

BASIC BACKPACKING COURSE HANDBOOK

Spring 2025



The Mountaineers, Seattle Branch

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Backpacking Overview

1. Preparation

- A. Where are you going?
- B. What equipment are you going to take?
- C. Have you checked local conditions and weather forecasts?
- D. Clothing, food, fuel, water
- E. Permits?
- F. Leave itinerary with responsible adult

2. The Ten Essentials

- 1. Navigation - map, compass, other tools (and ability to use)
- 2. Sun Protection - hat, sunglasses, sunscreen
- 3. Insulation - extra clothing
- 4. Illumination - headlamp with extra batteries & bulb
- 5. First aid kit
- 6. Fire - waterproof matches & striker, lighter, fire starter
- 7. Repair kit and tools
- 8. Nutrition - extra food
- 9. Hydration - extra water
- 10. Emergency shelter

3. Equipment for Backpacking

- A. Backpack (50 - 75L capacity)
- B. Tent/Shelter and ground cloth
- C. Sleeping bag and mat
- D. Stove and fuel
- E. Kitchen gear
- F. Water containers
- G. Footwear/Boots and socks, gaiters
- H. Clothing for seasonal extremes
- I. Ten Essentials (see above)
- J. Food for meals/snacks
- K. Water treatment
- L. Personal items
- M. Stuff sacks or dry bags to hold above gear
- N. Plastic bags for garbage, gear
- O. Trekking poles/ ice axe (know how to use)
- P. Food canister, Ursack/ Opsack, or Stuff sack and 50 ft. utility line for food bag/hang
- Q. Assorted straps for attaching gear to pack
- R. Miscellaneous items

4. Wilderness Ethics (Leave No Trace)

- A. Camp in existing campsites, follow all camping rules and regulations for area
- B. Build fires only in established fire pits within allowed area or elevation
- C. Dig latrines or cat holes at least 200 ft. away from lakes/streams, pack out your TP
- D. Take along a litterbag. Don't leave foil and trash in fire pits
- E. Don't cut live timber for firewood
- F. Stay on established trails
- G. Pack out everything you pack in, or even more. Be a good steward!

Backpacking Equipment - A Guideline

Housing (10-15 lbs):

Pack, straps, pack rain cover, pack liner (garbage bag), repair kit
Tent/shelter, poles, rain fly, ground cloth, stakes, guy lines, stuff sack (or dry bag)
Sleeping bag (lightweight 0-20 degree bag), stuff sack (or dry bag)
Sleeping pad, stuff sack (or dry bag)

Cooking:

Stove, repair kit, wind screen, fuel, pump (if separate), stuff sack
Pot(s) w/lid(s), pot gripper, cozy
Accessories: utensils or spork, mug (w/measure marks), bowl, camp soap, scrubby, water carrier, filter or water purification tablets, food storage (canister, Ursack or nylon sack with hanging rope), matches/striker, lighter, spatula, garbage bags

Food (1.5-2.5 lbs food per day):

Coffee, tea, dry cream/milk, dried pasta, rice, noodles, cheese, nuts, dried fruit, bread/rolls/crackers, gorp, cooking oil, oatmeal, dinners/lunches. Try to bring foods that require little or no cooking (can be eaten cold or are reconstituted with boiling water), contain little water and are re-packaged as needed into zip-lock freezer bags (to boil water, does not melt the bag). Bring extra food for an emergency.

Clothing (6-12 lbs):

Wet weather: Rain jacket with hood, or poncho, rain pants, gaiters
Cold weather: Thermal underwear, snug warm cap/balaclava, gloves, pile, down or wool pants and jacket or sweaters.
Cool weather: Thin wool pants or nylon pants w/ lightweight thermal underwear, shirts
Hot weather: Shorts (nylon), sun hat, tee shirt(s)/tank tops
Basic: Water-proofed leather boots or sturdy hiking shoes, wool socks, liner socks (if needed), lightweight camp shoes/sandals (for around camp, wading), underwear, bandana(s), thermal underwear to sleep in

Other (5-12 lbs):

Toiletries: Biodegradable camp soap, toothpaste/brush, floss, shampoo, deodorant, comb/brush, washcloth, towel or pack cloth, tweezers, nail clipper, razor, mirror, tissues, scissors, toilet paper and trowel, prescriptions, chapstick, sanitizer, wet wipes
Writing/reading: Paperback or e-book, e-nature apps, pen and paper

Essentials + Map(s): compass, GPS, pocket knife and/or multi-tool, first aid kit, headlamp with extra batteries & bulb, sunglasses, sunscreen/block, matches, insect repellent, fire starter, money & ID. Forest Service, etc. permit. For printing maps consider using www.caltopo.com, www.gaia.com app for navigation tools.

Optional: Watch, camera (or cellphone camera) & gear, altimeter (GPS or gaia app), ice axe, extra eyeglasses (and/or contacts), umbrella, hip pack (lid) or small day pack, headnet or mosquito net, sit pad, binoculars, trekking poles, extra batteries, tarp & rope

Your pack with 2 quarts of water should weigh 25 -40 lbs for short trips (2 - 4 days) and 42-50+ lbs on longer trips (5-10 days)

Food

Backpacking weight limitations restrict the variety of food people carry, but this restriction is offset by one of the principles of being outdoors: food tastes so much better there! Most of a food's weight is in the water it contains. Because water is available on almost any backpack you do, you can add it to dried foods at your campsite.

