Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Staying Safe in the Backcountry

Stanislaus National Forest

Travel in Primitive or Wilderness Areas

The backcountry is beautiful, and experiencing it in solitude can create a memory of a lifetime. It is also an inherently dangerous environment that must be properly prepared for. This begins by picking the right trail and trip for you. A person in average shape can expect to travel 1-2 miles an hour, plus another hour for every 1,000 feet of elevation gain. Before departing, check with the local ranger district for possible hazards such as swollen creeks or unstable snow accumulation. Sierra weather can change rapidly, posing a danger to backcountry visitors. Take a navigation tool, adequate protective clothing, and appropriate warmth and safety gear. Always let someone know where you are going and when you plan to return. Ranger pro-tip: make three copies of your backcountry itinerary– one to leave with a trusted friend or family member, one to put in your pack, and one to leave in your vehicle at the trailhead.

Food Security in Black Bear Country

Keeping your camp clean and free of trash reduces the chances of attracting bears or other unwanted animals. Keep food and garbage tightly sealed in plastic bags secured at all times. Don't keep your food stores in camp — stash your items at least 100 feet from your campsite.

If it goes in your body or on your body (sunscreen, toothpaste, etc) it can be a bear attractant. Never leave a pack containing these items unattended. The easiest method of guarding your food is to rent or purchase bear resistant food canisters. You can also suspend your food in a bear bag from a tree if you follow proper technique.

Human Waste

Giardiasis and other diseases can be readily transmitted between humans and animals. Waste should be buried at least six inches deep and 200 feet away from any natural waters. Pack out any used toilet paper or other sanitary items as trash.

Campfire Safety

You must have a free campfire permit to operate a stove, obtain one from CalFire and always check fire restrictions and wilderness regulations before you go - some areas have a complete ban. Please mind these guidelines:

Use a portable stove for cooking. If you build a small fire, use only existing fire rings– do not build new ones. Gather only dead and downed wood. Never break branches from standing trees, even if they look dead. If camping at high elevation consider not having a fire, plants take years to grow and organic material is scarce.

Gathering Water

The surest treatment to destroy giardia and other microorganisms is to boil water for at least one minute. At higher altitudes, maintain the boil for 3 to 5 minutes.

A 0.5 micron filter can remove most harmful bacteria and protozoa. If chemical disinfection method is used, (such as drops or tablets) iodine is more effective than chlorine. If possible, filter the water first and then allow the iodine to work for at least an hour before drinking the liquid. For short trips, consider taking a supply of water from home or other domestic source.

Navigation

You might encounter trails that are not well maintained or hard to follow. Satellite devices and phones can be great tools to have, but should not be your only option as they at the mercy of your reception and susceptible to power loss. Have a map and compass and know how to use them.

Emergencies

If you start to get sick, try to get out of the mountains (or at least to a lower elevation) while you can still travel.

If you're lost—take it easy, keep calm, admit to yourself that you're lost and don't panic. Sit down and try to figure out where you are. Use your head—not your legs. Carry a whistle for emergency use. Three repeats of anything (shouts, whistles, etc.) is considered a sign of distress. The best choice may be to make a fire and spend the night.

If you spend a lot of time in the backcountry, you may want to invest in a satellite communication device, such as a SPOT or inReach.

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Environmental Hazards

Altitude Sickness

Normally minor illnesses can become major concerns at high elevation, especially if you do not allow for time to acclimate. Altitude sickness may occur if you overexert at high elevations where oxygen supply is reduced. If you or someone in your party begin to suffer these symptoms stop and rest, breathe, and move slowly to lower elevations.

Lightning

Summer thunderstorms are common in the Sierra. The best thing you can do to avoid any problem is to check the weather forecast before you leave. When traveling in the backcountry, be aware of what the weather is doing- especially during the afternoons. If you see dark clouds forming start thinking about where you can take shelter. Remember that lightning can strike many miles away from a storm front.

Lightning is attracted to high objects and peaks, so don't be close to one and make sure that's not you. If you are near a peak and you start feeling any sort of static electricity– start running downhill immediately– this means a thunderstorm is imminent! Don't take shelter in a cave, if struck its structural properties will attract the strike straight to you. Though great for protecting from rain, your tent alone does not provide protection from lightning. Take shelter in a group of medium/small height trees and wait at least 30 minutes after the last strike to move.

Water Consumption

You must consume enough water before, during, and after your hike for your body to stay in good working shape. Take care to drink more water in the day or so leading up to your trip to prepare your body. At elevation you must drink around 8 oz (1 cup) every half hour to maintain adequate hydration. Using a hydration bladder can help you drink more frequently. If you are feeling thirsty, you are already on your way to dehydrated.

Poison Oak and Snakebites

Be alert. Examine densely vegetated areas for poison oak. Poison oak grows up to about 5,000 feet and oil can remain on clothing and cause reactions days after exposure. Common in foothills, rattlesnakes are also found above 9,000 feet. Be mindful when crossing rocky areas or stepping over downed trees, a rattlesnake may be on the other side.

Temperature Related Illnesses:

Hypothermia

Drastic lowering of the inner body temperature causes rapid, progressive, mental and physical collapse. Hypothermia can occur if someone is swimming in a cool body of water for too long, even on a warm day. Victims often don't recognize the symptoms in themselves because of comparatively mild conditions.

Look for the "Umbles": **Grumbles** , a person may become grumpy or generally negative; **Fumbles**, they will lose their fine motor control and have a slow reaction time; **Mumbles**, they will slur words and may be incomprehensible; **Stumbles**, may become stiff, uncoordinated, and unable to walk unaided.

In addition, they may not be shivering anymore, this is a sign that their body's temperature regulation is failing.

In the backcountry, get the victim out of the wind and wet, and call emergency services for assistance. Remove any soaking wet clothes and replace with **warm**, dry clothing. Place the victim in a dry sleeping bag. Have one or two heat donors then surround the victim inside the sleeping bag. Wait for further instructions from a search and rescue team.

Heat Cramps/ Exhaustion/ Stroke

Hiking during hot temperatures can be dangerous if you are not properly prepared. One early sign of overheating can be "**Heat Cramps**"– painful muscle contractions due to low electrolyte levels. These cramps are more common in those who tend to sweat excessively. Make sure to rehydrate with electrolytes.

Heat Exhaustion occurs when the body starts to fail at compensating for high temperatures. They may be sweaty, pale, tired, weak, and dizzy. They may also have a headache, be nauseated, or faint. Their skin will be pale, cool, and moist, pulse may be fast and weak, breathing fast and shallow. At this stage it is critical they are removed from the environment and immediately cooled– if not addressed it may progress to **Heat Stroke**.

Heat Stroke is a deadly threat, this occurs when the body's temperature regulation system completely fails and their temperature spikes above 103°. At this point they are no longer sweating and their skin is red, hot, and dry. They may have a throbbing headache, be dizzy, nauseated, confused, or even unconscious. Seek emergency medical services immediately.