



Above & Beyond

Scouting Skills Resource Guide

Hiking

Hiking is just Walking with an Attitude

The essence of hiking is to leave life behind, if only for a few hours, and explore the world around you using only the power of your body. It is feeling your lungs labor, your muscles tighten and relax, and all your senses bringing new information into your brain. Being a Hiking Dude is being on the move, covering ground, challenging your body, and renewing your soul.

The number one problem in America is the drop in miles walked per day. The sedentary lifestyle that so many of us now lead (especially people spending too much time making web sites!) is causing us to keel over right and left. Just going for a walk (let's call that a *hike*) for 30 minutes every day is about the best thing you can do for yourself, and for your family!

Plan the Hike, Hike the Plan

I actually enjoy the planning of hiking trips and treks nearly as much as the hike itself. Thinking about where I'll go, what I'll eat, the supplies I'll need, and what I'll see helps get through boring stretches at work and commuting. Planning is kind of like virtually taking the hike and its fun to see how close I imagined it would be to how it really is.



When planning a hiking trip, you can't get too detailed. It's fine to calculate right down to the weight of your bandanna or the exact minute you need to stop for lunch. But, you do need to remain flexible at all times and be prepared to shift your plans as needed. These main planning sections are good things to consider.

Take a Shot

Consider your current abilities from your recent training to determine how much of a hike you can handle - be realistic. Decide where you want to go - the coast, mountains, nearby forest, ... wherever you want to explore. Get a rough idea of how many hours you want to hike, how far you can go, what hiking supply load you need, and then use maps and guidebooks to find a trail that matches your desires and abilities.

Figuring out how far you can hike in a certain amount of time is a good exercise. Or, figuring how long it will take to hike a certain trail. The actual results will depend on your shape, the trail condition, elevation, weather, and lots of other little things. But, in general, you can count on 2 miles per hour on flat land. Reduce that a bit for every 1000 feet above your home elevation due to reduced oxygen. To the total time, add 1/2 hour for every 1000 foot elevation change due to slow climbing.

Tell a Friend

Find a hiking buddy to go with you. Hiking alone is not safe. Once you are an old pro and have been through some rough weather, difficult terrain, a few accidents and missed turns, then you can think of hiking alone. Until then, take a buddy along. Someone with more experience than you will be a great way to learn new tips.



Discuss your plans with your friend and make sure everyone understands how far you want to go, how fast you want to hike, and what you want to see on the hiking trip. Having expectations synchronized will make the adventure fun and fair with fewer surprises.

Check Terrain

Use a detailed topographic map to understand the difficulty of your hike. It may just be a 6 mile loop on the map, but that may be flat or include 4000 feet of elevation change. Learn [how to read a map](#) before going hiking. When you are in the field, your map and compass will be your most important tools to stay on track. Also make sure your map is current - trails change, magnetic declination changes, areas open and close. Checking with the agency responsible for managing your planned hike area is a good idea.

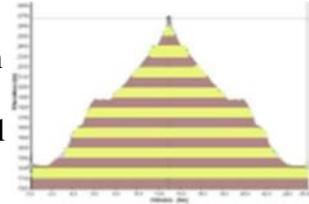


The elevation you gain and lose while hiking will have a definite effect on how fast you hike and how much ground you cover. Hiking up a steep grade will slow you way down, forcing your muscles to work much harder. Hiking a downgrade will be easier on muscles but much harder



on joints.

Creating a hike elevation profile will give you a good idea on where the more difficult stretches are in your planned hike. Convert the information on your topographic map into a chart of elevation versus distance. In this example, a climb to the top of a peak and then the return on the same trail is diagrammed. It is fairly consistent with just one short stretch halfway up that is fairly flat.



Take into account the time of year when checking the terrain. A dry, dusty trail in July may be a muddy mess in May. You may be able to hike across a frozen marsh in January, but go around it in June. Also remember that higher altitude means cooler temperatures and hypothermia is a real possibility anywhere below 60F degrees. If your hike takes you over 9000 feet, read more about [high altitude hiking](#).

Check Weather

Everyone knows that weathermen are seldom correct. Even with high-tech gear, predicting the chaotic nature of weather is not possible. A beautiful, sunny day can turn to life-threatening rain in an hour. You have to be prepared for the worst probable weather and its consequences. The word 'probable' is key - June in Minnesota will not require snowgear, but will require raingear. You need to consider what the worst effects will be from weather for which you did not prepare and then decide if it is worth the risk. For example, hiking in Death Valley in April has a miniscule chance for any precipitation, but an average daily high of 90F and a record of 120F. So, the consequences of no raingear are much less than not taking a hat and lots of water.



Elevation and weather are closely related. In general, every 1000 feet in elevation means a drop of 5F degrees in air temperature. Also, the higher you go the faster and more severe weather changes with big drops in temperature occurring quickly and higher winds in general.

A sudden rain passing through may just cause you to seek shelter for 15 minutes. But, your travel time may be greatly reduced afterwards due to a deep layer of mud on the trail. Be ready to change your hike plans due to weather conditions. Read more about what to do in case of [lightning](#).

While hiking on your trip, constantly stay in touch with nature around you. Just walking through and oohing and aaahing over the flowers and mountains is missing half the fun. Check out the clouds - are they building? are they picking up speed? are they white or dark? what does the horizon look like? Are birds still flying around? Is there a gentle breeze in the treetops or is the wind getting stronger? Keeping an eye on your surroundings is fun and important.

