



Venturing Program Safety Overview



The scope of this overview is to familiarize Venturing youth and leaders with risk management and safety considerations related to the high adventure activities associated with Venturing.

1. Change in Outdoor Ethics

The current focus on training Scouts and Scouters in outdoor high adventure program safety emphasizes what to do after an emergency situation presents itself. In order of priority, training occurs for wilderness survival, first aid, outdoor skills, safety management, and accident prevention.

This overview is intended to shift that focus to emphasize risk management and accident prevention first then worry about outdoor skills, first aid and wilderness survival. The idea is that an injury that does not occur needs no treatment; an emergency that does not happen requires no response, and an illness that does not develop demands no remedy.

2. Present Boy Scouts of America Guidance

A number of BSA publications address safety as it relates to high adventure, but there is no formal risk management program established at the unit level.

- The Guide to Safe Scouting says: “Trail safety is a matter of common sense... BSA has an abundance of literature relating to proper procedures and guidelines for a group on a trail.”
- The Boy Scout Fieldbook has chapters on Outdoor Safety and Planning.
- The Passport to High Adventure publication contains chapters on Who Will Go, Trip Planning, and Trek Safety.
- The Safe Swim Defense and Safety Afloat programs were established as a result of water related accidents and fatalities, and are both highly effective in preventing accidents.
- Climb On Safely was introduced to reduce risks associated with climbing and rappelling activities.

Although there are a number of incidents resulting in death or serious injury that occur on hiking trails every year, there is no formal risk management program to address the problem. Tour permits are a requirement that forces Scouters to plan ahead for outings. But in the case of high adventure activities, these permits require planning that just gets you to the trail head and no further. What is needed is a comprehensive “Safety Afoot” program to address the issue during high adventure activities.

3. Causes of Outdoor Accidents

As the Guide to Safe Scouting says, “trail safety is a matter of common sense”, but there are some specific reasons why accidents occur during high adventure activities.

- **Lack of Preparedness:** Before a crew attempts a high adventure trek, it must be both physically and mentally prepared. The BSA Venturing program is designed to stretch the Venturers capabilities. For an activity to be rewarding, it must be challenging. Failure to prepare can not only ruin a high adventure activity, but can contribute to accidents, injury and even death. If, for example, some or all members of a backpacking crew are in poor physical condition, accidents are more likely to occur when exhaustion sets in. Poor morale can result from a failure to mentally prepare crew members for the rigors of a backpacking trek. Shakedown hikes before the final trek will help eliminate these problems.
- **Exposure:** Unexpected changes in the weather combined with improper crew and individual equipment are a recipe for disaster. Keeping warm and dry are the prime considerations to prevent weather related injuries. Inadequate individual or crew equipment, or improperly used equipment contributes to the chances of exposure related injuries
- **Being in a Hurry:** To avoid this pitfall plan each day’s trek to be reasonable in terms of distance and terrain to be traversed. Start out slowly and cover short distances until you know what your crew is capable of. Do not deviate far from your planned route. A side hike here and there is permissible but, stay with what you planned as closely a possible. If you fall behind schedule, don’t rush to make up time. Moving faster to make up for lost time only increases the possibility of accidents.
- **Getting Too Tired:** Accidents on the trail occur most often when the crew is tired. Don’t make your trek an endurance contest. Plan your days to be challenging, but not so difficult that crew members will not enjoy their accomplishments. Fatigue slows reactions and mars judgment, both of which are contributors to accidents. Extreme fatigue causes the body and mind to react as if it were on drugs, thus further impairing judgment and reaction time.
- **Leader Judgment Errors:** A high adventure adult advisor is there for the health and safety of the crew first and foremost. When a dangerous situation presents itself, the leader must be able to recognize it and take appropriate action. Several examples of situations which can lead to poor leader judgment are:
 - If one member of a backpacking crew becomes exhausted it is time to stop. Other crew members may want to continue, and in an attempt to please them, the leader may authorize the trek to go on. Further, if the crew is behind schedule and crew members are becoming fatigued, the leader may want to push on to remain on schedule rather than stop for the night.
 - If unexpected situations arise, such as bad weather or an encounter with a wild animal, it may be time to stop for the night. The point is, a leader must be able to recognize dangerous situations and act to prevent accidents from happening.
- **Other Causes of Outdoor Accidents:**
 - Improper use of equipment or faulty equipment.
 - Inadequate preparation.
 - Horseplay.

