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Fact Sheet: Hiking

Hiking related injuries can be extremely hazardous in remote environments with limited access to emergency services. Getting lost on a hiking trip can be easy and potentially fatal, but also very preventable. Strenuous activity associated with hiking can also exacerbate pre-existing medical conditions.

Personal Protective Equipment / Top 10 Essentials

- Sturdy boots
- Map, Compass, GPS device
- Water and purifying kit
- Food
- Weather appropriate clothing (remember that cotton kills)
- Safety Items (light, fire starter, whistle, signal mirror)
- Personal survival/ first aid kit w/ moleskin
- Knife or multi-tool
- Sun protection (sunscreen, sun glasses, hats. etc.)
- Shelter

Preparation and Training

- Research and plan your trip. Determine best routes and good shelter locations.
- Inform an emergency contact of your intention to hike, what areas you expect to be in, and when you plan to return.
- There are many different models of compass with a variety of features. Before going on a trip you should familiarize yourself with how your compass model functions and some basic skills such as taking bearings, adjusting for magnetic declination, and using the compass and a map to locate yourself.
 - Depending on your location, you will have to adjust the magnetic declination on your compass. This adjusts for the difference between geographic and magnetic north poles. These values are often listed on maps. You may have to look this value up before leaving. If your compass does not have a way to adjust for this, you will have to manually add or subtract from your bearings to switch between the compass and the map bearings.
- Break-in your shoes before going out on an extended hike, as new shoes can cause blistering that can make it hard to walk safely. Proper boots provide traction and ankle support that can help to prevent falls.
- Consult your primary care physician as to your physical fitness capabilities with the expected level of exertion. Physical stresses like illness, injury, and adjusting to new altitude can affect your stamina and ability to perform certain activities safely.

- It is recommended you take courses in: Wilderness First Aid

General Safety

- When hiking, remain aware of your surroundings. Watch for bad weather, uneven terrain, and becoming distracted.
- Keep your feet as dry as possible. Hiking with wet feet can lead to a condition known as trench foot. This condition can cause permanent nerve and tissue damage that can lead to amputation. To prevent this, make sure you change socks and boots regularly.
- Do not hike into an area with an active wildfire.
- Pack out any cigarette butts to avoid starting a wildfire.
- Do not overload your pack, as this can compromise your stability.
- Hike up and down steep slopes slowly in a switch-back manner, rather than straight up or down.
- Move only as quickly as you are able, without compromising footing or focus.
- Avoid handholds such as rocks or trees, as they may not be secure and you may pull it down on top of you as you fall.
- Never follow directly beneath someone.
- Falling rocks are extremely dangerous, so do not purposely dislodge any rocks. If you dislodge a rock call out "ROCK!" so that anyone below you is alerted to the danger.
- Avoid hiking on unconsolidated rock piles, as they could be unstable leading to a fall or a rockslide.
- Do not climb cliffs or extremely steep faces without appropriate climbing gear.
- If you are fatigued, rest until you are able to continue safely.
- Pay attention to "hotspots", areas where clothing may rub against skin. This friction can cause blistering. As soon as you notice discomfort, apply a barrier (e.g., moleskin) to prevent further abrasion. If you have a blister, sterilize it, drain it with a sterile needle, and treat with first aid as an open wound.

Emergency Response

- If someone in your group falls, analyze the situation before helping. If you can get to the person safely, you may administer first aid if they are conscious and moving. If they are not conscious or are unable to move, they may have a head/neck injury, so do not move them. If possible, have someone stay with them, keep them warm, and have another pair of people go for help. If they fell into an area that you cannot access safely, call for emergency services.
- If you get lost, try not to panic. Take a minute to observe your surroundings and try to reorient yourself with the map and compass. Look for hills, water features, or roads that may be helpful in locating yourself on the map.
- Use your compass to identify where you are on a map.
 - Orient the map so that north on the map agrees with north on the ground.
 - Find at least two distant landmarks with which you can take a bearing. They should be at least 60° apart.

- Take the bearing of each landmark and draw a line of the same bearing on your map passing through the landmarks.
- Where these lines intersect is your location.
- If you are unable to plan a safe course (if it is getting dark or terrain is dangerous), you may have to stay put and call for help. Use the whistle in three short blasts (universal for help) and listen for a response. Go to an open area and make yourself as visible as possible. If you are out at night, you will need to find a dry shelter.
- When signaling, keep in mind a red flare is a signal for authorities to start search and rescue procedures.
- If you notice that you are having symptoms of trench foot (numbness, swelling, mottled color, wrinkled skin, blistering), stop and dry your feet completely before moving on.
- If you notice signs of infection (decaying odor, worsening of symptoms) or severe tissue damage (blackening of skin) on any wound, seek immediate medical attention.

References and Additional Resources

- [American Hiking Society](#)
- American Red Cross [Wilderness Remote First Aid Pocket Guide](#)
- Hack Your Pack – [Why Hikers Say ‘Cotton Kills’](#)
- Adapted from *Hiking Fact Sheet*, by University of Maryland: Department of Environmental Safety, Sustainability & Risk (<https://essr.umd.edu/about/research-safety/field-research-safety/planning>) with permission.