Check on Permits

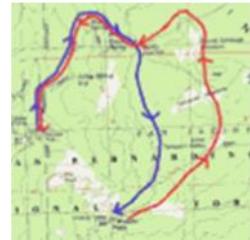
Most national parks and wilderness areas require a backcountry permit. Often times these permits are free but if you are checked and have no permit, the fines can be very expensive. Permits are used to monitor visitor traffic, to limit use of certain spots, or to help keep hikers safe. From very restrictive permits that define your trails and campsites to general access permits, it depends on the management goals of the agency in charge.



Other areas may not require a permit, but its always a good idea to check in with a ranger. It's an opportunity to tell one more person where you plan on hiking and to check one last time on trail conditions and any special short-term regulations in the area.

Tell Another Friend

Always, that is ALWAYS, leave your hike itinerary with someone at home. Make sure they know your route, start time, when you will be back, and when you will be contacting them. If you are not in contact with them as expected, they should have instructions on who to call to check - for example, the ranger station near the trailhead.



Pack for Hiking

The Right Pack

This is the fanny pack I use for day hikes.

It's not very big (215 cu. in.) but can hold everything I need for the day. It's made by [Outdoor Products](#) and costs about \$7.00



Outdoor Products makes inexpensive gear that works well for new hikers and backpackers. Both my sons have O.P. backpacks for Boy Scouts and have had no problems so far.

Some people don't like the look of fanny packs but I think they're very useful. If I get tired of having it around my waist, I can sling it over one shoulder or the other.

If you get something larger, such as this knapsack, you have to have it on your shoulder, not just your waist. And, you tend to carry more because it has more room and people hate wasted space. Two or three people could put all their stuff in one hiking backpack and take turns carrying it, but I'd hate to be without the pack when someone takes a wrong turn - you should always have your [basic essentials](#) on your body.



Minimize Weight

You wouldn't carry a bowling ball in each hand when you go on a hike. It's just not comfortable. But, with a 16 lb. pack, that's exactly what you are hauling up hill and down all day. The amount of fun packed into a hike is inversely proportional to the amount of stuff packed into your bag. Except for specific cold weather situations, you should have no need to carry more than 10 pounds in your pack for an all-day hike. Carry less and enjoy more.

A great way to minimize your gear and make future hike preparation easier is to create a [gear list](#). Gather all the stuff you are going to take, pack it, and just before you leave write down exactly everything that you have with you. After your hike is over, go over your list and see what you didn't use. Find things you can leave home next time. But, don't be dumb and choose raingear just because it didn't rain today.

For future hikes, just get out your list and gather what you need quickly.

When hiking with a partner or two, there are more opportunities for minimizing weight. You can buy larger containers of food so the packaging waste is less. You can take just one water filter, sunscreen, bug repellent, and other items that can be shared. You need to coordinate this before the hike.

The types of clothing you choose will greatly effect your weight. Light-weight synthetic fabrics do a specific job better than natural fiber at a reduced weight. Some articles of clothing specifically wick away sweat while providing insulating warmth. Others keep out rain but still allow perspiration to escape. [Hiking clothes](#) come in so many colors, styles, and brands, its almost comical. Spending a couple hours at an outdoors store should sufficiently overwhelm you and possibly drain your wallet.

Check Your Gear

Make sure your batteries are fresh.

Clean your water bottle.

Test the belts and buckles on your hiking pack.

Sharpen your knife.

Go through your first aid kit.

Basically, check out everything you are taking with you to make sure it will do its job. Finding out that last year's boots are moldy or don't fit any longer is a bad thing the day you are to leave for a hike.

Hiking Dude's Tips

- Always bring water, even on cold days, cloudy days, or short hikes
- A cellphone can be a lifesaver. Just don't freak out when it's ruined from mud or rain or a fall. Wrap it in paper towel and put inside two zip-loc baggies for extra protection.

- Carry a couple extra gallon-size zip-loc baggies. They have 101 uses and weigh nothing and they take very little room in your hiking backpack.

Hiking Etiquette

The longest I've hiked without meeting up with someone not in my party was four days while backpacking in the Rocky Mountains. But, on most day hikes, you will probably encounter other hikers and maybe some bikers or horse riders. Being prepared for these meetings before they happen is a good thing.



Share the Trail

There's a saying: *You'll never win a fight with an automobile.* The same general rule applies to any situation in which you find yourself - the bigger object wins. On trails, a hiker is about the smallest, slowest object so it is in your best interest to yield to any other mode of transportation you encounter.

A commonly used trail sharing sign is shown here. The rules are:

- Bikers yield to hikers and horses
- Hikers yield to Horses



The concept is that bikers are fast and can stop and go easily so they let everything else have the right of way. Horses are big and unpredictable so they get the right of way.

As a slow, unprotected hiker, I'm not about to argue the right of way with a horse or biker or ATV or anything else I might meet. I will always politely yield the trail and use the time to take a deep breath and say 'Howdy'.

Here are a bunch of tips to make it easier to share the trail with others. Please remember these and try to follow them and pass them on to new hikers:

- Stay on the trail. Do not cut switchbacks or take shortcuts.
- Stay to the right on wider paths.
- Pass on the left.
- When overtaking someone, let them know you are approaching and will be passing on their left. You may hear a biker call out, "On your Left!" as he comes up from behind. That means you should stay to your right.
- Whenever you stop for a view, a rest, or to yield, move off the trail so it is free for others. If you are selecting the spot for a rest, get off on a used area or a durable surface such as a rock, dirt, or snow. Don't just trample off the trail into a nice soft field of grass and flowers.

