelling requires a trained climbing instructor who meets the criteria defined in Climb On Safely.

Climb on Safely Training Outline

The *Climb On Safely Training Outline* (No. 20-101) is designed to teach adult Scouters how to implement the eight points of Climb On Safely for unit climbing/rappelling activities. This orientation **can be conducted by anyone who has an interest in climbing or rappelling**; it does not require a skilled climber or rappeller. Training in Climb on Safely **takes about 40 minutes** and can be done at a roundtable or summer camp or in conjunction with other unit leader training.

Climbing Merit Badge

The *Climbing* merit badge (No. 10522) is an optional merit badge that a Scout may earn toward the attainment of the Star, Life, and Eagle ranks, as well as for Eagle Palms. While the requirements for the *Climbing* merit badge have not changed since its introduction in 1996, the contents of the *Climbing* merit badge pamphlet (No. 35001A)

changed significantly in the 2000 edition. Photographs and illustrations depict climbing/rappelling techniques recommended by the Boy Scouts of America.

Topping Out

Topping Out: A BSA Climbing/Rappelling Manual (No. 3207A) describes and illustrates the climbing and rappelling techniques recommended by the Boy Scouts of America. Where appropriate, several alternative techniques are covered. The recommendations in *Topping Out* supersede those in all previous BSA publications. *Topping Out* is designed as a resource to guide BSA climbing directors and instructors in teaching others proper bouldering, climbing, rappelling, and anchoring procedures and techniques. It is an appropriate resource for all BSA climbing/rappelling activities wherever they are conducted.

Climbing/Rappelling National Standards

The current year Climbing/Rappelling National Standards apply to all council and district climbing/rappelling activities where multiple units participate. Climbing/rappelling activities include climbing/rappelling towers, vertical walls, horizontal walls, bouldering, and related programs. Programs that operate one week or more are required to be visited beginning January 1, 2001. A Project COPE or climbing inspector is empowered to visit the climbing/rappelling program and make recommendations to the councils.

National Camping School Climbing Section

Each region offers at least two weeklong climbing sections at National Camping School. Participants who successfully complete this section will be issued a certificate of completion of training as a BSA climbing director. A climbing director must be at least 21 years of age. Over a period of at least three days, climbing directors are empowered to train BSA climbing instructors who are at least 18 years of age.

A BSA climbing director or BSA climbing instructor who is at least 21 years of age must supervise the BSA climbing/rappelling site. **A minimum of two BSA climbing directors and/or BSA climbing instructors must be present during the operation of any BSA climbing or rappelling activity.** Each BSA climbing director or BSA climbing instructor **supervises no more than six participants**, including adult leaders, in climbing or rappelling.



Climb on Safely (BSA #3206 - 1998 Printing)
<http://www.usscouts.org/safety/ClimbOnSafely.html>

A Guide to Unit Climbing and Rappelling

Climb On Safely is the Boy Scouts of America's recommended procedure for conducting BSA climbing/rappelling activities at a natural site or a specifically designed facility such as a climbing wall or tower.

Although the BSA has an excellent safety record, there is inherent risk in climbing and

rappelling. With proper management, that risk can be minimized. When a climber is 6 feet or more above the ground, nothing should be left to chance.

Leaders should be aware that Climb On Safely is an orientation only and does not constitute training on how to climb or rappel.

Young people today seek greater challenges, and climbing and rappelling offer a worthy challenge. The satisfaction of safely climbing a rock face is hard to top. While introduction of the Climbing merit badge in spring 1997 spurred interest in these activities through the BSA, the proliferation of climbing gyms and facilitates have also made climbing and rappelling readily available throughout the United States.

This increased interest has made the BSA more aware of the inherent risks of climbing and rappelling. More accidents occur during unit rappelling than during council-managed climbing or rappelling, and more accidents have occurred while rappelling than climbing. Many climbing/rappelling accidents could be avoided by having qualified instruction from a conscientious adult who has the attention and respect of the youth entrusted to his or her care. Supervision by a caring adult who fully understands and appreciates the responsibility he or she assumes helps assure safety when youth engage in or prepare for climbing or rappelling.

The adult supervisor's relationship with youth should reinforce the importance of following instructions. The adult leader in charge and the climbing instructor share this responsibility. The instructor is responsible for all procedures and for safely conducting the climbing/rappelling activity. The adult supervisor works cooperatively with the climbing/rappelling instructor and is responsible for all matters outside of the climbing/rappelling activity.

A capable instructor has experience in teaching climbing/rappelling to youth, acknowledges personal limitations, and exercises good judgment in a variety of circumstances. The person who just spent four days of free-solo climbing on a sheer rock face may have technical skills but may lack teaching ability or the ability to empathize with youth who may be apprehensive about climbing.

Examples of sources of qualified climbing/rappelling instructors include, but are not limited to, the following:

- National Outdoor Leadership School
- Wilderness Education Association
- American Mountain Guides Association
- The Mountaineers
- Recreational Equipment Inc.
- Eastern Mountain Sports
- University or college climbing/rappelling instructors or students
- Project COPE directors or instructors
- Project Adventure instructors

Leaders and instructors should also consult current literature on climbing and rappelling for additional guidance. The *Outdoor Skills Instruction – Climbing/Rappelling* manual, No. 33036, is the most authoritative guide currently available from the Boy Scouts of America. In the year 2000, the BSA plans to publish a comprehensive climbing manual that will replace the current OSI manual.

Mountaineering: The Freedom of the Hills, sixth edition, edited by Don Graydon and Kurt Hanson, is a recommended reference for specific questions not covered in BSA literature. This book also covers lead climbing, snow and ice climbing, and other pursuits that are beyond the scope of BSA climbing/rappelling activities. These are not recommended activities for BSA units.

Passport to High Adventure, No. 4310, published by the BSA, is an appropriate guidebook to safely get your unit to and from the climbing/rappelling site.

Cub Scouts and Webelos Scouts are encouraged to engage in climbing in a controlled environment with close supervision by instructors who are knowledgeable about instructing this age group. Normally this means going to a climbing gym where the degree of difficulty is age-appropriate and the harnesses are size-appropriate for Cub Scouts. It is not recommended that Cub Scouts use climbing towers and walls in camp that have been designed for Boy Scout use.

