

# BACKPACKING

## Backpacking is Freedom

You have no worries, other than your own. You become part of a scenic landscape and survive in a primitive environment with few modern conveniences. Self-sufficient, yes, but with this freedom comes an individual responsibility to care for the environment and to respect the rights of those you meet along the way and those who follow you.

Backpacking is not limited to supermen and superwomen. However, it does require physical stamina and a genuine liking for the isolation of remote country.

Overnight backpacking trips should be undertaken only by those who are accustomed to hiking mountain trails and are familiar with backpacking techniques.

## Fishing and Hunting

Write in advance to the state Game and Fish Department for fishing and hunting rules and licenses.

Fishing and hunting are authorized under State regulations. Check with local Game



and Fish officials before entering areas to fish or hunt because regulations vary.

In every jurisdiction, target practice used to destroy animals, song birds, and other wildlife is held in contempt, and is usually illegal. Shooting live trees is also prohibited.

## SPECIAL REGULATIONS

### Permits

Permits are required in some areas of the backcountry. Permits can be obtained from local offices of the land managing agency. The permit must be obtained in advance and must be in your possession during your visit.

### Group Size

In many backcountry areas the maximum number of people in a group is restricted. Large groups are destructive. Check to determine allowable group size.

### Trail Courtesy

When hiking, it's quite possible you may encounter trail riders along with pack stock. Since stock is easily spooked from unseen sources, it is best to make your presence known. When stock approach, step off on the lower side of the trail while the stock passes. Be courteous in sharing the trail with others.



## Pets

Regulations differ on taking pets into the backcountry, so check with the local agency office regarding restrictions before you go. Remember: Dogs and cats are predators by nature and will instinctively chase forest birds and animals. Horses and dogs don't mix, so physical restraint of the dog is necessary. Also, bears and dogs do not mix.

You know your pet but other persons do not. Many areas have leash restrictions, especially on or with specific distances, (usually 200 feet) of well-traveled trails or heavily used areas. Show respect for other persons and wildlife by keeping your pet under physical restraint, or better yet, you might consider leaving your pet at home.

## Leave No Trace

For thousands of years our wild lands have existed in complex ecological relationships. These relationships can be easily upset or even destroyed. Once damaged, some plants and soils may not recover in our lifetime. Today, nature is

struggling in many backcountry areas to cope with results of unacceptable backpacking, overnight camping techniques, and heavy use.

Unappreciative and uninformed backpackers can cause severe damage to the backcountry. In places, firewood is scarce or nonexistent, and fire blackened rocks from unnecessary campfires dot the landscape. Small green trees and groundcover are gone, and “human browse” lines exist in trees near timberline. In many areas, the streams are no longer safe for drinking. Several groups of people camping around the same lake lower the quality of the backcountry experience through noise and visual pollution.

Laws and regulations can enforce the rules, but cooperation, proper attitudes, and voluntary actions of visitors are better ways to preserve the land.

Think of the reasons why you might visit a backcountry area. If one reason is to escape an urban setting and enjoy nature on its own terms, then all it takes is a little care-taking on your part to make sure those places will remain healthy for generations to come.

The mission of the **Leave No Trace** (LNT) program is to promote and inspire responsible outdoor recreation through education, research and partnerships.

### **Make a Difference**

You can make a difference by practicing and promoting these seven principles

- Plan ahead and prepare
- Travel and camp on durable surfaces
- Dispose of waste properly
- Leave what you find
- Minimize campfire impacts

- Respect wildlife
- Be considerate of other visitors

### **Awareness and Techniques**

If we could look back at the Rockies, the Southwest or the Lake States in 1830, we would see a land devoid of cities, roads and vehicles, inhabited only by Indians and Mountain Men. When traveling the backcountry, the mountain man’s priorities were adventure, monetary gain and personal survival. Today’s visitors to the backcountry seek solitude, primitive recreation and natural scenery.

Yesterday’s mountain man left no sign of his presence in the backcountry. Today, backpackers should strive to leave no trace of their presence so that the next person may enjoy a natural scene and the solitude it portrays. By treading lightly nature can endure and replenish.