- Hikers going uphill are working hard and should be given the right of way over hikers coming downhill. Sometimes uphill hikers will prefer to stop and let you pass coming down so they can get a short break. The uphill hiker should get to make the call.
- Greet people you meet. This makes sure they know you are there and is polite. A simple "Howdy" or "Nice Day" is fine.
- When hiking in a group, yield to single or pair hikers. It's harder for a group to get off the trail so often times singles will stop and let you all pass, but its their call.
- When hiking in a group, hike single file or take no more than half of a wide trail. Make sure everyone in your group understands what actions to take when encountering hikers, bikers, and horses.
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When meeting a horse:

- Get off the trail on the downhill side. Horses will tend to bolt uphill when spooked. Also, you waiting on the uphill side looks more like a predator waiting to pounce.
 - Quietly greet the rider and ask if you are ok where you are.
 - Stand quietly while the horses pass.
- Hike Quietly. Echos are fun, but keep conversations quiet and enjoy the lack of horns, engines, and city noises. There is such a thing as noise pollution. And, in my view, cellphones are the worst form of this pollution.
- Don't leave any markers when hiking off-trail. Cairns, ducks, or little piles of rocks are not needed. If people are hiking cross-country, their compass and map are all they need. Markers tend to concentrate traffic which creates more unmanaged trail scars. Or, markers pop up all over and serve no navigational purpose.
- Read trailhead guidelines. There may be specific rules for the trail you are on.
- Pack It In - Pack It Out. I am always amazed to find litter. It just does not make sense that someone spending time to get out into nature would purposely destroy it. I just don't get it.
- Take a Picture. A pretty rock or a bunch of flowers deserve to remain where they are. We have a need for mementos of our adventures, but picture in your mind what the place would look like if the group before you had taken what you are about to put in your pocket.

- Report vandalism. If there is contact information at the trailhead, tell the managing agency of any destruction or management needs you notice.

On the Soapbox

You will run into some people that feel they have a right to do whatever they want outdoors. You'll see areas where horses were tied to trees, ruining the bark and killing the trees. You'll see wide, braided trails around muddy spots with footprints, hoofprints, and tiretracks all adding to the damage. You'll see washed out gullies created by mountain bikers having fun tearing down the mountain. You'll have a biker fly past you with no warning.

These are the people that make an impression. Keep your eyes open for them for your own safety, but also recognize the many others that are courteous and polite. And, make sure people put you into the courteous and polite category after they've met you on the trail.

Equipment Used for Hiking

When out in wild country, the gear you have along is all you have to rely on. Until you get back to the comfort and safety of your home, it is up to you and whatever equipment you bring along to make your hike comfortable and safe. Failing to bring along the right stuff may mean a miserable experience or worse.

Hiking Essential Equipment

Hiking Ten Essentials

Ten or nine or fifteen, the actual number doesn't really matter but there is some equipment used for hiking that everyone really, really, really needs to have whenever they step outside. I would even say you should have most of these things with you whenever you are more than 5 minutes from home.





Consider these items that I've listed with what I feel are the highest priority items first, but the first 10 are all really #1:

1. Common Sense - well, not in my fanny, but with me at all times. :-) Good judgment saves more people than any equipment. Poor judgment kills. If dark clouds are approaching, go home. If your heel feels hot, stop hiking. Obey signs and guidelines and think about what you are going to do before you do it.
The word "touron" is used by National Park employees - it is a combination of "tourist" and "moron" - don't be one.
This includes having your trek plan and leaving a copy of it with a friend at home.
2. Pack - I get all my stuff into a fanny pack, except for my water. You may choose a bigger pack instead, but make sure it is good quality and comfortable.
3. Map & Compass - Whether you've been on this trail 50 times or this is your first, there is always a chance of getting lost. Unexpected injuries, bad weather, a closed trail, wild animals may all require an immediate change in route.

A compass is not like an insurance policy - just having it does you no good. You have to know how to use it properly along with reading your map correctly so you can stay on course or get back on course. Having just a compass or just a map is not good enough; treat them as a single team.

4. Water - One quart of water weighs 2 pounds. That's why so many people don't bring enough water on hikes. But, you need at least 3 quarts per day. It's a good idea to drink plenty of water before your hike to get your body well hydrated.

Many people carry Nalgene bottles - practically indestructible plastic bottles in any color you can imagine. A hydration system that carries water on your back, such as Camelbak, is a popular, flexible way to take water along. I prefer carrying two bota bags because I can carry them many different ways and they are still flexible and inexpensive.

If you know there is a potable water source on your route, you can plan a refill there. Or, take along a lightweight water filter to collect water from a lake or stream.

5. Flashlight - Even if you start hiking at 6:00am and will be finished by 11:00am, still take your flashlight. An injury or bad weather can easily keep you out through the night. LED headlamps are very bright, very small, inexpensive, and last a long time.
6. Food - Your body will expend lots of energy hauling you all over the hills. Continually snacking throughout the hike is a good way to keep the tank full and the motor running. If you wait to drink when you feel thirsty and wait to eat when you feel hungry, your body will already be in

need. It's better to drink and eat a bit often throughout the day to stay strong.

High energy, compact foods are good choices because they take up little space. You should carry at least 2000 calories of food. See my [hiking food](#) page for more information.

7. Raingear & Clothes - A \$5.00 plastic poncho is fine for quick protection from a passing thunderstorm. If you are a summer hiker at low elevations, then that's probably all you need for raingear. But, I hike in the mountains and rain can feel more like ice up there and the implications of not being prepared can be deadly. I always take a good raincoat *with hood* and rain pants. I can wear the extra layer to stay warm when the temperature drops, to stay dry in fog and dampness, and to shed rain or snow. The pants are critical and often overlooked.

Extra clothes need to be kept dry so you should put them in a big ziploc. Include at least a hat, pair of socks, polypropylene long underpants and undershirt. Avoid cotton clothes. See the [hiking clothes](#) page for details on clothes to wear and take.

