



into the wilderness

get outside

Wilderness Safety Awareness

It would be impossible to cover every possible scenario of what could occur in a wilderness setting that would threaten your safety. Common sense is one of your best safeguards. Below are some of the potential hazards we want to avoid and minimize in order that your time in the wilderness is as safe and productive as possible.

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LIGHTNING

One of the most dangerous places to be in a lightning storm is on a mountain in an exposed area. Take the necessary precautions at the first sign of an approaching storm. Lightning can reach out over a mile in front of an approaching storm. Electrical currents run like water currents – from high to low – stay out of low spots that collect water or are wetter than surrounding areas. Currents traveling along the ground can 'hit' multiple people. Avoid being on wet rock – current can flow many feet from original strike spot on the film of water covering the rock. Avoid high spots, especially when you are the highest object, and avoid any place that has been hit before. Get away from metal objects – backpack, tent. Best place to be is in an area of thick trees of uniform height. In a group spread out – but stay within eyesight. Sit or crouch on an insulating object (dry wood, sleeping bag), make yourself as small as possible, keep feet close together. Deep dry caves offer protection. Shallow, wet caves are unsafe – better to get into a group of uniform trees.

Aggressive CPR can bring many unconscious strike victims back - even if their heart has stopped - they're physiologically sound, just 'shorted out'. Humans don't store electrical charges – strike victims are safe to touch immediately. Conscious and moaning victims can wait for treatment. Please take a CPR class if you are able, we will review CPR when we are together. You may be the only person standing after a strike so it is important that

you know what to do. We will evacuate any strike victim even if they seem okay, problems can show up later.

Other Lightning Resources

- Thunderstorms and Camping Safety by Chuck Doswell
- Colorado Lightning Safety by the National Weather Service

HIGH ALTITUDE SICKNESS

Serious complications seldom occur below 3,000 meters. As arteries constrict to compensate for decreasing pressure the brain and/or lungs can fill with fluid to the point of being fatal. Most healthy people adjust fine if they spend 2 to 3 days in the 2,500 meter to 3,500 meter range and not gain more than 300 meters of sleeping altitude each night. We will sleep at 2,150 meters. If an individual develops pulmonary or cerebral edema we will all work together to get that person as low as possible as quickly as possible – this would warrant a call for a life flight off the mountain as the only cure is immediate descent. Ataxia, the inability to walk heel to toe, is the first sign of acute high altitude sickness. Difficulty breathing when at rest, coughing up fluids, gurgling sounds when breathing, confusion, severe headache, hallucinations, and seizures are also signs of acute pulmonary or cerebral edema. At the first indication of any of these symptoms we will place a call for evacuation off the mountain and also begin to descend as quickly as possible dependent upon instructions we may receive from a rescue team.

Headache, fatigue, nausea, vomiting, loss of appetite, and dizziness are symptoms of mild high altitude sickness and not cause for alarm unless conditions worsen and symptoms of acute sickness begin to occur. Ibuprofen is effective relieving altitude headache. Dehydration, hypothermia, and exhaustion can mimic acute mountain sickness.

A few tips that will help you acclimatize: (a.) Breathe heavy and move slower – at our altitude you will be getting about 25% less oxygen per breath. (b.) Keep hydrated. (c.) Maintain a diet of 70% carbohydrates. (d.) If you think acclimatizing may be a problem for you see your doctor. He/she may prescribe DIAMOX as it can speed up acclimatization and keep sickness from getting worse.

Other Resources

- articles on Altitude Sickness at WebMd
- High Altitude Illness & Acclimatization

ANIMALS

Mosquitoes: Probably the worst predator we will encounter and we will encounter many of them.

Ticks: Another predator that you have a good chance of coming into contact with. Check yourself frequently especially as you walk through tall grass and vegetation that rubs against you. Sitting still for long periods may give those in the immediate area an opportunity to crawl onto your person. The mirror you will carry in your first aid kit has two functions – reflect the sun to alert rescue plane or chopper and to check for ticks in areas that are impossible to see without a mirror.

TALUS FIELDS

I've heard from a few different sources that talus fields kill more people in the mountains than anything else. A talus field is a steep flow of loose rock down the side of a mountain. Often it doesn't take much for everything to avalanche under the weight of a hiker. We will not be in the position of having to cross or navigate up or down a talus field, but they are in the proximity of where we will be hiking and camping. Stay off of talus fields.

- All you didn't even know you wanted to ask about talus by Bruce Perry of Cal State Long Beach

FALLING

You're walking slowly on a level path praying and enjoying the warmth of sunshine on your shoulders for it's a John Denver kind of day in the Rockies. Suddenly you trip on a root, gaining momentum as you stumble forward you fall headlong onto a log. You'd be okay if that broken branch sticking out from the log hadn't impaled itself into your abdomen. Within a few minutes you have breathed your last and your days on this earth have come to an end. Maybe a bit melodramatic but it happens – (usually with more speed and general recklessness involved) - but out in the wilderness you don't want to take anything for granted. Falling a few meters or hundreds of meters, both can be equally lethal. Be careful, use common sense, and remember that you are not in the wilderness for thrill seeking - *Wilderness* is all about the spiritual adventure. Even a little thing like a twisted ankle can alter the time for everyone on the trip. Accidents happen - but we definitely want to eliminate injuries that occur as a result of foolish, thoughtless, or overzealous actions that could have easily been avoided. No matter how an injury occurs we won't point fingers or lament how it could have been avoided, we will all pull together and do what needs to be done to insure the well being of the injured person(s).