You can simplify menu planning by buying lightweight, convenient, freeze-dried foods at an outdoors specialty store. Instead of figuring out ingredients and shopping for them, you can pick up a variety of these already-put-together meals. Most are packaged in foil pouches. Just pour in boiling water and wait a few minutes while the liquid re-hydrates the food. You can eat right out of the pouch, leaving no dirty dishes! Freeze-dried food is expensive, however, even more expensive than it first appears because you can't believe the cheery labels that say, "Serves Two." After a hard day on the trail, it's easy for one person to polish off a dinner meant to serve two. Unfortunately, freeze-dried foods also tend to be highly processed and contain much more sodium than you will sweat out during the day. A variety of dehydrated meals are vegetarian, are less-processed, and many other healthy choices are available.

Food from the supermarket can take a little more planning and preparation, but is less expensive, and whole foods can provide more sustained energy through the day. These foods include:

1. Whole Grains: Quinoa, millet, whole wheat/grain pasta are more filling and higher in fiber than refined white products. Many crackers can be found in whole wheat/grain versions.
2. Protein: Tuna, sausage (nitrite free), nuts/seeds, and combinations of grains with vegetables/enzymes.
3. Fruits/Vegetables: Dried fruit (without sulfites) and seaweed. Fresh fruit and vegetables for short trips.
4. Fats: Nuts and seeds, olive oil and cheese.

Instant oatmeal, Zoom, Cream of Wheat/Rice, and granola are good breakfast foods. Add dried fruit, nuts, seeds, or coconut flakes for additional flavor. Add flaxseeds for a healthy dose of omega-3 fatty acids. Also, you can add powdered milk (recommend the full fat kind, Nido brand, over nonfat kind) or add powdered peanut butter for fat and protein. You can also cook dehydrated eggs, pancakes, griddle scones, etc.

Bagels and cream cheese are popular for lunch because bagels are indestructible in the pack, and cream cheese will keep up to five days in cooler weather before it becomes a science project. Also good for lunch are tortillas, sturdy rolls and crackers, hard cheese, salami, peanut butter and jam in squeeze tubes, powdered hummus reconstituted in a small container, carrot sticks, dried fruit, turkey and buffalo jerky, seaweed snacks, nuts, gorp, chocolate, etc.

Dinner can be quinoa, millet, pasta with cheese or tuna, ramen, Annie's brand whole wheat Mac and Cheese.

Snacks include seaweed, trail mix, nuts, seeds, sesame sticks, dried fruit, sun dried tomatoes, energy bars such as Lara Bars.

Tips

Repackage store-bought foods in Ziploc freezer bags (boiling water does not melt freezer bags) and include the cooking time. If a recipe calls for milk, add powdered milk directly to the bag.

Eating on Trail

Short Trip (1-2 nights)

For a trip of one or two nights, your choices are wide open. In warm weather, you could dispense with a stove and carry only sandwiches, cereal, hard-boiled eggs, and other foods that require no cooking. You could opt for luxury over lightness, carrying in frozen cooked meat, such as a chicken breast (weather permitting) that defrosts in your pack, and hardy vegetables such as potatoes, cucumbers, carrots and broccoli. Or stick with light backpacking foods. There are also meals that can be boiled in their own pouches available at some specialty or large grocery stores.

Longer Trip (3-7 nights)

On trips of more than a couple nights, weight is a primary concern. The easiest choice is freeze-dried backpacking food, but you can also shop at the supermarket.

Breakfast: Hot or cold cereal, including granola, Instant Breakfast, instant soups, breakfast bars, bagels and cream cheese, sturdy bread/rolls, and peanut butter. The more ambitious can cook dehydrated eggs, pancakes, griddle scones, etc.

Lunch and snacks: Tortillas, crackers and cheese, sandwiches of peanut butter with jam or honey, hard salami, sardines, canned or foil packaged fish or meat on crush resistant breads like pita or bagels, food bars, dried fruit, trail mix, nuts, chocolate, cookies.

Dinner: Freeze-dried meals in pouches; macaroni and cheese; tuna fish or chicken in foil packs, packaged noodle or rice dishes, perhaps with small cans of meat or TVP and freeze-dried vegetables.

Dessert: Instant pudding, dried fruit smoked, sweetened and cooked, candy bars, cookies, freeze-dried ice cream, apple crisp, chocolate, dehydrated desserts.

Tips:

Accompaniments such as dried soup, instant coffee, tea, cocoa, and bouillon weigh little and add much to enjoyment.

Use garlic salt, spices and herbs to add zip to otherwise bland dishes.

Include some fat, such as meat, cheese, chocolate, nuts, etc. in your dinner. This will help you sleep warmer.

Maps

Use of Maps

- ❖ To determine trail distances and elevation changes for use in trip planning.
- ❖ To identify peaks, streams, lakes, etc.
- ❖ For use, along with a compass, if lost (Backpackers seldom get lost -- just confused).

- ❖ For printing maps, consider using www.caltopo.com. Easy to use. Also prints current angle of declination on the map.

Types of Maps

Planimetric (No Contour Lines)

- ❖ Highway Maps. Good for main roads. Forest (logging) roads rarely shown.
- ❖ Forest Service Maps. A good guide to man-made features such as roads and trails.
- ❖ Sportsmen's (Hunters) Maps. Similar to Forest Service maps.
- ❖ Pictorial Relief Maps. Good for general planning purposes.

Topographic (Contour Lines)

- ❖ United States Geological Survey (USGS) Maps. Excellent for doing elevation gains and losses as well as the general shape of the terrain. Are essential for off-trail travel.
- ❖ Green Trails Maps. Recommended for hikers and backpackers. Trails and distances clearly marked.
- ❖ Forest Service Maps. Some FS maps, particularly for wilderness areas, show contour lines. Avenza app provides mostly free maps (Forest Service), also National Geo maps.
- ❖ Digital map/navigation tools: www.caltopo.com, www.gaia.com, etc. Caltopo is easy to use. It prints the current angle of declination on the map.