8. Firestarter & Matches - I always have matches in film cannister, cigarette lighter, and magnesium sparker. That's three ways I can get warmth if I get caught in a bad situation. The magnesium lighter weighs quite a bit, but it is my final backup that works when wet.

You might want to take waterproof matches, but cheap ones are not really waterproof and expensive ones are *really* expensive. Plus, they tend to get used for non-emergency tasks like lighting a campfire.

9. First Aid Kit - a small kit with basic supplies like moleskin, tweezers, bandaids, antiseptic wipes, gauze pad, and tape is adequate for most problems.
10. Knife - I love my knife. I usually have a stick on backpacking treks that I spend time carving on breaks and around camp. Make sure your knife is sharpened before you leave home. A pocketknife with a 3 inch blade is fine - no need for a big Bowie knife.
11. Sunglasses & Sunscreen - Bright sun is very hard on your eyes. The squinting can give you headaches too. Wearing good sunglasses will make the day much more pleasant and safe. Glacier glasses are my favorite because they have removable side screens and curl around my ears so they stay on - plus, they look way cool.

Long sleeve shirt and a wide-brim hat really should be worn when you are hiking all day. Add sunscreen to your exposed parts and your skin will thank you. Use a sunscreen that has no perfume so you don't attract bugs and critters.

12. Whistle - All you need to do is blow air. Even if both your legs are broken and you are at the bottom of a cliff, you can still use it and the sound of a whistle can carry far to rescuers. Only use it for emergencies, not just for the fun of it while hiking.
13. Insect Protection - DEET is your friend. Latest research from [the EPA](#) has shown that DEET is safe for all family members to use. DEET really works, too. I've tried lots of different kinds of repellents in Minnesota/Wisconsin where there are plenty of mosquitos, ticks, and other critters. I've found that mixing one ounce of 100% DEET into a 6 oz. pump bottle of 6% or 7% DEET repellent creates a 20% DEET mixture that keeps everything away. I use this on week-long backpacking trips too.

I also have an insect repellent shirt and pants. I don't think they really work, at least not for the aggressive bugs I encounter. But, just having long sleeves and long pants protects much more of your body so the problem is reduced. Wearing very light long shirt and pants is actually a good thing and not too hot for most hiking.

14. Key & License - I leave all my pocket junk locked in my car except for my identification and key. Makes things lighter and I won't be charging it out where I'm headed.
15. Change - This is just an old habit. I carry 4 quarters all the time. In the wilderness, its silly, but if you need to call for help at the end of your hike, it might be nice. Most people take a cell phone now, but I don't have one.
16. Nylon cord - There are too many uses to list for a piece of thin cord, from making a new shoelace to an emergency shelter. It's just a good piece of insurance.
17. Trash Bag - Roll up a heavy-duty lawn bag for emergencies. There are lots of potential uses and it takes little space.
18. Toilet Paper - Kept dry in a zip-log bag. Keep another zip-log bag for packing out the used paper.

Remember, this list of equipment used for hiking may need to be tweaked for your specified environment. But, don't be foolish and head out without adequate gear, knowledge, and ability.

Hiking Gear List

Considerations



- Think about the weather, terrain, altitude, and environment where you will be hiking. Arid, hot southwest hikes require more water and less insect protection than cooler, humid midwest hikes. Modify your gear as needed based on the environment.
- Buy what you need, but not more. If you will only be on groomed trails, don't spend money on gaiters that are unnecessary, but make sure you get them if your trek takes you through rough brush. Buy a light, inexpensive headlamp rather than one with eight different brightness levels and a flashing mode - unless you really need that for some reason.
- Get Advice. Ask other hikers for recommendations. If you see someone on the trail with a piece of gear you're interested in, ask how its been working for them.

Essential Gear

- ___ Day pack or Fanny pack
- ___ Compass
- ___ Map
- ___ Water
- ___ Water filter
- ___ Water-purification tablets
- ___ Water bottle(s)
- ___ Headlamp or Flashlight
- ___ Food
- ___ Matches

- Backup Fire Starter
- First-aid kit
- Knife/Multi-purpose Tool
- Sunscreen
- Sunglasses
- Whistle
- Insect repellent

Footwear

- Boots/shoes adequate for terrain
- Gaiters
- Extra laces
- Hiking socks

Clothing

- Convertible nylon pants/shorts
- Fleece jacket
- Polypropylene underwear (shirt & pants)
- Wide-brimmed hat
- Long-sleeved shirt
- Hooded rain jacket and pants
- Gloves

Accessories

- Key & I.D.
- Money
- 100-foot nylon cord
- Plastic garbage bags
- Resealable plastic bags
- Toilet paper
- Hiking Poles
- Lip balm (with sunscreen)
- Repair/sewing kit
- Pencil and paper

- ___ Bandanna
- ___ Watch

Gadgets & Extras

- ___ Cellphone
- ___ Camera and film

- ___ Binoculars
- ___ GPS
- ___ Weather radio
- ___ Field guides
- ___ Hiking Books

Types of Boots

There is a wide range of footwear for hiking, ranging from going barefoot to mountaineering boots. The type of boot you require all depends on the type of hiking you are going to do, how much support you want, and how much you can pay - paying more does not necessarily mean getting a better boot. You may be better off with a less expensive, lighter boot for your hiking style.

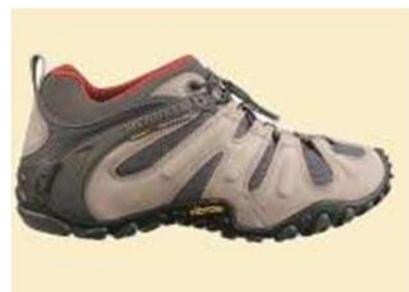
As examples of the general types of footwear, I've just used Merrell. I own a pair of \$100 Merrell backpacking boots that fit me extremely well and have given great support for two summers. But, you can find similar styles of boot in higher and lower qualities from the various manufacturers - Asolo, Montrail, Salomon, Timberland, Vasque.