### **Plan Ahead and Prepare**

#### **Trip Planning**

The first step of awareness and a primary backpacking technique is trip planning. As one of many visitors in the backcountry, a carefully planned trip can help to protect yourself as well as the environment.

#### **Things to consider**

- Maps to plan access, take-off and return points, route of travel, approximate camping areas and points of attraction to visit.
- Proper light-weight equipment to safely cope with the elements and your recreational pursuits.
- Food for the entire trip, packed in lightweight containers such as plastic bags.
- Number of people in the party and their abilities.
- Regulations and restrictions that may be applicable.

Experience will help you refine planning skills, equipment and

techniques. However, evenings at home with how-to books, practice in putting up tents or shelters from ground cloths and trying out dehydrated foods or home recipes will spark the imagination and eliminate some mistakes.

### **What You Need**

#### **Gear and Supplies**

- Tent or tarp for shelter
- Nylon ground cloth
- Sleeping bag
- Foam pad
- Water filter
- Lightweight stove
- Cooking utensils
- Cooking kit (lightweight pots and pans)
- Small flashlight, extra batteries and bulb
- Nylon rope
- Knife or multi-tool
- Waterproof matches
- Needle, thread, and safety pins

#### **Food**

- Dehydrated meals
- Trail snacks – high protein, high carbohydrate

#### **Clothing**

*Bring enough for 2 changes, in case one set gets wet or damaged. Bring wool or synthetic under layers for quick-drying and warmth when wet.*

- Pants
- Shirts- long-sleeved and short
- Socks- inner and outer
- Underlayer Jacket- synthetic or wool
- Underwear
- Camp shoes
- Waterproof jacket and pants
- Head cover and mittens
- Sun glasses

#### **First Aid Kit**

*(you can make your own)*

- adhesive bandages
- compresses
- 4-inch elastic bandages
- triangular bandage or cravat
- antiseptic
- aspirin and/or ibuprofen

- eye wash
- adhesive tape
- insect repellent
- sun block
- moleskin for blisters
- tweezers
- lip protection

### Hiking

- Boots, not tennis or sandals
- Socks – inner and outer layers
- Laces – take an extra pair

### Personal Sanitation

- Lightweight trowel
- Toilet paper
- Quick-dry towel
- Biodegradable soap

#### **TRAVEL TIP: Boots for comfort**

An ill-fitting or new, untried boot can cause a hiker misery after a long day on the trail. To prevent blisters, aching feet, and twisted ankles, make sure your footwear is suited to the type of terrain and pack weight you will be traveling with on your trip.

Most backpackers prefer 6 inch laced boots with rubber or synthetic soles. They should fit comfortably over two pair of socks, a wicking sock and a heavy wool or synthetic sock. Wear your new boots enough to break them in before the trip.

Take extra laces. Pack a pair of soft soled shoes or sandals. After a day of hiking, they will feel comfortable as well as being less damaging to campsite vegetation.

### When to Travel

Time your trip according to climatic conditions.

If you go into the high country too early, snow may interfere with travel; streams tend to be high and difficult to cross; fishing may be poor; and meadows and trails are apt to be soft and subject to damage.

July and August are subject to intense afternoon thunder and lightning storms in the alpine area.

In the Colorado Mountains, conditions are usually favorable for travel from June 15 to October 1. However, in the Northern Rockies, the best time for a trip is between July 15 and September 15.

August and early September often provide the best weather for travel in the high country, with little bother from insects.

To obtain solitude, try to plan your trip when use by others is at a minimum. The heaviest use times are holidays and weekends.

Whenever you go, be prepared for all kinds of weather including rain, summer blizzards, extreme cold, and heavy winds.

### Travel Light

Experienced backpackers pride themselves on being able to travel light. Rugged, surefooted backpackers will seriously explain that they cut towels in half and saw the handles off toothbrushes to save ounces. They measure exactly the right amount of food needed and put it in plastic bags, which are light. They carry scouring pads with built-in soap, to eliminate dish soap and dish-cloth.