Note: Backpackers are encouraged to learn the use of a compass in order to orient a map, take a bearing from a landmark or an oriented map, and to follow a bearing. An altimeter is also an excellent investment, and most are in combination with watches and digital nav apps/tools.

Tip: Paper maps can be expensive over time, and inconvenient to obtain just before a trip. Consider purchasing a computer product that allows printing of topographic maps at home, such as products by National Geographic (Topo), Memory-Map, or Maptech. It's also possible that if you own a higher-end GPS that you already have software that will allow you to print out topographic maps on your home printer.

If you're willing to do some investigation, it's even possible to print out topographic (USGS) maps for free (see the "Trip Planning Resources" section later in the document).

Leave No Trace

Our wild lands are special places of retreat and renewal, places of fragile beauty. But often, the places that we treasure most for their beauty and solitude are most susceptible to damage caused by well-meaning but careless visitors. Eroded switchbacks, networks of social trails and trashed campsites soon replace the pristine setting that originally drew us there.

If we learn and practice the principles of Leave No Trace, we will become adept at traveling and camping with care, planning and guiding our actions so as not to harm the environment or disturb others. And the wilderness jewels that we enjoy today will continue to sparkle for generations to come.

The Seven Principles of Leave No Trace

1. Plan Ahead and Prepare
2. Travel and Camp on Durable Surfaces
3. Dispose of Waste Properly
4. Leave What You Find
5. Minimize Campfire Impacts
6. Respect Wildlife
7. Be Considerate of Other Visitors

1. Plan Ahead and Prepare

- ❖ Respect Your body and its limits.
- ❖ Get in shape with aerobic and strengthening exercises.
- ❖ Base the selection, timing and pace of your trip on the limits of your body, mind, and abilities.

Be safe.

- ❖ Know the basics of first aid for the backcountry.
- ❖ Be aware of the medical needs of all party members.
- ❖ Carry the Ten Essentials: Navigation, Sun Protection, Insulation, Illumination, First aid supplies, Fire, Repair kit and tools, Nutrition, Hydration, Emergency shelter. Also carry phone call money (even if carrying a cell phone), pencil and paper.
- ❖ Use a water purification method.
- ❖ Let someone know where you are going and when you plan to return; give emergency telephone numbers.
- ❖ Check your equipment and be sure everything works.
- ❖ Bring clothing sufficient for warmth and comfort; and footwear appropriate for area, activity, season and safety.

Plan your trip.

- ❖ Learn what regulations apply - group size, permits, campfire restrictions, pets, and so forth.
- ❖ Limit party size to 12, unless regulations stipulate smaller groups.
- ❖ Party size includes pack animals, unless agency regulations specifically allow otherwise.
- ❖ Check with the appropriate agency on avalanche danger, stream crossings, bears, and other hazards.
- ❖ Review recent trip reports, and check for youtube videos.
- ❖ Learn about your route, including its trails, history, and wildlife.
- ❖ Repackage food to reduce bulk, weight, and waste.
- ❖ Bring a large water container so fewer trips are needed to the water source.

2. Travel and Camp on Durable Surfaces

On the Trail

- ❖ Walk in single file to protect trailside vegetation.
- ❖ Stay on trails even if they are muddy, snow-covered, or rutted. Bring and use gaiters.

- ❖ Suppress the desire to cut switchbacks on trails, because this tramples vegetation and leads to erosion.
- ❖ On rest breaks, select resilient areas off the trail where you will not damage fragile vegetation.
- ❖ Do light trail maintenance, clean blocked culverts, divert running water off of the trail, and remove rocks and other debris and litter.

Cross-Country Travel

- ❖ Spread out, rather than walking single file, when traveling cross-country.
- ❖ Travel cross-country on rock, talus, gravel or timber; use existing way trails if possible.
- ❖ Avoid brittle woody vegetation, fragile herbs and saturated soils.

Allow enough time at the end of the day for campsite assessment and selection. Fatigue, bad weather and late departure times are unacceptable excuses for choosing poor or fragile campsites.

Campsite Selection in Well-Used Areas

- ❖ Camp and cook in established sites rather than creating new sites.
- ❖ Camp 200 feet away from water, meadows, trails, and other campers, if at all possible.
- ❖ Do not expand existing sites.
- ❖ Do not alter vegetation with nails, hatchets, etc.
- ❖ Avoid damaging banks when obtaining water. Use established routes to water when possible.

Campsite Selection in Remote Areas

- ❖ Avoid camping in lightly disturbed sites.
- ❖ Select resilient, naturally bare, well-drained sites for tents and cooking. Good sites are bare soil, sand, gravel, rock, snow, or grass or sedge meadows.
- ❖ Avoid heather or fragile meadows.
- ❖ Camp 200 feet away from water.
- ❖ Never level or ditch a campsite.
- ❖ Never scrape away forest duff or vegetation to create a new site.
- ❖ Spread out tents.
- ❖ Cook 200 feet from camp and water. Avoid cooking upwind of your tents
- ❖ Use a large water container to minimize trips to fragile riparian areas.
- ❖ Naturalize your site when you are done. Fluff up the grass. Return rocks or logs to their original locations. If no one can tell you were there, then someone else is less likely to camp on the same spot that you used.

In Camp

- ❖ Switch to lightweight shoes to tread lightly on the land.
- ❖ Sit on existing rocks and logs instead of moving more in.

3. Dispose of Waste Properly

On the Trail

- ❖ Leave trails and campsites cleaner than you found them.