Hiking Sandal - You can safely hike in sandals with sturdy tread and strong straps. A toe guard is a good safety feature to minimize toe stubbing - ouch! Sandals are very light so your legs work less to lift and step, but they have virtually no support for your ankle or foot. They are dry and comfortable for hiking on groomed trails with a light day pack, but not practical for any off-trail hiking or extended treks. It is a good idea to have a pair along on treks to use as a camp shoe and for water crossings.



Find a sandal with molded arch supports, sewn rather than glued straps, comfortable footpad, and tough sole. The pictured style costs around \$30, but I got mine on sale for \$14.

Hiking Shoe - Shoes provide comfort and easy hiking by using light materials such as nylon and suede enforced with some leather. They are very flexible and require minimum break-in



time. You could probably buy a pair and start hiking in them the next day, after just wearing them around for a day. This shoe costs around \$50, but there is a huge range in price and quality available. Unfortunately, this style has become popular for normal wear so there are many shoes that appear to be hiking shoes but have no support - check the specs.

Real hiking shoes have good support for your arches and feet. They should also be designed to keep dirt and pebbles from getting in around the ankle and will preferably have some waterproofing. Their lower ankle cut lessens the support of ankles and provides no protection around the ankle area from brush and other scratches. I prefer to have a more sturdy feeling around my ankles when hiking, but these are fine for groomed trails.

The sport of Trail Running is pretty popular and there are specific shoes for trail running that tend to be quite a bit more expensive. They include extra padding, a bit more support, and tougher soles. They cost more, but can be used for normal hiking too.

Mid-weight Boot - This is the boot that most hikers and backpackers will use. They are appropriate for on-trail and off-trail terrain that is not extremely rugged. Typically, mid-weight boots are made of leather or synthetic material with leather enforcement sections like the one pictured. You should expect to spend a week of walking to break in your boots; some require less time, depending on their stiffness. If you are not used to above ankle boots, you'll need to spend extra time getting comfortable to the feel.



No matter what trails you plan to hike, a mid-weight boot will be a good choice. If you decide to go on extended treks, their extra foot stiffness and ankle support will help out. They also work fine on shorter hikes and give you the option to tackle more difficult routes if you want. The boot pictures costs around \$80, but my pair of Merrells cost \$140 and I got on sale for \$95.

Mid-weight hiking boots should be waterproof, probably with a lining of Gore-Tex. If you get an all-leather pair, you may treat it with waterproofing spray or paste. The extra boot weight means you will be working harder with these boots, but the extra safety and support are your rewards.

Heavy Boot - If your lofty plans include boulder hopping and off-trail blazing, then a heavier boot may be in order. These boots bridge the gap between trail hiking and mountaineering and some have features of mountaineering boots, such as crampon lips. Heavy hiking boots offer maximum support against twists and foot injuries, plus being water resistant and breathable through the use of Gore-Tex liners. For general hiking, they are overkill, but for treks over rough trails with lots of elevation change, they may be a good choice. This sample pair runs about \$150.



The construction of heavy off-trail boots makes them more sturdy, but also more expensive and not so comfortable. You will need to spend a good amount of time breaking in your new boots and getting your feet used to hiking/climbing in them. They weigh more so you will be working harder for each step you take.

Mountaineering Boot - Don't even think about getting a pair of these for hiking. :-) Mountaineering boots are intended for climbing mountains and are closer to ski boots than hiking boots. They offer extreme support for feet and ankles with attachment points for crampons for hiking on ice. Usually made with a hard outer shell, inflexible sole, and extra insulation, these boots would kill you on a day-hike. Using these boots, each step is deliberate and calculated - you climb up the mountain, you climb down the mountain. The boot here costs around \$275.



Choosing a Boot

When it comes down to choosing a boot, the general considerations you need to make include:

- **Boot Weight** - the lighter boot, the less work for your legs. Get as light as you can and still keep the support you need.
- **Water** - You want materials that will let perspiration escape but not let water come in. Water in your boot is uncomfortable and causes smelly feet and blisters.
- **Arch Support** - keeping your foot comfortable and supported under load is important. If the boot lets your foot flatten out, it will result in a painful hike.
- **Protection from Injury** - stubbing your toe and twisting your ankle are the two big ones. Ankle support is more important the rougher the terrain becomes.
- **Load Support** - when you carry a load, the boot should protect your foot from bending too far forward or backward while still allowing an adequate range of motion.

From my descriptions of the different hiking boot styles, you probably already know that I would always recommend a mid-weight boot. It is flexible and can be used for easy day hikes and extended backpacking treks. I also recommend taking along a pair of sandals on any multi-day hikes so you can air out your boots and let your feet relax when not actually hiking. This is important for drying out your boots for the next long hike.

For basic day hikes, a hiking shoe would also be a good choice. If you are starting out, a shoe might be a bit more comfortable and you could wear it for every day walking. As long as you are staying on groomed trails that are not too rough, a shoe would be a good bet. But, for myself, I appreciate the ankle support and coverage offered by mid-weight boots so I have the option of stepping up my trail selection if I want.

- **Type of Hiking** - consider the terrain you will be walking on, the weather you will encounter, the length of your hikes, and the weight of your pack. A sturdier boot with more support is required for rougher, longer treks with a heavier load. A lighter shoe for groomed trails in arid country would be fine.