- **Swift water.**
- **Loose, falling objects.**
- **Inadequate food and water.**

4. Five Preventative Virtues

The potential for accidents to happen can be greatly reduced if leaders pay proper attention to the five following things:

- **Dehydration**: Dehydration is a factor in about 90% of all backcountry incidents. When a person becomes dehydrated, it results in decreased dexterity, agility, and judgment. Leaders must ensure that their crews drink enough water. Crew members should continuously drink water during high adventure activities. Preventing dehydration is a major factor in preventing the next thing on the list.
- **Heat Related Illness**: If a heat related illness is allowed to progress from heat prostration to heat stroke, the result can quickly be death.
- **Cold Related Illness**: Hypothermia is a major cause of death in outdoor activities, second only to drowning. It is not only a winter time occurrence. In fact most cases of hypothermia happen when temperature conditions are around 50 degrees. The best way to avoid hypothermia in any season is to ensure that all crew members keep dry. This means possession and use of proper rain gear, wearing synthetic clothes instead of cotton while on the trail, and getting the crew under shelter if weather conditions become severe enough.
- **Nutrition**: Nutrition on the trail is extremely important. Leaders should ensure that crew members are eating sufficient amounts of food. Trail menus should be heavy in carbohydrates. Instead of eating a heavy lunch each day, crew members should snack constantly on the trail. Break out the GORP at every break during the day.
- **Exhaustion**: Prevent exhaustion by taking frequent breaks to relax, drink fluids and snack. Ensure that your schedule is reasonable. Its all right to challenge the crew, but don't make it a race.

5. Dynamics of Accidents Model

This model provides a tool for adult advisors to predict accident potential during high adventure activities. It combines Environmental Hazards (EH) with Human Factors Hazards (HFH) to determine Accident Potential (AP).

EH are associated with terrain, weather, and equipment. HFH include physical condition, experience, skills, fear, and communication.. The combination of EH and HFH result is some level of accident potential. Several examples will best illustrate how to use this model.

- **Example 1**: A group has been hiking along the Appalachian Trail. It has been raining all day; the group is tired. Accident Potential is high for ankle injuries. EH = rocky trail, difficult footing, wet rocks, slippery conditions. HFH = tired, cold hikers not paying attention to the trail. If people are aware of increased AP, they will be more careful about footing.

- **Example 2: Environmental Briefing** - “Today we will canoe on the Delaware River. There are several EH to keep in mind: Broken glass and rusty cans on the river bottom (shoes will be worn at all times); No shade (sunburn, dehydration likely); Rapids (powerful currents can pin boats or swimmers). Each time a crew moves to a new environment, a new Environmental Briefing should be done.

6. **Planning Group Adventures**

The best way to ensure a successful trek is thorough and detailed planning. In planning hi-adventure activities there are four things that need to be considered.

- **What Are The Capabilities Of The Group?** Leaders must determine the experience and knowledge levels of the crew members for the type activity being planned. This applies to leaders as well; both adult advisors and Scouts who will hold leadership positions in the crew. Adult advisors must determine whether the crew members possess the physical and emotional maturity to successfully complete the planned activity. The interests of the group should be considered when determining which type of high adventure activity is planned. If no one wants to do the particular activity being planned, then maybe it should be changed.
- **Where Do You Want To Go?** Be sure that where you want to go matches up to the capabilities of the crew. If you are taking a group of 13 year olds backpacking, start on an easy portion of the Appalachian Trail rather than the Green Mountains of Vermont. The differences in terrain are striking. As Venture/Varsity Scouts become more experienced in a particular activity, then they can be further challenged.
- **How Far Do You Want To Travel?** The planning required for a one hour drive to the Appalachian Trail for a weekend hike is considerably different from that required for a cross country drive to spend ten days on the trail at Philmont. In any case, each activity requires some amount of logistics planning. This additionally describes how far to travel each day. Considerations include the Time Control Plan, which is explained below, the type of terrain, what you want to do while on the trail, and the capability of the group.
- **Where Will You Get Help?** Each of the previous considerations are generally done for most Scouting activities. This is the one that is normally not done very well, if at all. Leaders need to identify park or forest personnel, police, rescue, and medical assistance in or near the area of your high adventure activity. Phone numbers, locations, and how to reach them from any location on the trail or river need to be identified. This subject will be covered in greater detail when we discuss development of a Risk Management Plan.

7. **Risk Management Plan**

Development of a risk management plan causes adult advisors to be attentive to all potential hazards which could occur during a high adventure trek. The elimination of all risks is not the point of a risk management plan. It provides a means of conscientious and consistent review of every aspect of the proposed trek, and requires identification of sources of help if accidents or illnesses happen.