- ❖ Take a litterbag to carry out all refuse--yours and any found along the way.

Cooking and Cleanup

- ❖ Pack out all litter and trash. Never bury it, burn it or place it in pit toilets.
- ❖ Bury or pack out fish entrails. Consult the appropriate land agency.
- ❖ Clean up as soon as you are finished eating.
- ❖ When washing dishes, strain out food particles, and pack them out. Fling waste water away from camp and water sources.

Sanitation

- ❖ Use established backcountry toilets when available.
- ❖ Bury human waste 6 to 8 inches deep and 200 feet away from water, campsites and trail.
- ❖ Pack out all TP and tampons. Do not bury, as will get dug up by animals.
- ❖ In high alpine areas or on snow, bag and pack out human waste.
- ❖ Urinate on bare rock or soil. Animals will strip vegetation to get to the salts left behind.
- ❖ Wash body and clothing at least 200 feet from water sources. If soap is necessary, use biodegradable soap. Do not return soapy water to streams or lakes.
- ❖ Swimming is OK if you wash off bug repellent and sunscreen first (before entering water).

4. Leave What You Find

- ❖ Photograph or journal to document your trip.
- ❖ Leave flowers, leaves, rocks or other natural features for all to enjoy. Antlers and animal bones are sources of nutrients for rodents and other small mammals.
- ❖ Leave trail-less areas free of blazes, cairns, and flagging, unless you find them already there.
- ❖ Collect berries or edible plants well away from camp or trails. Don't deplete small isolated populations.
- ❖ Respect archeological or historical sites and artifacts.

5. Minimize Campfire Impacts

- ❖ Carry and use a stove. Especially in alpine areas. Consider using a stove even when wood fires are permitted.

Follow campfire etiquette. While campfires have long been a tradition in camping, they are very harsh on the environment and their use should be avoided. If you make the decision to have one, please follow these guidelines carefully:

- ❖ Collect only dead and down wood 200 feet or more from outside the camp area,
- ❖ Never cut standing trees or snags, as they are an important part of the ecosystem. Use only wood that you can collect and break by hand.
- ❖ Keep any fires small, build only in existing fire rings, and only where safe and legally permitted.

- ❖ Never leave a fire unattended.
- ❖ Burn all wood to ash, put the fire out completely and scatter the ashes.
- ❖ Do not burn foil and other trash in the fire ring. Pack it out.
- ❖ When traveling cross-country, use fire pans or soil mounds. Build fires only when necessary and legally permitted. Remove all evidence of them before leaving the area.

6. Respect Wildlife

- ❖ Keep wildlife healthy and self-reliant by not feeding them.
- ❖ Hang food and trash out of reach of animals: 10 feet from tree trunks and 12 feet off the ground.
- ❖ Cook, eat and store food well away from the sleeping area.
- ❖ Only take dogs on trips designed for dogs and their owners.
- ❖ Observe wildlife from a distance. Do not approach or follow them.
- ❖ Avoid wildlife during sensitive times: mating, nesting, raising young, winter.

7. Be considerate of Other Visitors

- ❖ Respect other visitors and the quality of their experience.
- ❖ Observe trail courtesy. Yield to uphill hikers. Small groups yield to larger groups. Wait on the downhill side of the trail for pack stock to pass.
- ❖ Take breaks and camp away from other visitors.
- ❖ When traveling cross-country, let others have the same adventure of route finding that you experience, don't spoil it by adding trail markers.
- ❖ Use tents, equipment, and clothes that are muted in color.
- ❖ Position your camp so it blends with the environment.
- ❖ Enjoy the quiet and let others do the same. Use headphones if you bring a radio or MP3 player.
- ❖ Place your wet clothing and gear out of others' view.

And When the Trip is Over

- ❖ Report to the ranger any problems with trail conditions, litter, or hazards.
- ❖ Share with others the joys and responsibilities of backcountry travel.
- ❖ Get involved with outdoors and conservation groups that help preserve our recreational resources.
- ❖ Volunteer to help with trail maintenance and campsite rehabilitation projects and work parties.

First Aid Kit Contents

First aid instruction sheet
Elastic bandage
Antiseptic towelettes
Aspirin/acetaminophen/ibuprofen
Antibiotic ointment
Moleskin and foot care products
Adhesive bandages
Gauze pads (large and small)
Butterfly closures
Roll gauze
Roll medium tape
Scissors (your knife may have good ones)
Tweezers
Needle
Ace wrap
Triangular bandage
Iodine water treatment tablets
Personal medication (bee sting allergy kit, etc.)
Cell phone (possibly also coins for phone calls)
Paper and pencil for medical and rescue information

Possible Additions to First Aid Kit for Backpacking

(Talk to your health provider about some of these possibilities, especially for extended trips)
Broad spectrum prescription antibiotic
Prescription painkiller such as Tylenol with codeine
Dental repair kit
Benadryl (for bites, stings and poison ivy/oak)
Anti-diarrhea medicine
Laxative
Sam splint
Thermometer (with case)
Injury/accident report form
Larger groups may want to share the weight of additional items, such as a splint.

Note: If considering carrying a cell-phone for emergencies, keep in mind that not all mountainous areas are accessible by service. Mainly areas near major roads, highways and

interstates receive service. Consider carrying other emergency communication devices: InReach or Spot, PLB, or Satellite phone (short-term rentals available).

A hiking party should consist of at least three people, one to stay with an injured person and one to go out for help.