- **Skill Level** - more support is a good idea for a new hiker. Someone in good hiking shape with legs, ankles, and feet accustomed to the muscle use and pounding may use a lighter boot where a new hiker should have a sturdier boot until he improves his abilities and strength. Think ahead to where you plan to take your skill level. If you are starting on easy, flat trails but plan to work up to more difficult terrain later in the summer or next year, then plan ahead and get appropriate footwear now.
- **Boot Fit** - This is the hard part about getting any footwear, as I'm sure you know. Your foot and boot will mold to each other over time, so some tips to getting that fit correct might help:
 - Ignore shoe sizes. If you wear a 9, you may go to 10 or 8 in a hiking boot. Concentrate on the fit of the boot, not the supposed size of it.
 - Wear your exact hiking socks when trying on boots. Use a sock liner if that is what you plan on hiking in.
 - Boots should feel snug all over, but not tight. There should be no points of pressure.
 - Shop for boots in the afternoon or evening. Walk around the mall in your shoes for 10 minutes before trying on the boots. Your feet change in shape through the day and this will help prevent buying boots that *seemed* to fit.
 - Unfasten the laces and put your foot in the boot. While standing, push your foot forward until your toes reach the toe of the boot. There should be just enough room for you to slip your index finger between your heel and the back of the boot. Check both feet.
 - Move your foot back to the rear of the boot and lace the boots up snugly. Walk around a bit to see how the boots feel.
 - Your toes should not touch the front of the boot. If you kick your toe into the floor, the front of your ankle and top of your foot should take the force - your toes should not hit the toe of the boot. If your toes hit, that means you will be constantly pounding your toes when hiking downhill and it will become painful.
 - Your heel should not slip in the boot. Hold the heel of the boot down with the toe of your other boot and try to lift your heel. If it moves up and down more than a quarter inch or so, then when you hike you run the risk of rubbing a nice big blister on that heel. You may try a smaller size or look for a different style with a different heel cup and arch form.
- **Boot Quality** - I'm not really much of a brand-name kind of guy. I also have this suspicion that the sales guy is going to push me to the most expensive boot instead of the best boot for my needs. I've had Nikes that disintegrated and I've had Wal-Mart items that never wear out. But, in general, you pay more for higher quality, I'll go along with that. In the world of hiking boots, there are some major players and they have tough customers. Turn out a poor product and folks will try a different brand the next time around since there are so many to choose from. When checking out boots, take some time to examine the boots closely. Some may look really cool, but fall apart after 100 miles of hiking. Some of the particulars to check include:
 - Stitching - look for missed stitches, loose threads, neatness.
 - Welt - where the upper and sole are connected. should be tight and no spots that look weak or loose.

- Thin Spots - even leather thickness, no abrasions, no cuts or uneven edges.
- Tread - thick, tough, and solid. not spongy and soft to wear out in a few weeks.
- Lacing - braided nylon rather than flat shoe laces. Check eyelets for strength and durability.
- Smell - seriously! I smelled a pair and it was like dead fish. It should have a clean, new leather smell.

Caring For Your Boots

Depending on the materials used in the construction of your boot, you will need to use different products to care for them. Make sure you ask the salesperson or manufacturer for proper care procedures.

- Break in your new boots. Lighter boots need little break-in, but make sure you wear them around the neighborhood at least a few times, until your feet feel comfortable in them.
- Store your boots in a cool, dry place. Put crumpled up newspaper in them to absorb moisture. Take them out and wear them every month or so just to keep them soft and in the correct shape.
- Make sure you have new, strong laces in your boots before starting a hike. Nothing like having a broken lace out there. Just tie a knot and carry on if it does happen.
- Never dry your boots by a fire or other source of high heat. High heat may destroy glue, ruins leather, and makes you spend more on another pair. Dry them gradually in warm, dry air.
- After a trip, clean and thoroughly dry your boots. Treat them with the recommended conditioner, usually oil or wax for leather and silicon-based for synthetic materials.
- Before a trip, coat them again with conditioner and coat the seams to improve water resistance.

Hiking Socks

Hiking socks aren't just another gimmick to get more of your money. Wearing good quality socks while hiking will make your hike a much better experience and are an important piece of gear you should invest in.



Hiking Sock Goals

The main goals of your hiking socks are:

- Cushioning your feet to make your hike more enjoyable
- Wicking moisture from your feet to help prevent blisters
- Keeping your feet warm when hiking in winter or adverse weather
- Reducing blister-causing friction



- Improving boot fit, but only very small amounts

Types of Hiking Socks

Hiking socks have evolved a lot in the past few years. Your old rag-wool wonders are now relics of the past. (I still have a few pair that I love, but don't wear hiking.) Now-a-days, socks are composite technical wonders, using different materials in different sections of the sock to best fulfill a job. Stronger fibers to resist abrasion are used in the toe and heel areas. Elastic fibers hold the sock snug to the ankle and calf. Wool and synthetic cushioning and moisture wicking fibers are used around the foot to help keep the foot dry and warm.



A sock liner is a special kind of sock that creates an extra friction-reducing, moisture-wicking layer at a small price in money and extra weight.

Choosing Socks

When choosing socks, consider these tips:

- Never use cotton socks for hiking. Cotton absorbs moisture and takes forever to dry.
- Use wool to stay warm and still wick away moisture. Tend to be most expensive. Look for *Merino Wool* for softer, finer fibers.
- Use synthetics if your feet sweat a lot because they wick moisture away better than natural fibers.
- Turn the sock inside out and check the denseness of the fabric loops. Smaller, denser loops will hold up longer for cushioning and absorption.
- Thicker socks tend to wear longer. The thickness can also help improve the fit of a very slightly large boot. Or, a thicker pair of socks in the morning and a thinner pair after lunch when your feet have swelled a bit might be something to consider.
- Seams should be flat so they do not create more points of pressure on your foot.
- Socks should have elastic stretch so they hold to your foot and do not slip down into piles in your boot.
- The fit should be snug, but not tight. Any bagginess or extra length between heel and toe means its too big.