Qualified instruction is essential to conducting a safe climbing/rappelling activity. Some people who claim to be qualified or have had some experience with climbing or rappelling may lack sufficient knowledge to safely conduct these activities. For instance, some climbers with a lot of experience have repeated the same mistakes many times without learning correct procedures.

Guide to Safe Scouting, IX. Sports and Activities

<http://www.scouting.org/pubs/gss/gss09.html#d>

Climbing and Rappelling

1. Qualified Supervision

All climbing and rappelling must be supervised by a mature, conscientious adult **at least 21 years of age** who understands the risks inherent to these activities. This person **knowingly accepts responsibility** for the well-being and safety of the youth in his or her care. This adult supervisor is **trained in and committed to compliance with the eight points of the Boy Scouts of America's Climb On Safely procedure**. One **additional adult** who is at least 18 years of age must also accompany the unit. Units with more than 10 youths in the same climbing/rappelling session must have **an additional adult leader at least 18 years of age for each 10 additional youth participants**. In other words, a group of 11 to 20 youths requires at least three adult leaders; a group of 21 to 30 youths would require four adult leaders, and so on.

The adult supervisor is responsible for ensuring that **someone in the group is currently certified in American Red Cross Standard First Aid and CPR** (a 6 1/2-hour course). In addition, the two-hour module "First Aid—When Help Is Delayed" is recommended.

A course of equivalent length and content from another nationally recognized organization can be substituted. A higher level of certification such as emergency medical technician (EMT), licensed practical nurse (LPN), registered nurse (RN), and licensed health-care practitioner is also acceptable. **The ARC's Emergency Response, a 43 1/2-hour course that includes CPR, is highly recommended.**

2. Qualified Instructors

A qualified rock climbing instructor who is at least 21 years of age must supervise all BSA climbing/rappelling activities. The climbing instructor has successfully completed a minimum of 10 hours of instructor training for climbing/rappelling from a nationally or regionally recognized organization, a climbing school, a college-level climbing/rappelling course, or is a qualified BSA climbing instructor.

The BSA offers a section of National Camping School for climbing directors who in turn can train climbing instructors. (A Project COPE director or instructor fulfills this requirement until January 1, 2002.) Every instructor must have prior experiences in teaching climbing/rappelling to youth and must agree to adhere to Climb On Safely and the guidelines set in *Topping Out*.

NOTE: Any adult Scouter who successfully completes training in Climb On Safely is entitled to wear the temporary patch, No. 8631. A *Climb On Safely Training Outline*, No. 20-101, is available from your local council service center.

3. Physical Fitness

Require evidence of fitness for the climbing/rappelling activity with **at least a current BSA Personal Health and Medical Record—Class 1**, No. 34414A. The adult supervisor should adapt all supervision, discipline, and precautions to anticipate any potential risks associated with individual health conditions. If a significant health condition is present, an examination by a licensed health-care practitioner should be required by the adult supervisor before permitting participation in climbing or rappelling. The adult supervisor should inform the climbing instructor about each participant's medical conditions.

4. Safe Area

All BSA climbing/rappelling activities must be conducted using an established or developed climbing/rappelling site or facility. A qualified climbing instructor should **survey the site in advance** of the activity to identify and evaluate possible hazards and to determine whether the site is suitable for the age, maturity, and skill level of the participants. The instructor should also **verify that the site is sufficient to safely and comfortably accommodate the number of participants** in the activity within the available time. An **emergency evacuation route** must be identified in advance.

5. Equipment

The climbing instructor should verify that the proper equipment is available for the size and ability level of participants. Helmets, rope, and climbing hardware must be approved by the UIAA (Union Internationale des Associations d'Alpinisme), CEN (European Community Norm), or ASTM (American Society for Testing and Materials). **All equipment must be acquired new or furnished by the instructor.**

Records must be kept on the use and stresses (the number of hard falls) on each item of equipment, which must be specifically designed for climbing and rappelling. Outside providers should be asked if they are aware of any stresses that have been put on their equipment. **Any rope or webbing that has been subjected to more than three hard**

falls or that is four years old (whatever its use) must not be used. Refer to *Topping Out* concerning records that must be kept.

6. Planning

When planning, remember the following:

Obtain written parental consent to participate in climbing/rappelling activities for each participant.

In case severe weather or other problems might occur, **share the climbing/rappelling plan** and an alternate plan with parents and the unit committee.

Secure the necessary permits or written permission for using private or public lands.

Enlist the help of a qualified climbing instructor.

Be sure the instructor has a topographic map for the area being used and obtains a current weather report for the area before the group's departure.

It is suggested that **at least one of the adult leaders has an electronic means of communication in case of an emergency.**

7. Environmental Conditions

The instructor assumes responsibility for monitoring potentially dangerous environmental conditions that may include loose, crumbly rock; poisonous plants; wildlife; and inclement weather. **Use the buddy system** to monitor concerns such as dehydration, hypothermia, and an unusually high degree of fear or apprehension. The adult supervisor is responsible for ensuring that the group **leaves no trace** of its presence at the site.

8. Discipline

Each participant knows, understands, and respects the rules and procedures for safely climbing and rappelling and has been oriented in Climb On Safely. All BSA members should respect and follow all instructions and rules of the climbing instructor. The applicable rules should be presented and learned prior to the outing and should be reviewed for all participants before climbing or rappelling begins. When participants know the reasons for rules and procedures, they are more likely to follow them. The climbing instructor must be strict and fair, showing no favoritism.

A UIAA- or ASTM-approved **climbing helmet must be worn during all BSA climbing/rappelling activities when the participant's feet are six feet or more above ground level.** When using a climbing gym, the climbing facility's procedures apply.



Climbing Merit Badge (No. 10522)

1. Show that you know first aid for injuries or illnesses that may occur during climbing activities, including hypothermia, blisters, sprains, snakebite, abrasions, fractures, and insect bites or stings.
2. Identify the conditions that must exist before performing CPR on a person.
Demonstrate proper technique in performing CPR using a training device approved by your counselor.
3. Present yourself properly dressed for belaying, climbing, and rappelling (i.e., appropriate clothing, footwear, and a helmet; rappellers must wear gloves).