Clothing - The Three Layer Method

1. Base Layer ("skin layer"): This usually consists of a high-tech knit polyester material such as Capilene, or Thermax. These materials are hydrophobic - they wick sweat away from your body to an outer layer where it can evaporate. Lightweight wool or silk also wick moisture, and perform well as the first layer. An older fabric, polypropylene, wicks moisture, but is itchier and retains odors.

2. Middle Layer (insulation): Here you'll want a warmer layer such as polyester fleece (pile) or wool garment. These materials will also help wick moisture away from your body to your outer layer.

3. Shell Layer (outer, windproof/waterproof): This layer should be made of fabric that contains pores smaller than a water molecule but larger than a water vapor molecule. Thus, rainwater is repelled, but water vapor from your body passes through the garment. The best known such fabric is Gore-Tex, which had the market practically to itself until competitors with similar fabric qualities appeared more recently.

Warm Weather Dressing

In warm weather, clothing is naturally less of a worry. Shorts and a T-shirt may be all you need to wear. However, always remember: when you're in the mountains, the weather can change quickly, so always have the three-layer system with you.

Avoid Cotton Clothing

Cotton feels good, but it absorbs several times its weight in water (i.e., sweat and rain) that sucks heat away from the body. Unlike synthetic clothing, wet cotton is cold and takes a long time to dry. Because wet clothing is a primary contributor to hypothermia, experienced mountaineers subscribe to the often quoted statement: "Cotton kills."

Don't Forget Your Hat

An old expression says, "If your feet are cold, put a hat on." Mountaineers know that in cold weather, lots of body heat escapes if the head is bare. That makes a knit (wool, synthetic, or wool/syn blend) or fleece cap a key piece of clothing. You can take it off while climbing and put it on when resting on a chilly mountaintop or ridge. And a savvy backpacker often sleeps with a

hat on. A knit or fleece balaclava protects and warms both your neck and head, and is an excellent choice in cold wind.

Footwear

Backpackers wear boots or sturdy hiking shoes to provide lateral support so you don't twist an ankle and to provide a shield for your soles from the sharp rocks and pounding encountered on trails (and off trail). Running shoes aren't designed to give ankle support and aren't a good choice for backpacking.

What to Look for When Buying Backpacking Footwear

1. Let the salesperson know that you're looking for backpacking footwear (boots or hiking shoes) and give the level of your experience. Ask about waterproofing care (type, frequency). Boots are not waterproof, but water resistance is better than not.
2. Bring along the socks you'll be backpacking in to get a realistic idea of the fit.
3. If the store has a steep ramp in its shoe department, walk up the ramp to see if your heel slips in the boot (or shoe) that you're trying on. Some slippage is inevitable, but more than half an inch is trouble. Walk down the ramp to see if your toes slip forward. If they hit the front of the boot (or shoe), they'll turn black and blue when you descend steep hills. Kick the front for a similar test.
4. Check for wiggle room for your toes. With the boot (or shoe) unlaced, you should be able to slide your foot forward and slip one finger (and only one) behind your heel.
5. Walk around the store. Flex, bend your knees, and put your feet in odd positions to simulate uneven trail walking and see if you feel any problems. If possible, put on a pack with weights in it while you walk around.
6. Late afternoon is a good time to buy backpacking footwear since your feet will be a little more swollen then, better reflecting foot condition after hours of backpacking.
7. At home, wear your new boots (or shoes) around the house for half an hour at a time, walk the neighborhood, and wear on day hikes to start breaking them in.

A Note About Socks

Socks are almost as important as boots, and your sock choices will probably be a very personal one. Try on as many types of socks as you can, but avoid cotton or cotton-blend socks. These will absorb water (sweat, rain, stream water), holding it next to the skin, and will likely result in blisters.

Synthetic (also silk or thin merino wool) liner socks used in combination with a heavier sock to enhance comfort and wicking have long been a popular combination, but many of today's high-tech synthetic and wool blends combine cushion and wicking so that liner socks may no longer be necessary. Only you can determine what is comfortable and workable for you.

Sleeping System

Sleeping Bags

Goose Down

Advantages: Lightest known insulator
Most compactable
Lasts 15 to 20 years
Greater "comfort range" (not as hot or clammy on warmer nights)

Disadvantages: Useless when wet
Dries very slowly
More expensive

If you choose a down bag, make sure you pack it in a waterproof stuff sack or sturdy plastic garbage bag. Some down bags have an outer shell of Dry Loft, a breathable, waterproof fabric manufactured by Gore-Tex. These bags are more versatile, but also more expensive. The quality of down fill is indicated by a numerical rating, with higher fill numbers indicating higher insulation quality (not necessarily the warmth of the bag), more compressibility and a higher cost.

Store a down sleeping bag flat or folded in half under a bed, or in a large cotton storage sack. Hanging compresses the down and is not recommended.

Synthetic

Advantages: Retains some insulating power when wet
Dries more rapidly than down
Easier care
Less expensive than down

Disadvantages: Much bulkier
5 year moderate use life, before it starts losing loft

Before buying a bag, crawl into it and zip it up. It should fit snug, but not so snug as to compress the insulation (losing warmth). Too much room in a bag means air can circulate, cooling you down. Also check the zipper options: a right or left-sided zipper, two-way zipper, full-length or 3 / 4 length zipper.

A woman's bag differs from a man's by having more insulation in the foot, a narrower shoulder and wider hip area.

Note that temperature ratings can vary by manufacturer -- a 15 degree bag by one company may keep you less warm than a higher quality 20 degree-rated bag by another.

Tip

Extend the life of your sleeping bag by using a liner. Liners are lightweight and available in many materials, including silk, fleece, cotton and synthetics, but you should avoid cotton liners for the same reason that you avoid cotton clothing in the backcountry. In addition to keeping your bag clean, liners can increase the warmth of your sleeping bag by several degrees.