Caring for Socks

Hiking socks aren't cheap. You'll want to make yours work as well as possible and last as long as possible:

- Wash inside out so skin particles, salt, and sweat are washed away.
- Use just a small amount of fabric softener in the wash cycle to keep the socks soft.
- Air dry or remove from dryer before they are completely dry and allow to finally air dry for a fresher feel and safer dry.
- Commercial dryers are too hot and can shrink or ruin the socks.
- Only use them for hiking, not for everyday



Hiking Clothes

Layering for Comfort and Safety

No matter the conditions, layering your hiking clothes should always be your method of dressing. You can peel off or add on layers as your activity level changes and the environment requires. Your biggest concern should always be keeping your body dry and at a safe temperature - too hot or too cold may result in disaster. In mild weather, hiking shorts and a t-shirt will work fine, but on hikes that will take more than a couple hours, layering your hiking clothes including everything from hiking pants to hiking hat is the safe and comfortable way to go.



Layer #1: Wicking

The clothes next to your body are responsible for wicking perspiration away and keeping you dry. First layer should always be a polypropylene long undershirt and underpants. Never wear cotton - it absorbs and holds moisture which chafes and makes you cold.

Long underwear can be rolled up over the knees and elbows as the temperature climbs and then even removed if it really warms up. I wear the long underwear all the time when mountain hiking and have only had a few days when it got so warm I was more comfortable with it off - that was around 80 degrees. Of course, it's better to remove this layer early rather than get overheated and then chilled when the evening cool-down occurs.

My wife prefers silk underwear which is just as good as polypropylene, but a bit harder to care for.

Wicking liner socks fall into this category also.



Layer #2: Insulating

This layer can actually be a couple layers. It's job is to keep enough body warmth in to keep you comfortably warm while still allowing perspiration to escape. The best way to do that is to have dead air space trapped in pockets. Synthetic fabric such as fleece is usually a good choice.

Moisture is deadly when the temperature drops or when you slow down your pace - you want moisture to get out but not in. Goose down is also a good insulating layer, but is bulky and probably overkill for most hiking outings.

For pants, a pair of nylon zip-off pants is a great layer on top of your polypropylene underpants.

Clothes that are easy to slip on and off are optimal since these insulating layers will be changed as you heat up and cool down.

Layer #3: Protective Shell

This used to be the trouble area with layering - something that could keep out rain but still allow perspiration to escape. Gore-Tex was a break-through in outdoor wear. It's tight weave retards rain and snow, but allows perspiration vapor to pass through. Now, it's just a matter of price choice to figure out what outer shell you want to buy.

Make sure you get a coat that has a built-in hood so rain doesn't just drip down your neck. This layer protects you from rain, snow, and wind. Heat is lost from your body by:

- Convection - wind pulling the warm air away from around your body.
- Conduction - an object absorbing your heat, like sitting on a cold rock or sleeping on the ground or wet clothes.
- Evaporation - heat loss from an object drying out, like when you get a bandanna wet and wrap it around your neck. Or, when your wet cotton t-shirt dries from the wind.

An outer shell prevents all three of these heat losses and is crucial whenever you may encounter bad weather or cold temperatures.

I always have a raincoat AND rainpants. Even if it is not raining, these make a very effective wind-barrier and an extra insulating layer when it gets colder. Also, these are not cheap old plastic items, these are polyester and my happen to be from Land's End. The rainpants should have side zippers at the waist and the bottom of each leg so you can quickly slip them on and off in case of a sudden rainshower.

Head, Hands, and Toes

Keeping your core body warm but not overheated is the most important thing for survival. A bare head will allow a huge amount of body heat to escape - this is good on hot days, but not in dreary weather. A stocking cap should go on as



soon as you start feeling a bit of chill and a wide-brimmed hat should be used for shade in the hot sun. I sleep in a stocking cap for all but about 3 months in the summer when camping because it is usually down in the 50s in the mountains and below freezing in the fall and spring.

Your hands and feet don't lose as much heat, but they need to be kept warm and dry because they have poorer circulation. Wet hands get miserable quickly. Gloves with a removable synthetic liner are great. You can wear just the liner for a bit of warmth, the shell to protect from wind and rain, or both for extra warmth.

Good-fitting boots with warm socks and liners are required for healthy, comfortable feet. Extra pairs of liners and socks so you can change into dry socks when needed is a good idea.

Hiking Shorts

Shorts are the pants of choice throughout the summer for most hikers. Day-hikes are typically done on beautiful days and if the weather looks dismal, hikers wait for a better day. Since that's the case, it's easy to get by with just a pair of hiking shorts with big cargo pockets for your bit of gear and maybe a fanny pack for extras. I've finally worn out my last pair of shorts for hiking and now only use convertible pants. Hiking shorts are comfortable to hike in but offer no protection from weather. They are mostly just for covering up private parts and holding your keys and candybars.



Hiking Pants

Convertible nylon hiking pants provide a wind-resistant layer that is usually somewhat water-resistant as well. They do not provide much insulation value since they are so light-weight but wearing them over polypropylene underwear keeps your legs warm or cool as needed in a wide temperature range. Quickly zip off the legs when it warms up or just zip open the knees when you are just warming up or if you want to keep the protection from bugs, brush, and scratchy grasses to your legs.

I have a few pair of these and even have one that is insect repellent. I don't know how much the repellent works, but long pants make a huge difference in comfort from mosquitos where I hike and camp. Having light-weight pants means I can stay cooler but still have bite protection.