4. Location. Do the following:
 - a. Explain how the difficulty of climbs is classified, and apply classifications to the rock faces or walls where you will demonstrate your climbing skills.
 - b. Explain the following: top-rope climbing, lead climbing, and bouldering.
 - c. Evaluate the safety of a particular climbing area. Consider weather, visibility, the condition of the climbing surface, and any other environmental hazards.
 - d. Determine how to summon aid to the climbing area in case of an emergency.
5. Verbal signals. Explain the importance of using verbal signals during every climb and rappel, and while bouldering. With the help of the merit badge counselor or another Scout, demonstrate the verbal signals used by each of the following:
 - a. Climbers
 - b. Rappellers
 - c. Belayers
 - d. Boulderers and their spotters
6. Rope. Do the following:
 - a. Describe the kinds of rope acceptable for use in climbing and rappelling.
 - b. Show how to examine a rope for signs of wear or damage.
 - c. Discuss ways to prevent a rope from being damaged.
 - d. Explain when and how a rope should be retired.
 - e. Properly coil a rope.
7. Knots. Demonstrate the ability to tie each of the following knots. Give at least one example of how each knot is used in belaying, climbing, or rappelling.
 - a. Figure eight on a bight
 - b. Figure eight follow-through
 - c. Water knot
 - d. Double fisherman's knot
(Grapevine knot)
8. Harnesses. Correctly put on at least ONE of the following:
 - a. Commercially made climbing harness
 - b. Tied harness
9. Belaying. Do the following:
 - a. Explain the importance of belaying every climber and rappeller.
 - b. Belay three different climbers ascending a rock face or climbing wall.
 - c. Belay three different rappellers descending a rock face or climbing wall.
10. Climbing. Do the following:
 - a. Show the correct way to tie into a belay rope.
 - b. Climb at least three different routes on a rock face or climbing wall, demonstrating good technique and using verbal signals with belayer.
11. Rappelling. Do the following:
 - a. Using carabiners and a rappel device, secure your climbing harness or tied harness to a rappel rope.
 - b. Tie in to a belay rope set up to protect rappellers.
 - c. Rappel down three different rock faces or three rappel routes on a climbing wall. Use verbal signals to communicate with a belayer, and demonstrate good rappelling technique.
12. Demonstrate ways to store rope, hardware, and other gear used for climbing, rappelling, and belaying.

Source: <http://www.meritbadge.com/bsa/mb/051.htm>



Project COPE

<http://www.scouting.org/factsheets/02-543.html>

What Is Project COPE?

Since its founding in 1910, the Boy Scouts of America has offered its members an outdoor program stressing personal fitness. Project COPE is an acronym for Challenging Outdoor Personal Experience. It comprises a series of outdoor challenges, beginning with basic group initiative games and progressing to more complicated low-course and high-course activities. Some of these events involve a group effort, whereas others test individual skills and agility. Participants climb, swing, balance, jump, and rappel as well as think through solutions to a variety of challenges. Most participants find that they can do much more than they initially thought they could.

Project COPE is an exciting outdoor activity that can attract and keep older boys in Scouting. It is designed to meet the needs of today's youth who are seeking greater challenges to their physical and mental abilities. The underlying goals of a Project COPE course are consistent with the methods of Scouting. Group activities are ideal for emphasizing the patrol method and developing leadership. Individual activities help promote personal growth. Participation is entirely voluntary.

History and Background

The 1979 Dalajamb International Encampment in Sweden provided a number of challenging events of great interest to Scouts from the United States. Foremost among them was the pioneering course constructed by a group of veteran Swedish Scouts. This course was laid out in a heavily wooded area and utilized terrain elevations as part of the design. Bridges were built across ravines of varying widths and depths. Zip lines hung for traversing the ravines, and novel constructions were used for climbing.

Successful Experiment

The National Council of the Boy Scouts of America was interested in programs, equal to the successful overseas and jamboree activities, that could be promoted on a nationwide basis. Project COPE was identified as having that potential because it offered older Scouts the kind of challenging and exciting program that encouraged them to return to summer camp and increased their tenure. An unexpected dividend was the use of Project COPE by youth and adults outside of Scouting. These groups found it an excellent tool for developing both team effort and individual achievement.

A Project COPE course provides an opportunity for each participant to achieve success as an individual and as a member of a patrol or team. The activities are not designed to be competitive or to be races against time. The objectives include building teams; solving problems; making decisions; and developing trust, communication, leadership, and self-esteem as team members cooperate to achieve goals upon which they have agreed. The course is designed to foster personal growth in a shorter length of time than anything most people have experienced.

Objectives

Before implementing a course, the council should determine what it seeks to accomplish. Seven major goals are commonly associated with Project COPE activities:

1. Leadership development
2. Problem solving
3. Communication
4. Self-esteem
5. Trust
6. Decision making
7. Teamwork

The council should decide which activities to incorporate into its program to accomplish the desired objectives. The council should incorporate all seven objectives, giving particular emphasis to one or two. Whatever the goals, the experience should be facilitated to accomplish them. Participants should be challenged to develop team goals for each activity. Afterward a reflection is accomplished through nondirective questioning that encourages participants to analyze how they did as a group and as individuals, and how they could do better in future endeavors including life skills.

Safety

National promotion of Project COPE enables the Boy Scouts of America to establish standards designed to meet Scouting's needs and concerns for safety within a strong network. Each COPE facility is inspected at least twice annually—once by a regional inspection team and once by a council inspection team. The safety of Scouts, leaders, and staff is imperative. Mere concern about safety is not sufficient. This concern must be demonstrated by a director and staff members who are knowledgeable and personally skilled in the respective course activities, who are effective teachers, and who are constantly alert to safety procedures and participant needs. Prospective staff members must be carefully screened. A qualified staff must be assembled with enough members to ensure that continuation of the program does not depend on one or two people. Standards for Project COPE are stringent so that the experience will be both safe and successful.