Sleeping Pads

Sleeping pads insulate you from the ground, which is often cold, and can provide a cushion for more comfortable sleep. R-Value represents insulating efficiency/warmth.

See the sleeping system table (in the slide deck) for the range of conditions and expected nighttime lows (0F - 50F), with recommended pad R-value ranges (higher value ranges for lower nighttime temps and lower bag temperature ratings). Example: For cool conditions with an expected average nighttime low of 32 degrees (cool), a 20 degree or lower bag temperature rating would pair for comfort with a pad having an R-value range of 2 - 3.9.

Inflatable

Advantages:

- Can be very warm, depending on type
- Much more comfortable
- Less bulky to carry
- Some models partially self-inflate

Disadvantages:

- Warmer versions are two or three times heavier
- More expensive
- Can puncture (carry tape or repair kit)
- Can be noisy to very noisy, with your movement

Closed-Cell Foam (typically 3 / 8")

Advantages:

- Can be lighter weight
- Less expensive
- Virtually indestructible

Disadvantages:

- May not be as insulating, depending on type of inflatable
- Not as comfortable
- Bulkier to carry)

Trip Planning Tips

1. Deciding Where to Go

- Read over available guidebooks
- Contact local rangers and park officials for current, specific information about

campgrounds, roads and trails. Check Forest Service and trail websites.

C. Plan a trip according to your ability, do not exceed your training or conditioning level.

2. Information to Get Before You Go

Contact ranger (or recreation officer) in charge of the area that you intend to visit.

For the U.S. Forest Service and National Park phone numbers, call the Outdoor Recreation Information Center (ORIC) at 206-470-4060 or visit their facility located on the first floor of the Seattle REI store. ORIC's geographic focus is Washington, primarily western and central Washington, and offers limited government maps/publications. For Bureau of Land Management (BLM) assistance, contact district offices (phone numbers on BLM websites).

Ask the following of ORIC, Forest Service, National Park or BLM offices::

- A. What/how is major road access? Is it open? Is high clearance and/or 4WD needed?
- B. What parking is available and what permits are required?
- C. What is the level of difficulty of the outing?
- D. What are specific hazards or difficulties for the trip (weather, flooding, fires, bridges out, rerouting, etc.)?
- E. What topographic map covers the area (or Forest Service map, if camping)?.

3. Things to Do Before You Go

- A. Gather and organize your gear several days in advance of your outing so you can concentrate on getting a good night's sleep the evening before you leave.
- B. Consider using a gear checklist for each trip to ensure that nothing important is left behind.
- C. Make sure your equipment is adequate to ensure your comfort and safety in the worst possible weather conditions.
- D. Information should be left in writing with a responsible friend or family member indicating where and with whom you are going, date of your expected return, vehicle description, its license number and where it will be parked, and when and whom to contact for rescue in case you don't return as scheduled.
- E. Review recent trip reports, and check for youtube videos..

4. Things to Remember During Your Outing

- A. Always take a compass bearing at the parking lot prior to starting your outing.
- B. Set your altimeter (or multi-function watch) at the trailhead.
- C. Remove a layer of clothing just before starting out to minimize perspiration.
- D. Staying together is the responsibility of all party members. Keep an eye on the person in front of you and the person behind you. Let those ahead know if it appears the group is splitting up.
- E. Keep your map and compass out. Know at all times where you are on the map and what direction you should go to get out in case of a sudden storm or whiteout or in case wind-blown snow covers up your trail..
- F. Travel slowly. Avoid sweating, as this will only lead to rapid chilling later on.
- G. Minimize breaks to five minutes to prevent chilling.
- H. If feet or hands are cold, put on gloves and a hat.
- I. Be aware of changing weather conditions and turn back if weather or route conditions appear to be hazardous.

5. Remember to Have Fun !

Stoves

Butane/Propane Canister

This stove may be less expensive initially to buy. However, the canisters cost significantly more per BTU than white gas. These stoves are convenient to light: just turn the knob and light. The flame is not as hot as white gas, but is fully adjustable to a true simmer. One major drawback is that its performance drops in very cold temperatures and as the canister empties. Brands available locally include Coleman, Gaz, Jetboil, MSR, Primus and Snow Peak.

FYI: A stove with a separate canister is the safest, particularly when you need to have a windscreen around your stove to keep it lit. In a few instances, older one-piece stoves have exploded when too much heat was contained by the use of a windscreen placed at the base of the stove. However, newer one-piece stoves have solved this problem by placing a windscreen that sits only around the heating element rather than the entire stove.

White Gas

This type of stove provides a flame that's appreciably hotter than that of a canister or alcohol stove. This means it boils your water more quickly, but some stoves can be too hot for a good simmer. White gas stoves generally burn well in the cold and at altitude, and some also burn other liquid fuels. Among the popular white gas stove brands are Coleman, Primus, Brunton, Trangia, and Jetboil.

Alcohol

Denatured Alcohol is a significantly less efficient fuel than white gas or propane/butane, but it's readily available at hardware stores and even gas stations. A decent stove and windscreen can easily be made at home at almost no cost, the total weight carried is quite low, and unlike with canister stoves, you can carry just exactly as much or as little fuel as you think you'll need for a given trip.

Whichever type of stove you choose, make SURE you know how to use it, before you go on your backpack trip.

Tips

You don't need a full cook kit for cooking. You can plan your meals so that the only cooking container you'll need is a pot for boiling water. Don't forget utensil(s) and a plate or bowl and mug/cup.

If you have a white gas stove and carry the pump separate from the fuel bottle, be sure you have all items before leaving home!