- **Activity:** The title of the planned high adventure activity.
- **Date and Time:** Time and date of departure and return from the activity.
- **Trek Goals and Objectives:** The Scouts who make up the crew should have a hand in determining the goals and objectives of the activity. Leaders can and should assist in defining these, but ultimately they should be determined by the boys.
- **Location:** Where is the activity going to occur.
- **Environmental:** At the location of the activity, precautions concerning environmental conditions should be identified. In addition to the obvious weather and terrain conditions, consideration should be given to animals and insects expected to be encountered. Bears, poisonous snakes, ticks, black flies, and mosquitoes are examples of creatures that can adversely impact a trek.
- **Transportation:** This refers to how the crew will get to and from the location of the trek. It covers transportation to the trail head, and from the end of the trail to home. It includes filling in and submitting the applicable tour permit.
- **Routes and Campsites:** This addresses what happens from the trail head to the end of the trail. It includes routes to be hiked or traveled via canoe, potential campsites, water sources, landmarks, and obstacles to be expected during the trek. It also includes a **Time Control Plan**, which provides time and distance estimates for each day, and terrain profiles which the crew will traverse. This is more than an exercise in map reading. The time and distance estimate is based upon crew travel at 2 miles per hour, with an hour added for each 1000' increase in elevation, and ½ hour increase for each 1000' decrease in elevation. The terrain profile provides a more refined understanding of your potential in the wilderness. It shows terrain elevations, water sources, trail intersections, and landmarks. It allows a check of progress against schedule and helps to anticipate problems.
- **Permits:** Most state and national parks require permits for hiking and camping. Leaders need to identify any requirement for permits and arrange for obtaining them. In some places, like the Shenandoah National Park, crews fill out their own permits at various trail heads. This method provides crews with a copy of the regulations for the park, although they do not talk with park rangers.
- **Participants:**
 - **Number:** Self explanatory. Includes boys and leaders.
 - **Characteristics:** Includes the age, capabilities and limitations of both boys and leaders. Capabilities and limitations should be identified at shakedown before the high adventure activity.
 - **Medical Examination:** BSA Class 3 physical are usually required for high adventure activities. Leaders should be aware of and prepared to deal with any potential medical problems listed on the physical forms. Leaders should also be aware of prescribed medications required for any of their crew members. In addition, the primary leader should ask parents to inform them of any potential medical or emotional problems that might arise during the trek. As this information could be embarrassing to a boy, it should be kept confidential and provided to only those leaders with a need to know.
 - **Permission Slip:** Permission slips should contain pertinent information about the high adventure activity and be provided to parents sufficiently early in the planning stages to clear up questions the parents might have.

- **Leaders:**
 - **Number:** Self explanatory. Ensure that two-deep leadership and the Scout-to-leader ratio for the activity is always in force.
 - **Qualifications:** Leaders should be trained and certified in CPR and first aid. A Wilderness First Aid course is far superior to standard Red Cross first aid training for high adventure activities.
In addition, leaders should be skill-trained and qualified in the type activity being undertaken. This includes being in the physical condition required for the activity.
- **Equipment:** Early during the planning phase of a high adventure activity both a personal and crew equipment list should be provided to all participants. Leaders should inspect all equipment to ensure its suitability for the activity.
 - **Personal Equipment:** Boots, socks, rain gear, and sleeping bags are at the top of the list of personal equipment for backpacking. Leaders must ensure that each participant's gear is suitable and serviceable.
 - **Crew Equipment:** Leaders must ensure that crew equipment is serviceable and required for the activity. Stoves and fuel containers, crew first aid kit, dining fly, bear bag & rope, and water purification capability are at the top of the list.
- **Emergency Phone Numbers:** The following phone numbers should be easily accessible to leaders.
 - Park or Forest Personnel
 - State or Local Police
 - Rescue Personnel
 - Nearest Hospital
 - Relatives of all crew members, boy and adult
- **Evacuation Plan:** Evacuation routes should be identified for each portion of the course of the trek. The routes should include locations where you will evacuate to, as well as the location of the nearest telephone. Evacuation procedures for crew members in different emergency situations should be thought out during planning.

8. **Summary**

Thorough and detailed planning before departure on any high adventure activity will greatly lessen the chance of accidents.

- an injury that does not occur needs no treatment
- an emergency that does not happen requires no response
- an illness that does not develop demands no remedy

References

- **Fieldbook**, Boy Scouts of America, Third Edition, 1984
- **The Backcountry Classroom**, Drury and Bonney, ICS Books, Inc., 1992
- **Medicine in the Backcountry**, 2nd Edition, Tilton and Hubbell, ICS Books, Inc., 1994
- **Guide to Safe Scouting**
- **Passport to High Adventure**
- **Princeton University Outdoor Action Leader's Manual**, Third Edition, Curtis, 1993
- **Leadership and Administration of Outdoor Pursuits**, Ford and Blanchard, Venture Publishing, Inc., 1985