How much should you carry? It all depends on your physical condition and experience, the terrain to be covered, the length of the trip, and time of the year. The average is thirty pounds for women (maximum 35) and forty pounds for men (maximum 50). Try not to carry more than one-quarter of your body weight.

When figuring weight, count all items – the cup on your belt, the camera around your neck and the keys in your pocket.

### Travel and Camp on Durable Surfaces

**Stay on the designated path** when hiking existing trails. Cutting a switchback or avoiding a muddy trail by walking in the grass causes unnecessary erosion and unsightly multiple paths. In the spring, travel across snow and rocks as much as possible; high mountain plants and soil are especially susceptible to damage during a thaw.

If you choose a route without trails, do not mark the trees, build rock piles or leave messages in the dirt. A group should spread out rather than walk one behind the other. Ten people tramping in a row can crush plant tissue beyond recovery and create channels for erosion.

Hike in small groups of no more than six people. Four is the best number, especially during off-trail travel. In case of sickness or injury, one person can stay with the victim while two people go for help. Use your judgment in breaking your group into smaller units to reduce visual impact and to increase individual enjoyment and self-reliance.

### Dispose of Waste Properly

Pack it in; pack it out still rings true. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food and litter.

### Disposal of Camping Wastes

Don't take cans and other "unburnables" into the backcountry unless you are willing to pack them out.

Avoid the problem of leftover food by carefully planning meals. When you do have leftovers, carry them in plastic bags and pack out.

Wash dishes at least 200 feet from water sources.

Waste water (dishwater or excess cooking water) should be strained and the “chunks” packed out. Food scraps like egg and peanut shells and orange peels take an extremely long time to decompose and are eyesores.

Fish intestines should be buried.

### **Bathing and Washing**

Although the mountain men weren't famous for their cleanliness, today's visitors like to bathe and wash their clothes. Be aware, however, that all soap pollutes lakes and streams. If you wish to soap bathe, jump into the water first, then bathe ashore well away from the water, and rinse the soap off with water carried in jugs or pots. This allows the biodegradable soap to break down and filter through soil before reaching any body of water. Thorough rinsing can adequately clean clothes. Soap is not necessary.

Too much soap in one place makes it difficult for soil to break it down. Therefore, dispose of soapy water in several places.

Do not use soap or dispose of soapy water in tundra areas; the soil layer is too thin to act as an effective filter and destruction of plant life usually results.

### **Human Waste**

The proper disposal of human waste is important. For the benefit of those who follow, you must not contaminate the water.

Fortunately, nature has provided a system of very efficient biological “disposers” to decompose fallen leaves, branches, dead animals, and animal droppings in the top 6-8 inches of soil. The individual “cat hole” method, used by most experienced backpackers is recommended.

### **Leave What You Find**

Help preserve America's cultural heritage by leaving archeological and historical remains undisturbed, encourage others to do the same, and report your discoveries to the local ranger.

Avoid removing items of interest (rocks, flowers, wood, and antlers.) Leave these in their natural state for others to see.

### **Minimize Campfire Impacts**

The mountaineer's decision to have a campfire was influenced by a need for warmth and a cooking source. Today, your most important consideration should be the potential damage to the environment.

The mark of an experienced backpacker is to use a stove when an area could be easily damaged.

A stove leaves no trace. Use of stoves is preferred and often the only legitimate fire source in many wilderness areas today.

Use a candle for light and enjoy the evening star show.