Certification

Project COPE directors are certified through weeklong training at a National Camping School or at Philmont Scout Ranch during the annual Boy Scouting conferences. A currently trained Project COPE director must be on site whenever the COPE course is being operated. Each COPE course must be inspected annually using the national standards for Project COPE.



Guide to Safe Scouting, VI. First Aid

<http://www.scouting.org/pubs/gss/gss06.html>

First aid is the first help or immediate care given someone who has suddenly sickened or been hurt in an accident. First-aid training continues through the program of the Boy Scouts of America as concrete evidence that we are prepared to help others in need.

It is important that one person in each touring group be trained in the principles of first aid, know how and when to put this knowledge to the best use, and thoroughly understand the limitations of this knowledge.

It is strongly recommended that adult leaders in Scouting avail themselves of CPR and first-aid training by the American Red Cross or any recognized agency to be aware of the latest techniques and procedures. However, some of the first-aid techniques found in BSA literature are not the same as those professed by the American Red Cross. Frequently, modifications depend on the Scout's age - this could be a factor in the Scout's judgment and physical dexterity.

First-Aid Kits

A first-aid kit well stocked with the basic essentials is indispensable. Choose one sturdy and lightweight, yet large enough to hold the contents so that they are readily visible and so that any one item may be taken out without unpacking the whole kit. Keep a list of contents readily available for easy refilling. Keep the kit in a convenient location. Make one person responsible for keeping the kit filled and available when needed. Quantities of suggested items for your first-aid kit depend on the size of your group and local conditions.

Suggested First-Aid Kit Contents

- Bar of soap
- 2-inch roller bandage
- 1-inch roller bandage
- 1-inch adhesive
- 3-by-3-inch sterile pads
- Triangular bandage
- Assorted gauze pads
- Adhesive strips
- Clinical oral thermometer
- Scissors
- Tweezers
- Sunburn lotion
- Lip salve
- Poison-ivy lotion
- Small flashlight (with extra batteries and bulb)
- Absorbent cotton
- Water purification tablets (iodine)
- Safety pins
- Needles
- Paper cups
- Foot powder
- Instant ice packs

Because of the possibility of exposure to communicable diseases, first-aid kits should include **latex or vinyl gloves, plastic goggles or other eye protection**, and **antiseptic** to be used when giving first aid to bleeding victims, as protection against possible exposure. **Mouth barrier devices** should be available for use with CPR.

Cardiopulmonary Resuscitation (CPR)

This specialized skill to endeavor to revive victims of cardiac arrest (no breathing-no pulse) may be taught to Boy Scouts and Venturers by an instructor currently trained by the American Red Cross or American Heart Association. Teaching this skill to Cub Scouts is not recommended.

Preliminary skills related to CPR are found in the *Boy Scout Handbook* and the *First Aid* merit badge pamphlet (rescue breathing, choking, and steps to take for CPR).

Protection Considerations for Bloodborne Pathogens

Many people are concerned about the rapid spread of HIV (the AIDS virus) and try to avoid exposing themselves to this hazard. Health professionals and amateur first-aiders like those of us in Scouting may find ourselves faced with special concerns in this regard. Therefore, we must know how to act and how to instruct the youth we lead. Try to maintain the BSA's tradition of rendering first aid to those in need. Recognize that often the victims we treat with first aid are friends and family members whose health we are familiar with. Therefore, in such cases, except when we know they have infectious diseases, we should not hesitate to treat them.

The Boy Scouts of America Recommends

Treat all blood as if it were contaminated with bloodborne viruses. Do not use bare hands to stop bleeding; always use a protective barrier. Always wash exposed skin area with hot water and soap immediately after treating the victim. The following equipment is to be included in all first-aid kits and used when rendering first aid to those in need:

- Latex or vinyl gloves, to be used when stopping bleeding or dressing wounds
- A mouth-barrier device for rendering rescue breathing or CPR
- Plastic goggles or other eye protection to prevent a victim's blood from getting into the rescuer's eyes in the event of serious arterial bleeding
- Antiseptic, for sterilizing or cleaning exposed skin area, particularly if there is no soap or water available.

Individuals (medicine, fire rescue, and law enforcement Venturing crew members; volunteer first-aiders at camporees, Scouting shows, and similar events) who might have been exposed to another's blood and body fluids should know the following:

1. The chartered organization and its leaders should always explain and make clear the possible degree of exposure to blood or body fluids as a result of Scouting activities.
2. As a precaution, adult volunteers or youth members should consider a hepatitis B vaccination. The cost of the shots will not be borne by BSA, nor is the chartered organization required to underwrite the cost.
3. The chartered organization may arrange to have shots given at a reduced rate or free of charge.
4. If vaccination is recommended, any adult volunteers and youth members who decline the shots, either at full cost to them or at a reduced rate, or free, should sign a refusal waiver that should be retained by the council for five years.

Near-Drowning

Near-drowning is a term used to describe a fatality that occurs several hours after resuscitation or revival of a drowning victim. Near-drowning accidents are usually witnessed and CPR (cardiopulmonary resuscitation) is delivered at the scene. Lung rupture can occur during the submersion or consequent to the resuscitation efforts. Pneumonia is a later complication in the injured lung. To ensure that water-accident victims do not become near-drownings, they need to be admitted to a hospital with a

respiratory intensive care unit and monitored for at least 24 hours to watch for complications. The hypothermic victim requires special attention.



Tenderfoot First Aid Requirements

11. **Identify** local poisonous plants; tell how to treat for exposure to them.