Getting Found

Despite all your preparations, planning your route, knowing how to use a map and compass, it still happened - you're lost! So, now what should you do?

Following some simple guidelines will greatly improve your chances of being rescued rather than recovered - if you know what I mean. They are simple guidelines, but over and over again people lost in the woods just can't seem to follow them. Sometimes, it takes a strong will to stay under control and do what is needed.



The Number One tool needed for survival when you are lost or injured in the wilds is a **Positive Mental Attitude**. You should continually tell yourself that you have to get home. When you panic or lose hope, the situation becomes fatal.

The Number One thing you should have done before you got lost is something you should have done before ever stepping on the trail. **Leave Your Hiking Plan** and expected return time with someone, they can report you missing if you do not check in with them at your return time. If you also left this information with a ranger at the trailhead, they'll know quickly when you are not back.



STOP

S

STOP - As soon as you realize you may be lost, stop, stay calm, stay put. There is nothing you can do about whatever got you to this point - all you can do now is solve the problem of getting out of the situation. The further you walk, the longer it will take rescuers to find you. If you don't know where you are, walking further has at least a 75% chance of being the wrong direction. If you are not safe where you are, then move to someplace safe and stop there.

Sit down, take a drink of water, eat a handful of trail mix, and relax while you think things over.

T

THINK - Go over in your mind how you got to where you are. What landmarks should you be able to see? Were you heading North or West?

Do not move at all until you have a specific reason to take a step. Walking around while thinking is not good, sit on a rock or log while you observe your surroundings.

O

OBSERVE - Get out your compass and determine the directions from where you are currently sitting. Using your map and the general area where you are, identify landmarks that you should be able to see. This step is often enough to get re-oriented and sure of where you need to go to get back on track.

Consider your situation. Estimate how long you have until dark. Check out the weather and determine if it looks like it will be getting better or worse. Check your water and decide how

long it should last. Consider the other hikers in your party and how they are doing when you plan your next steps.



PLAN - Based on your thinking and observations, come up with some possible plans and then act on one of them. Prioritize the needs of your group and deal with them in turn. If you are confident that you have determined the way to go and have time before dark to reach a known spot, such as the marked trail on your map, then go carefully and obviously mark your route with stacked rocks, sticks stuck in the ground, or strips of cloth from your bandanna. If you are not very, very confident in the route, then its better to stay put.

Surviving Until Found

So, you make the best choice and decide to wait to be found. Now, you need to take steps to ensure rescuers find a live person and not a body. There are a handful of problems that tend to be the most common threats to your chances for survival. Be aware of these and be ready to combat them:



- Loneliness - If you begin to feel lonely and bored, it means you are not taking your situation seriously enough. When lost, the only resource you have is yourself. Either you are not really convinced that you may die or you've given up - either way, this is a common threat to lost hikers.
To combat this, make a list of useful tasks that need to be done and stay busy doing them. Things like collecting water, firewood, bedding, and insulation materials, or setting up signals. There should always be something else to be done. Even sleeping is a survival task that rests your body and conserves energy.
- Fear - There have been plenty of scary movies made about bears, wolves, cougars, and other nasty wild animals. When you're alone with just your pocketknife for protection, fear about what might be out there can build up. Also, being afraid that no one will find you, or that you'll get hurt, or that it will snow tomorrow can all work against you. Everyone will experience some fear when lost, but turning that fear to a motivating driver is your goal. Being afraid of the cold night ahead, you quickly build a small shelter, make a fire and gather plenty of wood for the night. Being afraid a plane might not see you, you lay out some bright cloth and have leaves and green boughs ready to throw on the fire.
Or, you curl up in a ball and wait for a miracle. Fear can motivate or paralyze - you need to control it or it will control you.
- Thirst - you can last 3 minutes without air, 3 days without water, and 3 weeks without food. Don't worry about collecting berries or eating pine nuts. Dehydration is the most common physical ailment of lost hikers. Find a water source, filter or treat the water, and keep your body hydrated. Even if you can not treat or filter the water, it is better to be sick a week from now rather than dead 3 days from now.
- Exhaustion - Whenever you feel tired, you should try to sleep. Catnaps all day long may be what you need, especially if you were too cold or scared to sleep at night. When you are tired, you can not complete your tasks effectively and you are more apt to become injured. Get as much

rest as your body seems to need.

By making a somewhat comfortable and warm sleeping area and shelter, you are more likely to sleep better and this will help you ward off the other threats.

- Hot/Cold - Unless the temperature where you are lost is right around 90 degrees, your body will either be fighting to stay warm or to cool off. Not being prepared to combat the weather will be disastrous. [Hypothermia](#) and [heat illness](#) are two very common problems effecting found survivors, and both can be prevented with preparation and sense.
Staying dry and warm are two of the most important tasks you have when lost. When you are wet, your body gets colder much faster and you can die from hypothermia when its 60 degrees. Preventing unnecessary sweating is a good goal to help keep you dry. When clothes do get wet, do whatever you can to dry them out as soon as possible. Using the sun or your survival fire are good options.
- Injury - Of course a broken leg is going to really reduce your ability to get anything done. But, even small cuts and scrapes and burns can become serious in the dirty outdoors. Its important that you clean and treat any wound you might get immediately to help prevent infection. A burn or cut on your hand can make gathering wood or filtering water more difficult. Every small thing makes survival a bit harder and you don't need the extra challenge.
- Hunger - anyone lost for more than a day when they were just going on a day hike will probably experience hunger. Every day that you don't eat is another day you are consuming your body's stores and becoming weaker. Fortunately, you can go many days without food, but every day will see you weaker. It's important to complete all the survival tasks you can early on so you aren't required to do them as you weaken. It's also important to understand what edible plants are available to you.