### **If you do build a campfire remember:**

Use a campfire infrequently and only when:

There is an established fire ring, or you have a fire pan or fire blanket, or can build a mound fire. *This will prevent rock and soil scarring.*

There is sufficient mineral soil to build a mound fire. *See how to build a mound fire in the tips box.*

There is abundant dead wood available on the ground. *In many areas, wood is being used faster than it grows.*

Your campsite has an established fire ring. *Avoid creating new fire-scarred areas.*

Your campsite shows no signs of heavy use, such as an ash-filled fire pit or trampled soil. *In over-camped areas or near timberline, choose an alternate campsite or use a portable stove.*

### **Fire Rules**

In some areas campfires are prohibited by regulations. *Check with the public land management agency for local regulations.*

## **Dealing with Solid Waste Disposal**

### **The “cat hole” method**

- Select a screened, well-drained spot at least 200 feet from any water or trail.
- Use a lightweight plastic trowel to dig a hole 6-8 inches across and 6-8 inches deep. Try to remove the sod (if any) in one piece.
- After use, refill the hole with the loose soil, and then replace the sod. Nature will do the rest in a few days.
- The cat method is unnecessary for urination; however, urinate well away from trails and water sources. Use areas that are well hidden, but try to avoid vegetation

because the acidity of urine can affect plant growth.

- If you are traveling as a group, consider a latrine to minimize impact.

### **Pack it out**

- Consider bagging and packing out toilet paper. This is essential to prevent sanitation problems from heavy visitation, and some areas require it.
- Tampons must be bagged and carried out or burned in an extremely hot fire. Never bury tampons because animals will dig them up.

## How to Build a Mound Fire

When there is no existing fire ring, use this method to assure minimum impact.

**Step 1:** Once you have a piece of ground chosen for a fire, the first step is to cover the ground a fire proof piece of material (sold in many outdoor stores) or a fire pan. A flat rock can also be used. Remember having a small fire is better as it takes less wood to build thus conserving the wood supply and time spent gathering it.

**Step 2:** Cover the material/pan with several centimeters, or 1 1/2 inches, of mineral soil to insulate the material and ground. Mineral soil can be obtained from sandy beaches, gravel areas or by digging underneath the organic soil layer. Be careful to not disturb any vegetation while obtaining the mineral soil. The soil should not contain twigs or other biological matter that may burn once the fire is lit.

**Step 3:** Build your fire on top of the mineral soil and keep it small to conserve wood and prevent it from burning nearby vegetation.

**Step 4:** Light and Enjoy.

**Step 5:** Once the fire is finished burning and no large pieces of charcoal are left, douse the ashes with water. Be sure the fire is out and cool to the touch. The ashes can be scattered across a meadow or forest so that they are hidden from view. Return the mineral soil from where it was obtained and pack your material/pan away. What is left should be as good as before the fire with no trace of burned wood or scorched rocks. The remains of a properly built fire should not be visible after it is dismantled.

All fires must be attended. *Many forest fires have started from people who have left their fire burning while they went hiking.*

Don't build a ring with rocks. *This will permanently blacken them and tell others you were there.*

Build fires away from tents, trees, branches and underground root systems.

Campfires should never be built on top of the forest floor. *If there is groundcover of needles and decomposed matter be sure to dig through it to the soil.*

Do not build fires on windy days. *Sparks might be dangerous, especially when the countryside is dry.*

Use only dead-and-down branches no larger than your wrist. *This will insure complete, efficient burning.*

Keep your fire small. *Firewood is often scarce near heavily used campsites so it should not be wasted on excessively large fires.*

Avoid breaking off branches, alive or dead, from standing trees. *Broken, stubby trees lose much of their natural appearance and the action can injure or kill young trees.*

Break branches with your hands, not a saw. *Saws leave unnatural and unnecessary scars and add weight to your pack.*

Scatter unused firewood before leaving your campsite. *This will preserve a natural appearance.*

Fires should be completely out before you abandon the campsite, and the ashes scattered. *When preparing to leave the campsite use water and soil to douse the flames thoroughly. Feel the coals with your bare hands to be sure the fire is out.*

### Respect Wildlife

When tracking wildlife for a photograph or a closer look, stay downwind, avoid sudden motions and never chase or charge an animal. Respect the needs of birds and animals for undisturbed territory.

Some birds and small animals may be quite curious, but resist the temptation to feed them. Feeding wildlife can upset the natural balance of their food chain- your leftovers may carry bacteria that are harmful to them.

### Be Considerate of Other Visitors

Traveling quietly through the

backcountry has many advantages. You'll have a better chance of seeing wildlife that would otherwise be frightened by loud noises. You'll begin to tune in to the sounds and the rhythm of nature more easily. Others will also appreciate your thoughtfulness.