12. a. **Demonstrate** the Heimlich maneuver and **tell** when it is used.

b. **Show** first aid for the following:

- Simple cuts and scratches
- Blisters on the hand and foot
- Minor burns or scalds (first-degree)
- Bites or stings of insects and ticks

- Poisonous snakebite
- Nosebleed
- Frostbite and sunburn



Second Class First Aid Requirements

6.

a. **Show** what to do for "hurry" cases of stopped breathing, serious bleeding, and internal poisoning.

b. **Prepare** a personal first-aid kit to take with you on a hike.

c. **Demonstrate** first aid for the following:

- Object in the eye
- Bite of a suspected rabid animal
- Puncture wounds from a splinter, nail, and fish hook

- Serious burns (second degree)
- Heat exhaustion
- Shock
- Heatstroke, dehydration, hypothermia, and hyperventilation



First Class First Aid Requirements

8.

a. **Demonstrate** tying the bowline knot and **describe** several ways it can be used.

b. **Demonstrate** bandages for a sprained ankle and for injuries on the head, the upper arm, and the collarbone.

c. **Show** how to transport by yourself, and with one other person, a person:

- From a smoke-filled room
- With a sprained ankle, for at least 25 yards

d. **Tell** the five most common signs of a heart attack. Explain the steps (procedures) in cardiopulmonary resuscitation (CPR).





FIRST AID Merit Badge (revised as of January 1, 2003)

1. Satisfy your counselor that you have current knowledge of all first-aid requirements for Tenderfoot, Second Class, and First Class ranks.
2. Do the following:
 - a. Explain how you would obtain emergency medical assistance from your home, on a wilderness camping trip, and during an activity on open water.
 - b. Prepare a first aid kit for your home. Display and discuss its contents with your counselor.
3. Do the following:
 - a. Explain what action you should take for someone who shows signs of a heart attack.
 - b. Identify the conditions that must exist before performing CPR on a person.
 - c. Demonstrate proper technique in performing CPR using a training device approved by your counselor.
 - d. Show the steps that need to be taken for someone suffering from a severe **cut** on the leg and on the wrist. Tell the dangers in the use of a tourniquet and the conditions under which its use is justified.
 - e. Explain when a bee sting could be life threatening and what action should be taken for prevention and for first aid.
 - f. Explain the symptoms of heat stroke and what action needs to be taken for first aid and for prevention.
4. Do the following:
 - a. Describe the signs of a broken bone. Show first-aid procedures for handling fractures **and broken bones**, including open (compound) fractures of the forearm, wrist, upper leg, and lower leg using improvised materials.
 - b. Describe the symptoms and possible complications and demonstrate proper procedures for treating suspected injuries to the **head, neck, and back**. Explain what measures **should** be taken to reduce the possibility of further complicating these injuries.
5. Describe the symptoms, proper first-aid procedures, and possible prevention measures for the following conditions:

<ol style="list-style-type: none">a. Hypothermiab. Convulsions/seizuresc. Frostbited. Dehydratione. Bruises, strains, sprains	<ol style="list-style-type: none">f. Burnsg. Abdominal painh. Broken, chipped, or loosened toothi. Knocked-out toothj. Muscle cramps
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6. Do the following:
 - a. If a sick or injured person must be moved, tell how you would determine the best method.
 - b. With helpers under your supervision, improvise a stretcher and move a presumably unconscious person.
7. Teach another Scout a first-aid skill selected by your counselor.



MEDICINE Merit Badge (revised as of January 1, 2003)

1. Discuss with your counselor the influence that EIGHT of the following people or events had on the history of medicine:
 - a. Hippocrates
 - b. The invention of gunpowder
 - c. William Harvey
 - d. Antoine van Leeuwenhoek
 - e. Edward Jenner
 - f. Florence Nightingale
 - g. Louis Pasteur
 - h. Gregor Mendel
 - i. Joseph Lister
 - j. Robert Koch
 - k. Wilhelm Conrad Roentgen
 - l. Marie and Pierre Curie
 - m. Walter Reed
 - n. Karl Landsteiner
 - o. Alexander Fleming
 - p. Jonas Salk
 - q. **James Watson and Francis Crick**
2. Explain the Hippocratic Oath to your counselor, and compare the original version to a more modern one. Discuss to whom those subscribing to the original version of the oath owe the greatest allegiance.
3. Discuss the health care provider-patient relationship with your counselor, and the importance of such a relationship in the delivery of quality care to the patient. Describe the role of confidentiality in this relationship.
4. Do the following:
 - a. Describe the roles the following people play in the delivery of health care in your state. (Note: Not all may exist in your state.)
 1. Physician
 2. Chiropractor
 3. Optometrist
 4. Podiatrist
 5. Pharmacist
 6. Psychologist
 7. Physician's assistant
 8. Nurse practitioner
 9. Nurse-midwife
 10. Registered nurse
 11. Licensed vocational/practical nurse
 12. Medical assistant
 13. Emergency medical technician
 14. Medical laboratory technologist
 15. Radiologic technologist
 16. Physical therapist
 17. Occupational therapist
 18. Respiratory therapist
 - b. Describe the educational and licensing requirements for five of those in 4a -- other than 4a1 -- practicing health care in your state. b. Describe the educational and licensing requirements for five of those in 4a -- other than 4a1 -- practicing health care in your state.
- 5a. Tell what is meant by the term "primary care" with regard to a medical specialty. Briefly describe the types of work done by physicians in the following "core" specialties:
 1. Internal medicine (a "primary care" specialty)
 2. Family practice (a "primary care" specialty)