When cooking, set your stove on rock or gravel, if possible. Otherwise, place the stove on the ground in a spot free of plant material. Be aware that during a period of prolonged heat and drought, a stove whose heating element is very close to the ground can actually ignite the parched dirt. NEVER cook in your tent!

Water Treatment

1. **Squeeze Filter**
2. **Pump Filter**
3. **Gravity System**
4. **Ultraviolet (UV) Purifiers**
5. **Chemical Treatment (Iodine or Chlorine Tablets)**
6. **Boil**

It used to be that we didn't think twice about drinking water out of an ice cold clear stream. Today, we would never drink water in the mountains without treating it.

Boiling is still considered the safest way to rid water of Giardia and most other bacteria and viruses. However, it's time consuming and uses a lot of fuel. Be sure to boil for one full minute to ensure you've done the job - longer at high elevations.

Iodine tablets are an easy and relatively inexpensive way to treat water. The tablets need to have 30 minutes to effectively kill all bacteria and viruses, and their dosage should be increased when the water is particularly cold. Iodine tablets are often sold with neutralizing tablets of ascorbic acid that removes the unpleasant flavor and discoloration caused by iodine. If not sold together, purchase neutralizing tablets in addition to the iodine tablets. However, some authorities don't recommend drinking iodine-treated water for extended periods of time. Iodine won't kill Cryptosporidium, a particularly tenacious parasite, but its occurrence is rare in most backcountry locations in the United States.

Squeeze filters and pump filters are the most popular water treatment methods today. Popular squeeze filter brands are Katydyn and Sawyer. Popular pump filter brands are MSR, Katydyn, and Sweetwater. Squeeze filters are generally much lighter weight than pump filters. One advantage to having a water filter is that it can reduce the amount of water you have to carry.

If you decide to invest in a water filter, shop around and ask questions, such as: How much is it? How much does it weigh? How easy is it to take care of? What kind of critters will the pump filter out? Can it handle the coldest temps I expect to camp at?

Most water filters won't get rid of viruses, but these aren't yet a problem in the U.S. **UV purifiers, chemical treatment, and some pump filters** (with integrated chemical treatment feature) will kill viruses.

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Tip

Take along a collapsible jug or bucket that you can dip into the water source and then carry to a comfortable place to use with your squeeze or pump filter. This allows particles to settle and keeps them out of your filter. This also lessens the impacts on fragile stream sides and vegetation.

Shelters/Tents

Tent Types

- 1. Hoop**
- 2. Dome**

There are subclasses to the above tent types, but the basic designs start with the principles of the tents listed above. Hoop tents are generally not freestanding, and must be staked to stand up. Most dome type tents are freestanding and rigid without stakes, and thus can be moved around easily while trying to find the best location. Any tent, however, should be staked out to ensure security in winds, as well as give you full floor space. Hoop style tents are generally lighter in weight than domes of similar size and shape.

A three-season tent, generally for spring through fall, is all one needs in most cases, unless you intend to camp in the winter/snow or in other very harsh conditions. A four-season tent implies winter use.

When choosing a tent, remember that you can get wet two ways when you're inside: from precipitation and from condensation. Your breath and skin constantly give off vapor that can condense on tent walls and drip onto your sleeping bag and clothes. That's why standard tent construction involves two layers - an inner, non-waterproof layer and a separate, waterproof rain fly. The fly spreads like a canopy over the tent without touching it, leaving airspace space between. Vapor from your body rises through the tent wall and leaves via the space beneath the fly.

Before buying a tent, crawl into it, and make sure you fit without touching the sides, bottom, or head. If you, your sleeping bag, or any of your gear touches the wall of the tent, the touch point may allow moisture to enter.

Although the bottom of your tent is manufactured to withstand the abrasion of small stones and twigs, the use of a ground cloth (or tent footprint) will provide extra protection from sharp items beneath it as well as keep the tent bottom cleaner, especially in rainy or muddy conditions. A ground cloth/footprint should be cut (or folded under) two inches smaller than the floor dimension. Otherwise, when it rains the ground cloth will simply channel the water underneath the tent - something you want to avoid.

Many experienced backpackers would recommend that you seal the seams of a new tent, even if the seams are supposedly factory sealed.

Backpacks

Internal Frame

This pack hugs your body and moves with you. Its advantages are felt when mountain climbing, cross-country skiing, and hiking on rough terrain. There are some disadvantages: The frame can be harder to fit correctly to your body and harder to load properly, but modern internal frame packs address at least the fit issue quite well.

External Frame

The external frame pack is becoming rare. The majority of backpacks sold today are internal frame packs. The frame holds the pack away from your body. This type of pack is not recommended, as its disadvantages outweigh the advantages.

How Large Should My Pack Be?

You'll likely want a pack in the range of 50 to 75 liters, with 50-65 liters generally adequate for most backpacking. With more experience, you might find a smaller light pack will be adequate for three season trips, and if doing winter expeditions or special situations, it's possible that you could want a pack with more than 75 liters capacity. Note, that it's not a bad idea to borrow or rent a pack until you have selected most of your other gear items, so you can fit your pack to what you've learned that you need. Larger packs tend to be heavier packs.

Backpacking Gear for Women

Clothing

The latest offerings in women's clothing, in addition to natural wicking fibers, are extended sizes. And there are many choices and designs in seamless underwear.

Packs

Leading manufacturers offer backpacks for women. Be sure to ask questions, try packs on with weight and walk around, and discuss how the pack fits and how the weight should be distributed in the pack. Get a salesperson that has some experience in fitting women. Be certain that the hip belt is a design that is comfortable for your hips to carry the weight. Many packs can be tried on and purchased with a better-fitting hipbelt, sized larger or smaller than the standard size. Ask the salesperson if the hipbelt is interchangeable for your best fit.