However, in "grizzly country" noises may keep the bears away. See "Enjoy Bear Country."

**Wear "earth colors"** to lessen your visual impact, especially if you are traveling in a group. However, during hunting season a blaze orange hat and vest are advisable for your personal safety.

**Allow horses plenty of room** on trails. Horses may be frightened by backpack equipment. It is best to move off the trail. Everyone in your group should stand off to the downhill side of the trail. Avoid sudden movements as horses pass.

### Drinking Water

Better to be safe than sorry. No matter how "pure" it may look, water from streams or lakes should be considered unsafe to drink until properly treated.

The most common disease associated with drinking water is

giardiasis which is caused by ingesting the microscopic cyst form of the parasite giardia lamblia. Flu-like symptoms appear 5-10 days after exposure and may last 6 weeks or more if untreated. Other disease causing organisms may also be present in untreated surface waters.

Start each trip with a day's supply from home or other domestic source. To replenish that supply, search out the best and cleanest source, strain the water through a clean cloth to remove any suspended particles or foreign material. The best treatment then is to bring the water to a rolling boil for 3-5 minutes. Cool overnight for the next day's supply.

Another solution is to treat with iodine water purification tablets or use an EPA approved water purification device.

## Safety and Emergencies

**For safety reasons, travel with a companion.** Leave word at home and at your "jumping-off" place if a backcountry visitor register is provided.

When you travel in a party, see to it that no one leaves the group without advising where they are going and for how long.

**Watch for loose or slippery rocks** and logs, cliffs, steep grades, and inclined hardpacked snow fields where a misstep can cause an uncontrolled slide or fall.

Use your best judgment, and never take chances.

## In Case of Injury

Injury in remote areas can be the beginning of a real emergency.

- Stop immediately!
- Treat the injury if you can, and make the victim comfortable.
- Send or signal for help. *If you must go for help, leave one*

*person with the injured. If rescue is delayed, make an emergency shelter.*

- Don't move until help arrives unless there is more danger in remaining where you are. *Use extreme care in moving the injured.*

## Altitude Sickness

A person should spend 2-3 days getting acclimatized to high altitude before hiking. The lack of oxygen at high elevations gives some travelers altitude sickness.

## Prevention

The best prevention is a slow ascent with gradual acclimatization to altitude. Beginning at an elevation of 9,000 feet, it is recommended that you do not ascend more than 1,000 vertical feet per day.

## Symptoms

Cough

Lack of appetite

Nausea or vomiting

Staggering gait

Severe headaches

## Treatment

A person with symptoms of altitude sickness should breathe deeply and slowly, rest, drink plenty of water, and eat quick energy foods such as dried fruit or candy. Take aspirin or ibuprofen to help the headaches; antacid pills may help other symptoms. If symptoms persist, seek lower elevations immediately. Continued exposure can make the victim too weak to travel, and may lead to serious complications.

## Dehydration

Adults require 2 quarts of water daily, and up to 4 quarts for strenuous activity at high elevations. There is a 25 percent loss of stamina when an adult loses 1½ quarts of water. To avoid dehydration, drink water often and continuously. Use a rest stop

## Hypothermia

Hypothermia is the rapid, progressive mental and physical collapse that occurs when a person's body is chilled to the core. It is caused by exposure to cold, and aggravated by wet, wind, and exhaustion. It occurs most often when the temperature is between 30 and 50 degrees – making it hard for people to accept the danger.

to take a drink. If you drink only when you feel thirsty, you are already becoming dehydrated.

An excellent "hydration check" is to note your urine color; dark yellow may indicate you are not drinking enough water.

## Hypothermia

Cold kills in two distinct steps: (1) exposure and exhaustion, and (2) hypothermia.

Exposure occurs when your body begins to lose heat faster than it produces it. To compensate you either exercise to stay warm or your body makes involuntary adjustments to preserve normal temperature in the vital organs. Either of these responses drains your energy reserves until they are exhausted.