3. Obstetrics/gynecology (a "primary care" specialty)
 4. Pediatrics (a "primary care" specialty)
 5. Psychiatry
 6. Surgery
- 5b. Describe the additional educational requirements for **these** specialties.
- 6a. Briefly describe the types of work performed by physicians in FIVE of the following specialties or subspecialties
- | | |
|---------------------------------|--|
| 1. Allergy/immunology | 16. Ophthalmology |
| 2. Anesthesiology | 17. Orthopedic surgery |
| 3. Cardiovascular disease | 18. Otolaryngology/head and neck surgery |
| 4. Colon and rectal surgery | 19. Pathology |
| 5. Dermatology | 20. Physical medicine and rehabilitation |
| 6. Emergency medicine | 21. Plastic, reconstructive, and maxillofacial surgery |
| 7. Endocrinology and metabolism | 22. Preventive medicine |
| 8. Gastroenterology | 23. Radiology |
| 9. Geriatric medicine | 24. Rheumatology |
| 10. Hematology/oncology | 25. Thoracic/cardiothoracic surgery |
| 11. Infectious disease | 26. Urology |
| 12. Nephrology | 27. Vascular surgery |
| 13. Neurological surgery | |
| 14. Neurology | |
| 15. Nuclear medicine | |
- 6b. Describe the additional educational requirements for the five specialties or subspecialties you chose in 6a.
- 7a. Visit a physician's office, preferably one who delivers "primary care." (This may be that of your counselor.) Discuss the components of a medical history and physical examination (an official BSA health form may be used to guide this discussion), and become familiar with the instruments used. (If this cannot be arranged, demonstrate to your counselor that you understand the components of a medical history and physical, and discuss the instruments involved.)
- b. Describe the characteristics of a good diagnostic test to screen for disease (eg, routine blood pressure measurement). Explain briefly why diagnostic tests are not perfect.
- c. Show how to take a blood pressure reading and a pulse reading.
8. Do the following:
- a. Discuss the roles medical societies, the insurance industry, and the government play in influencing the practice of medicine in the United States.
 - b. Briefly tell how your state monitors the quality of health care within its borders, and how it provides care to those who do not have health insurance.
9. Compare and discuss with your counselor the health care delivery systems in the United States, **Sweden, and China (previously included Canada and Mexico)**.
10. Serve as a volunteer at a health-related event or facility in your community (eg, blood drive, "health fair", blood pressure screening, etc) approved by your counselor.

Source: <http://meritbadge.com/bsa/mb/130.htm>



from *Passport to High Adventure*, No. 4310, p. 43.

Recommended Weight (lbs.)*			
Height	19-34 Years	35+ Years	Maximum
5' 0"	97-128	108-138	166
5' 1"	101-132	111-143	172
5' 2"	104-137	115-148	178
5' 3"	107-141	119-152	183
5' 4"	111-146	122-157	189
5' 5"	114-150	126-162	195
5' 6"	118-155	130-167	201
5' 7"	121-160	134-172	207
5' 8"	125-164	138-178	214
5' 9"	129-169	142-183	220
5' 10"	132-174	146-188	226
5' 11"	136-179	151-194	233
6' 0"	140-184	155-199	239
6' 1"	144-189	159-205	246
6' 2"	148-195	164-210	252
6' 3"	152-200	168-216	260
6' 4"	156-205	173-222	267
6' 5"	160-211	177-228	274
6' 6"	164-216	182-234	281

*This table is based on the revised Dietary Guidelines for Americans from the U. S. Department of Agriculture and the Department of Health and Human Services.



from *Passport to High Adventure*, No. 4310, pp. 42.

Cardiac or Cardiovascular Disease

Adults who have had any of the following should undergo a thorough evaluation by a physician before considering participation in high adventure.

1. Angina (chest pain caused by coronary artery disease or congenital heart disease).
2. Myocardial infarction (heart attack).
3. Surgery or angioplasty to treat coronary artery disease.
4. Stroke or transient ischemic attacks.
5. Claudication (leg pain felt during exercise; caused by hardening of the arteries).
6. Family history of heart disease in individuals under age 50.
7. Weight in excess of recommended guidelines.

The physical exertion of high adventure may cause a heart attack or stroke in susceptible persons. An adult who is 40 years of age or older or who has experienced any of the conditions above should speak with his or her doctor about the possible need for an exercise stress test with thallium (a metallic element that helps in the diagnosis of stress) within three to six months before the scheduled trek to assess the adequacy of the heart muscle's blood supply. It is recommended that an adult who is over 40 years of age who has not experienced any of the conditions above have an ordinary stress test without thallium. **Even if the stress test is normal, the results of testing done without the exertions of a trek do not guarantee safety.** If test results are abnormal, the individual is advised not to participate.



from *Passport to High Adventure*, No. 4310, pp. 42.

Hypertension (High Blood Pressure)

The combination of stress and altitude appears to cause significant increase in blood pressure in many individuals participating in high adventure. Occasionally, hypertension reaches such a level that it no longer is safe for an individual to engage in strenuous activity. Persons whose blood pressures are increased mildly (to greater than 135/85) may benefit from treatment before coming to a high adventure base and during the trek. Individuals who are hypertensive (having blood pressure greater than 140/90) are urged strongly to be treated and to have normal blood pressure (less than 135/85) before arriving at the base of operations. Medications should be continued during the high-adventure trek.

Each participant 18 years of age or older will usually have his or her blood pressure checked upon arrival at a high-adventure base. Those individuals with blood pressure greater than 150/90 will probably be kept off the trek until the blood pressure decreases.



from *Passport to High Adventure*, No. 4310, pp. 42.

Insulin-Dependent Diabetes

Exercise and the type of food eaten affect insulin requirements. Any individual with insulin-dependent diabetes mellitus should be able to monitor personal blood glucose and know how to adjust insulin doses based on these factors. The diabetic person also should know how to give a self-injection. Both the diabetic person and one other person in the group should be able to recognize indications of excessively high blood sugar (hyperglycemia or diabetic ketoacidosis) and to recognize indications of excessively low blood sugars (hypoglycemia). The diabetic person and at least one other individual in the group should know the appropriate initial responses for these conditions.

It is recommended that the diabetic person and one other individual (in case of accidents) carry insulin on the trek and that a third vial be kept at the base for backup. Insulin can be carried in a small thermos, which can be resupplied with ice or cold water at intervals.

A diabetic person who has had frequent hospitalizations for diabetic ketoacidosis or who has had frequent problems with hypoglycemia probably should not participate in a high-adventure trek until better control of the diabetes has been achieved.



from *Passport to High Adventure*, No. 4310, pp. 43.

Seizure Disorders or Epilepsy

A seizure disorder or epilepsy does not exclude an individual from participating in high adventure. However, the seizure disorder should be well controlled by medications. A seizure-free period of at least one year is considered adequate. Exceptions to this guideline may be considered by medical staff and will be based on the specific type of seizure and the likely risks to the individual and to the other members of the crew.



from *Passport to High Adventure*, No. 4310, pp. 43.

Asthma

It is expected that an individual with asthma will have consulted a physician in order to establish control of the condition. The asthma should be controlled to essentially normal lung function with the use of oral or aerosol bronchodilators. The patient should bring ample supplies of medications on the trek. Individuals undergoing allergic desensitization therapy who require injections on the trek should bring their medications and store a portion at base camp upon arrival.