Consider renting different designs so that you can load your own items and hike around with it.

Sleeping Bags

Avoid an overly large sleeping bag. Check out men's short bags or female-specific bags. Women's bags are generally designed with more fill in the torso to address common cold spots that women experience. Check size and shape by getting in. If you want to use a liner bag, be sure to try one inside the sleeping bag to be sure the fabrics are compatible (does not create static electricity or take up too much space). Temperature ratings are usually overoptimistic about the comfort level. Ask the salesperson for guidance on reliability of temperature ratings for the bag and brands of interest.

Tips

Cold hands? Consider lightweight liner gloves. Wear alone or inside wool or fleece mittens, gloves and/or over mitts.

Cold feet sleeping? Try fleece or merino wool socks, down booties, or sock liners.

Wildlife Safety - Bears and Cougars

Most of the backcountry in the Pacific Northwest holds the potential for encounters with bears and cougars. The likelihood of bear encounters with campers varies greatly from area to area, and is more likely than the very rare cougar encounter. It is essential to read posted information and speak with local land managers to learn of the potential for bear and cougar encounters in the area that you plan to visit. NOTE: Backpackers in the Olympics and North Cascades are more likely to meet or observe bears in the wild than elsewhere in Washington.

Until recently, backcountry users in the Pacific Northwest assumed that any bear encounters would be with black bears. A small number of confirmed grizzly bear sightings in Washington state indicates that in some areas (North Cascades, Central Cascades, and the Pasayten Wilderness Area), grizzlies are becoming a concern. The changing status of the grizzly bear underlines the advisability of speaking with a local ranger for up-to-date information.

While traveling in bear country, whether there are black bears or grizzly bears present, camp organization and cleanliness take on a whole new significance. When bears and people occupy the same territory, a bear has access to human food, and as a result can rapidly become more aggressive. When this happens, the primary concern is safety, both for the visitor and the bear. Personal safety is the first priority: a bear can be a very dangerous animal if provoked or habituated to the food of humans. Safety of the bear is also a concern, and a problem bear will have to be dealt with accordingly, relocated or sometimes at the expense of its life.

Although black bears are often perceived to present less of a threat than grizzly bears, the potential for personal injury does exist and precautions should be taken. Where grizzlies are a concern or where black bears are a problem, the stringent practices listed below are recommended. Judgment and good information are required to decide when it is appropriate to relax these stringent practices (such as distance between kitchen and sleeping site). If you have an encounter with any bear or see a grizzly bear, report the incident or sighting to the nearest ranger station.

Generally, cougar encounters are minimized in camp and on the trail while following similar precautions for bears.

Food Storage

All food must be properly stored so as to make it unavailable and uninviting to wildlife. This includes canned food, garbage, stock feed, pet food, and scented or flavored toiletries. In the front country, lock food in car trunks, out of sight of determined bears. In the backcountry, the main methods of food storage are hanging and the use of bear-resistant containers (hard containers or Ursacks). Ursacks are very popular today, but are not accepted in some national parks and other public lands.

Some established campsites have bear-proof steel lockers, metal poles or wires/cables strung between trees/poles to enable you to more easily store or hang your food. Food bags should be hung at least 12 feet off the ground from a sturdy branch (or rope between two trees) and 10 feet away from the trunks of trees. Ingenuity and practice are required to hang your food when no established set-up is provided. Even with the precautions of hanging, black bears are adept climbers and may still reach your food. Food hanging sites should be located downwind at least 200 feet from sleeping areas.

Permanent metal bear boxes for food storage at established sites are rare in the Pacific Northwest, though they are common further south in California and in western Canadian parks. Lightweight bear-resistant containers for backpackers have been used successfully for years in Alaska (against grizzlies and Alaskan brown bears) and are now required in certain areas of Olympic National Park (ONP) and other public lands. Containers for use in ONP are available at ONP Wilderness Information Center (WIC) in Port Angeles. For stock users, bear resistant panniers that do not need to be hung are effective and can make food storage much easier.

Check with the park office or ranger district administering the public lands where you are backpacking for any specific requirements for use of bear proof food containers, and availability of rental containers.

In bear country, be sure to treat used tampons and toilet paper as food garbage. Hang them with garbage while in camp. Under no circumstances should they be left in your personal gear or stored near sleeping areas.

Cooking

Messy kitchens with strong food odors (bacon, fried fish, etc.) and food that is readily available can attract bears. Kitchens should be placed at least 100 feet away from and downwind of sleeping sites. Avoid creating large amounts of leftover food because cooked food has a strong scent. Try to eat all leftovers promptly. If you still have leftovers, either triple or quadruple bag them and hang them with the food bag away from camp. Do not dispose of leftover food in camp toilets, as it attracts wildlife.

In serious bear country, you should wear one set of clothes for cooking and hang them near or in the food bags. Don't sleep in clothes that have been worn while cooking.

For more information on safe backcountry travel and camping in bear and cougar country, review an excellent brochure at <https://bcparks.ca/conservation/bearsandcougars.pdf>

Note: the brochure's information applies to cougars and bears found in western U.S. as well as western Canada, though it was prepared for B.C. park visitors.

Mountaineers' Backpacking Guide

1. A backpacking party of three is the minimum.
2. Never hike beyond your ability and knowledge.
3. Never let judgment be overruled by desire when choosing a route or deciding whether to turn back.
4. Carry the necessary clothing, food and equipment at all times.
5. Leave the trip itinerary with a responsible person.