Rock climbing is not a part of the *Wilderness* program. There are steep cliffs with lots of loose rock all throughout the areas we will be hiking and camping. Stay away from all forms of rock climbing and stay away from the edges of cliffs.

Never throw or roll rocks off a cliff or steep incline – this is a cardinal rule in the mountains.

When we are backpacking do not shortcut the switchbacks on the trail. Falling with a fifty pound pack would most likely result in some type of injury. When crossing a stream with your backpack make sure of your footing before committing yourself to a jump or lunge. There will be a lot of extra force coming down on your landing. Your backpack has momentum of it's own that will want to keep going when you land from a jump or whenever you stop. Be especially aware if you are turned sideways as the weight of the pack could throw you off your feet. Likewise if you land short and start to fall backward your backpack all but insures that you will not be able to prevent it from happening.

One moment of thoughtlessness or risk taking could jeopardize your safety and well-being and dramatically alter the time for everyone else on the excursion.

ALLERGIC REACTIONS

Allergic reactions can occur from exposure to food, plants or insect bites. Even if you have not had allergic reactions before you will be in an environment where you may be exposed to plants and insects that you haven't been exposed to before – this could also be true for some of the foods you will be eating. Allergic reactions often involve bumps or welts on the skin usually accompanied by itchiness, as it progresses you may feel a tightening of the throat. In severe reactions the throat can swell to the point of being unable to breathe. Should you begin to have an allergic reaction, immediately take some Benedryl. It will not reverse the reaction but will help to stop it from progressing any further. If you have experienced allergic reactions in the past consult a doctor. He/she may prescribe an epi-pen (epinephrine a form of adrenalin) that could reverse the adverse affects of the reaction.

- Anaphylaxis: First aid by the Mayo Clinic

BURNS

Keep the burn in cool water for about ten minutes - the underlying tissue continues to burn even though removed from the heat source. Don't pop burn blisters. If they do pop apply a thin layer of antibiotic or second skin. Cover burn with gauze or clean clothing - make sure it can 'breathe'. Don't use ice or snow on the burn - unless it is the only immediate thing on hand at the moment the burn occurs.

Be careful of hair and clothing around your fire. If you catch fire smother flames or douse with water immediately - don't flay at the flames as you are wasting precious time. Don't build your fire too close to your tent; be attentive to the wind and sparks being blown around.

Other Resources

- Burn First Aid from the Mayo Clinic

PRECAUTIONS IN DAYS OF SOLITUDE

Carry your first aid kit and your knife with you at all times. I suggest a hiking staff also. We will pair up once at our permanent camp. You will be responsible for your buddy, and they you, during the days of solitude. Each day all of us will need to be by or in our tent at a certain time - probably a few hours before sunset. A simple zipping of your tent door is all you may need to do so your buddy knows you are there. Should someone not be at camp at the prearranged time it could end our solitude as we would need to assume the worst and begin to search for the missing person. Don't hike a distance away from the camp that you begin to feel uncomfortable with - this is not the time to challenge your orienteering skills. Commit to memory different landmarks as you hike, turn around often and look back at the way you have come - things look vastly different coming from the opposite direction. We will go over the geography of our immediate area once we are at our permanent camp.

DEHYDRATION

To prevent dehydration drink at least two liters of water per day - three liters would be optimal. This is especially important during the days of fasting as most people feel nauseous. Force yourself to drink if this is the case for you. Even though it is unpleasant to drink enough water in order to avoid dehydration in the long run you will be much better off as you will avoid the much more painful complications from dehydration - constipation, weakness, headaches, and disorientation - these are just the early and less serious complications that arise from dehydration.

EATING AFTER FASTING

Fasting at 2,100 meters will most likely be much harder than any previous fast you have done at lower elevations. At the end of the fast you may find that you have to force yourself to eat as you may be experiencing nausea and have lost your appetite. For some it takes about half a day to regain their appetite. It is important to begin eating again so that you will have the strength to hike out in a few days.

KNIVES, TENT POLES, AND TREE BRANCHES

Be careful when using your knife. Don't take chances that could result in cutting yourself. One slip and you could be dealing with a life-threatening situation. Even if it isn't serious it is a hassle having to constantly care for a cut. Tent poles have a way of poking themselves into eyes and other sensitive areas. Also be aware of tree branches when you're intent on doing something else, like setting up your tent. When breaking branches for firewood be

careful as you are using your feet or hands to break them in two. Overall, don't rush in any of these activities, think about what you are doing and be aware of your immediate surroundings.

Other Safety Resources

- General Backcountry Safety by the Mountain Rescue Association
- First Aid Guide from the Mayo Clinic