At least one other crew member should know how to recognize an asthma attack, how to recognize worsening of an attack, and how to administer bronchodilator therapy. Any person who is approved to go on a trek who has required medical treatment for asthma within the past six years must carry a full-size prescribed inhaler on the trek. Asthmatic individuals whose exercise-induced asthma cannot be prevented with bronchodilator premedication, who require systemic corticosteroid therapy, or who have required multiple hospitalizations for asthma, should not attempt to participate in the strenuous activities of high-adventure.

Guide to Safe Scouting in reference to asthma and SCUBA diving:
<http://www.scouting.org/pubs/gss/gss02.html#1>



from *Passport to High Adventure*, No. 4310, pp. 43.

Recent Orthopedic Surgery

Every high adventure participant will put a great deal of strain on feet, ankles, and knees. Experience has shown that participants who have had orthopedic surgery or problems within the past six months find it difficult or impossible to negotiate steep, rocky trails. These problems will be reviewed by the medical staff to determine if a person's participation in a trek will be permitted. A person with a cast on any extremity may participate only if approved by the medical staff.



from *Passport to High Adventure*, No. 4310, pp. 43.

Medications

Each high adventure participant who has a condition requiring medication should bring an appropriate supply in a locked pouch. In certain circumstances, duplicate or even triplicate supplies of vital medications are appropriate. Leaders should be aware of medications needed and monitor their use.

An individual should always contact the family physician first and call the council if there is a question about the advisability of participation. The medical staff for a high adventure program reserves the right to make medical decisions regarding any individual's participation.



CPR Guidelines 2000 (by Andrea Pennington, M.D.)

<http://health.discovery.com/centers/heart/cpr/cprguide.html>

On Aug. 15, 2000, the American Heart Association released major revisions to recommendations for cardiopulmonary resuscitation (CPR) and the treatment of cardiovascular emergencies. These new guidelines for both lay rescuers and healthcare providers cover a variety of topics such as CPR and automated external defibrillators (AEDs).

CPR Techniques

Lay rescuers check for signs of circulation, such as normal breathing, coughing or movement in response to stimulation when determining if they should administer chest compressions.

Lay rescuers performing adult CPR provide 15 chest compressions for every 2 rescue breaths, regardless of whether one and two rescuers are present.

To treat an unconscious adult choking victim, lay rescuers begin standard CPR including chest compressions and will not conduct abdominal thrusts or blind finger sweeps of the mouth.

Public Access to Defibrillation

Recommends as a goal **delivery of electric shock by a defibrillator within 5 minutes for an out-of-hospital sudden cardiac victim and within 3 minutes for an in-hospital victim.**

Recommends that AEDs be placed where there is a reasonable probability of one sudden cardiac arrest occurring every five years.

In addition to healthcare providers, identifies specific lay responders who should be trained in CPR and the use of an AED, including police, firefighters, security personnel, ski patrol members, ferryboat crews and airline flight attendants.



Heart Center Recommends New CPR Guidelines

<http://www.ahsc.arizona.edu/opa/ahsnews/aug00/cpr.htm>

Performing chest compressions on people experiencing cardiac arrest may be just as good as, and possibly better than, combining chest compressions with mouth-to-mouth ventilation, writes **Gordon A. Ewy, MD**, director of the UA Sarver Heart Center in an editorial published in the May 25 issue of the *New England Journal of Medicine*.

"Authorities in CPR have come to realize that our now standard method of performing basic CPR is very difficult for the average lay person to learn, retain and perform," says Dr. Ewy, who is recognized internationally for his CPR research. In February, he received a "CPR Giant" award from the American Heart Association Emergency Cardiovascular Care Committee in recognition of his many contributions in the area.

Dr. Ewy was asked to write the editorial to accompany a journal article outlining a study done by a group of Seattle researchers in which emergency telephone dispatchers gave bystanders at the scene of cardiac arrests instructions in either chest compressions alone or standard CPR (chest compressions plus mouth-to-mouth ventilation). The rates of survival until discharge from the hospital was higher among patients receiving chest compressions only, but not statistically significant. The Seattle researchers concluded that CPR using chest compressions alone has a similar outcome as standard CPR and may be the preferred approach for inexperienced bystanders.

The Sarver Heart Center's CPR Research Group also has found that chest compressions only could be better than standard CPR. The group is working toward finding a CPR method that is easy to learn, easy to do and more effective, with the hope that thousands more lives could be saved. In a study reported in the *Archives of Internal Medicine* about five years ago, a group of UA College of Medicine cardiologists found

that 82 percent of people questioned were "very concerned" or "moderately concerned" about the possibility of getting a disease while giving mouth-to-mouth.

Dr. Ewy notes that the incidence of bystander-initiated CPR is extremely low throughout the world and that the vast majority of people have an aversion to mouth-to-mouth ventilation because of the fear of infection and other concerns.

"More importantly," Dr. Ewy writes, "**survival with CC-CPR (chest-compression CPR) is dramatically better than no bystander CPR.**"

Dr. Ewy emphasizes that standard CPR is almost always essential in children and young adults. He also encourages the early use of an automatic external defibrillators (electronic devices that shock the heart to restore normal contraction rhythms) in patients suffering cardiac arrest due to ventricular fibrillation, in which the ventricles contract in a rapid and uncoordinated way.



SARS – Severe Acute Respiratory Syndrome

<http://www.cdc.gov/ncidod/sars/faq.htm>

What is SARS?

SARS is a respiratory illness that has recently been reported in Asia, North America, and Europe.

What are the symptoms and signs of Severe Acute Respiratory Syndrome (SARS)?

The illness usually begins with a fever (measured temperature greater than 100.4°F [$>38.0^{\circ}\text{C}$]). The fever is sometimes associated with chills or other symptoms, including headache, general feeling of discomfort, and body aches. Some people also experience mild respiratory symptoms at the outset.