## Survival Tips

Exposure to the elements is more dangerous than hunger and thirst. You may live more than a week without food, for 3 days without water, but for only a few hours in severe weather.

**Get out of the wind.** Move from exposed ridges or open flats. Go to the lee (sheltered from the wind) side of a mountain, behind trees, rocks, or other natural barriers.

**Find natural shelter** in rock formations, caves, dense evergreen forests and behind large logs. In winter, be sure that snow from overhead branches will not fall into your fire.

**Build a “lean-to”** with poles and evergreen thatch, if you cannot find a natural shelter. If unable to do this, make a windbreak of evergreen boughs stuck into the snow.

### Symptoms

When your energy reserves are exhausted, lowered body temperature affects the brain, depriving you of judgment and reasoning power. (You do not realize this is happening.)

Symptoms include:

- Uncontrollable fits of shivering
- Vague, slow or slurred speech
- Memory lapse or incoherence
- Physical clumsiness such as fumbling hands, frequent stumbling, or a lurching gait
- Drowsiness, apparent exhaustion, and inability to get up after a rest

This is hypothermia. Your internal temperature is sliding downward. Without treatment, this slide leads to stupor, collapse and death.

### Treatment

Treatment must be immediate and drastic. The victim may deny being in trouble. Believe their symptoms.

- Get them out of the wind and strip off all wet clothes
- If they are only mildly impaired, give warm drinks, keep awake, get them into dry clothes and a warm sleeping bag.
- If semi-conscious, leave stripped and put in a sleeping bag with another person, who is also stripped. If possible, put victim between two warmth donors.

### Defense

- The best defense against hypothermia is to avoid exposure.
- Recognize hypothermia weather and dress for it.
- Stay dry and protected from the wind.
- If you cannot stay dry and warm under existing weather conditions with the clothes and equipment you have, get out of the weather.
- Build a fire and make camp-- while you still have a reserve of energy.

### Silent Killer

The dangerous thing about hypothermia is that the victim doesn't realize what is happening.

- They may feel fine, but the fact may be that exercising is the only thing preventing going into hypothermia.
- When they stop, the rate of body heat production instantly drops by 50 percent or more.
- Violent shivering may begin and the victim may slip into hypothermia in a matter of minutes.

### Windchill Chart

Wind, temperature, and moisture are factors that can greatly affect the safety of a backpacker. Each contributes to the loss of body heat. The “wind chill” chart illustrates the effect of wind and temperatures on dry, exposed flesh.

### Lightning

Lightning storms can be severe in the high country. Storms can appear without notice, blowing in over the mountain tops. When lightning is imminent, don't take chances- immediately crouch in a kneeling position.

Safe locations include a deep thick cave, crouched between rocks in a boulder field, or forested areas. Above treeline, crouch on a small rock with insulating material (your foam pad, for example)

under you, with only your feet touching the ground. Clasp your hands around your knees. If you are struck, the bolt of lightning may not pass through your heart because of the insulation.

Best bet: *Think ahead and get to safe areas before the storm hits.*

### Avoid:

- Exposed locations such as ridgetops, meadows, ledges, rock outcrops, and exposed sheds or shelters
- Wire fences, telephone lines, and metal tools
- Large or lone trees
- Rivers and lakes
- Horses and stock
- Grouping together

### If You Get Lost

Someone in your party may become lost. If you or someone else becomes lost, follow these steps.

- Stay calm
- Try to remember how you got to your present location.
- Look for familiar landmarks, trails, or streams.
- When you find a trail stay on it.
- If you decide to go on, do it slowly.
- Try to find a high point with a good view, and then plan your route of travel.
- Follow a drainage downstream. In most cases it will eventually bring you to a trail or a road. Help won't be far off.
- If you are injured, near exhaustion, or it's dark, stay where you are; someone may be looking for you.

When backpacking with children, these suggestions may help save a child:

- Be sure they stay with you or near camp.
- Discuss with them what they are to do if they become separated.
- Give each child a whistle and instruct them to blow on it if they are lost.