After 2 to 7 days, SARS patients may develop a dry, nonproductive cough that might be accompanied by or progress to the point where insufficient oxygen is getting to the blood. In 10% to 20% of cases, patients will require mechanical ventilation.

If I were exposed to SARS, how long would it take for me to become sick?

The incubation period for SARS is typically 2-7 days; however, isolated reports have suggested an incubation period as long as 10 days. The illness usually begins with a fever ($>100.4^{\circ}\text{F}$ [$>38.0^{\circ}\text{C}$]).



Tick-borne Illness

http://www.cdc.gov/ncidod/diseases/list_tickborne.htm

Lyme Disease FAQ

Q. What are the signs and symptoms of Lyme disease?

A. Within days to weeks following a tick bite, 80% of patients will have a red, slowly expanding "bull's-eye" rash (called erythema migrans), accompanied by general tiredness, fever, headache, stiff neck, muscle aches, and joint pain. If untreated, weeks to months later some patients may develop arthritis, including intermittent episodes of swelling and pain in the large joints; neurologic abnormalities, such as aseptic meningitis, facial palsy, motor and sensory nerve inflammation (radiculoneuritis) and inflammation of the brain (encephalitis); and, rarely, cardiac problems, such as atrioventricular block, acute inflammation of the tissues surrounding the heart (myopericarditis) or enlarged heart (cardiomegaly).

Q. What is the incubation period for Lyme disease?

A. For the red "bull's-eye" rash (erythema migrans), usually 7 to 14 days following tick exposure. Some patients present with later manifestations without having had early signs of disease.

Ehrlichiosis FAQ

Q. How do people get ehrlichiosis?

A. In the United States, ehrlichiae are transmitted by the bite of an infected tick.

Q. What are the symptoms of ehrlichiosis?

A. The symptoms of ehrlichiosis may resemble symptoms of various other infectious and non-infectious diseases. These clinical features generally include fever, headache, fatigue, and muscle aches. Other signs and symptoms may include nausea, vomiting, diarrhea, cough, joint pains, confusion, and occasionally rash. Symptoms typically appear after an incubation period of 5-10 days following the tick bite. It is possible that many individuals who become infected with ehrlichiae do not become ill or they develop only very mild symptoms.

Rocky Mountain Spotted Fever FAQ

Q. What is Rocky Mountain spotted fever?

A. Rocky Mountain spotted fever (RMSF) is the most severe tick-borne rickettsial illness in the United States. This disease is caused by infection with the bacterial organism *Rickettsia rickettsii*.

Q. How do people get Rocky Mountain spotted fever?

A. The organism that causes Rocky Mountain spotted fever is transmitted by the bite of an infected tick. The American dog tick (*Dermacento variabilis*) and Rocky Mountain wood tick (*Dermacentor andersoni*) are the primary vectors of Rocky Mountain spotted fever bacteria in the United States.

Q. What are the symptoms of Rocky Mountain spotted fever?

A. Patients infected with *R. rickettsii* usually visit a physician in their first week of illness, following an incubation period of about 5-10 days after a tick bite. The early clinical presentation of Rocky Mountain spotted fever is often nonspecific and may resemble many other infectious and non-infectious diseases. Initial symptoms may include fever, nausea, vomiting, muscle pain, lack of appetite and severe headache. Later

signs and symptoms include rash, abdominal pain, joint pain, and diarrhea. Three important components of the clinical presentation are fever, rash, and a previous tick bite, although one or more of these components may not be present when the patient is first seen for medical care. Rocky Mountain spotted fever can be a severe illness, and the majority of patients are hospitalized.

Q. In the United States, where do most cases of Rocky Mountain spotted fever occur?

A. Rocky Mountain spotted fever is a seasonal disease and occurs throughout the United States during the months of April through September. Over half of the cases occur in the south-Atlantic region of the United States (Delaware, Maryland, Washington D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida). **The highest incidence rates have been found in North Carolina and Oklahoma.** Although this disease was reported most frequently in the Rocky Mountain area early after its discovery, relatively few cases are reported from that area today.



West Nile Encephalitis

<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

Q: What are West Nile virus, West Nile fever, and West Nile encephalitis?

A. “West Nile Virus is a flavivirus commonly found in Africa, West Asia, and the Middle East. It is closely related to St. Louis encephalitis virus found in the United States. The virus can infect humans, birds, mosquitoes, horses and some other mammals.

“West Nile fever” is a case of mild disease in people, characterized by flu-like symptoms. West Nile fever typically lasts only a few days and does not appear to cause any long-term health effects.

More severe disease due to a person being infected with this virus can be “West Nile encephalitis, West Nile meningitis or West Nile meningoencephalitis.” Encephalitis refers to an inflammation of the brain, meningitis is an inflammation of the membrane around the brain and the spinal cord, and meningoencephalitis refers to inflammation of the brain and the membrane surrounding it.



Snake Bite First-Aid by *Annette McGivney* our friends at *Backpacker Magazine*

<http://www.backpacker.com/article/0,2646,249,00.html>

“Of the estimated 6,000 to 8,000 poisonous snake bites that occur in the United States each year, there are only five to eight fatalities...Most human strikes are merely defensive in nature and leave behind just enough venom-the process is known as envenomization-to make you sick.

If you or someone in your party is struck by a poisonous snake, better safe than sorry: Get to a medical facility. Administering antivenin is the only successful treatment.

For the hike out to the car, immobilize the bitten extremity with a splint, and if possible, carry the victim to the trailhead. If you can't carry the person, he'll have to hike out on his own. It takes at least 2 hours for the symptoms of envenomization to take effect. Watch for signs of shock (heavy sweating, clammy skin, shallow breathing), since the fear of having been bitten is often more dangerous than the bite.

When the victim is more than a day's hike from the trailhead, the only field treatment recommended by wilderness medicine experts is the Sawyer Extractor. Dave Hardy advises using two of the suction cup extractors simultaneously to remove venom from both fang punctures. If applied within 5 minutes of the incident, the extractor may help reduce envenomization, but it is no substitute for professional medical care.



Rabies

<http://www.cdc.gov/ncidod/dvrd/rabies/>

Figure 1. The infectious path of rabies virus

