

Backpacking Basics in the White Mountains

About This Guide

This guide is about how to properly hike in the White Mountains of New Hampshire.

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Chapter 1. Safety

The basics and importance of safety while hiking in the White Mountains.

Plan Ahead

How to properly plan before any hike.

Before leaving the house, it's essential to properly plan out the entirety of a hike and what to bring for it. Without doing so is not safe and should never be a spur of the moment unless you are experienced and know exactly what to do.

The first item is to determine what to hike. There are many trails and summits in the White Mountains and vary significantly in terms of difficulty and length. There are various websites that can help determine where to hike and are listed in the [Where to Hike \(on page 1\)](#) section. As a beginner, do not attempt to do a challenging hike until you are fit enough. Some people have perished in the Whites simply due to poor planning and lack of fitness to finish a hike.

A common goal for hikers in the Whites is to do all 48 mountains in the AMC 4000 footers list (<http://www.amc4000footer.org/>). Just make sure to start with an easier one to get the hang of it.

Once you've determined a hike, the next step is to look at the weather when you'd like to hike it. It's not recommended to hike in bad rain or snow storms as mountain summits can be dangerous in these conditions. It's best to choose a day that will be mostly clear with moderate temperatures. You can hike in the winter, and many do so, but it is less safe for inexperienced hikers, so summer is a great time to start.

In addition to the weather, you should look at the sunset time of the day and try to plan to be done by then to avoid hiking in the dark. A safe estimate as to how long a hike will take is roughly 1 hour per mile as most hikes in the Whites have a lot of elevation in a short distance. It can definitely be done in less time, but this gives a reasonable estimate as to when to start and know that you'll be done before sunset.

You also need to plan what to bring and wear, which are covered in [Clothing \(on page 6\)](#), [Food \(on page 8\)](#), and [Shelter \(on page 13\)](#).

Where to Hike

A list of resources to help pick a trail to hike.

4000 Footers

- <https://bmhatfield.github.io/white-mountains/>

- <http://4000footers.com/nh.shtml>

All Hikes

- <https://www.visitwhitemountains.com/attractions/hiking-the-whites>
- <https://www.alltrails.com/parks/us/new-hampshire/white-mountain-national-forest>

Leave No Trace

Always bring home what you brought with you.

To protect wildlife, the environment, and to be considerate of other hikers, you must leave no trace on the trails. This means that after finishing a hike, the trail should look like you were never there. All leftover food, food scraps, and other trash or items must be not be left anywhere in the area. Leave No Trace also means that nothing should be moved or removed from anywhere on the trails and to avoid damaging the wildlife like trees or plants in the alpine zone.

For more information on Leave No Trace, refer to the organization's official site: <https://lnt.org/>

Ten Essentials

A list of the bare minimum safety items needed for any hike.

The Ten Essentials

These are 10 items that should be brought on every hike in case of an emergency.

Item	Description
Navigation – Map, compass, and GPS system	Navigation systems are used when planning your route before your trip, and when you need help orienting yourself in your surroundings during your activity. Know how to use a topographical or relief map as well as your compass or GPS unit before going out.
Sun Protection – Sunglasses, sunscreen, and hat	Sun protection is necessary to protect your skin and eyes against harsh UV rays that are responsible for sunburns and skin cancer. Consider using sunglasses, sunscreen, and hats. Sun-protection clothing such as pants and long sleeve

Item	Description
	shirts can also help minimize your exposure to the sun.
Insulation – Jacket, hat, gloves, rain shell, and thermal underwear	Nature is unpredictable. Be prepared for sudden changes in weather conditions. Pack an extra layer of clothing that reflects the most extreme conditions you could encounter.
Illumination – Flashlight, lanterns, and headlamp	Lighting is indispensable in the outdoors where no conventional light sources can be found. Items include flashlights, lanterns, and headlamps. Headlamps are the preferred light source because they are hands-free. Be sure to pack extra batteries.
First-aid Supplies – First Aid Kit	Be prepared for emergencies by packing first-aid supplies with you. Start with a pre-made kit and modify it to fit your trip and your medical needs. Check the expiration date on all items and replace them as needed. Consider including an emergency guide in case you are faced with an unfamiliar medical emergency.
Fire – Matches, lighter and fire starters	Fire can be an emergency signal and a heat source for cooking and staying warm. Pack matches (preferably waterproof) and fire starters - items that catch fire quickly and sustain a flame (e.g. lighter).
Repair Kit and Tools – Duct tape, knife, screwdriver, and scissors	Carry a basic repair kit with you to help repair equipment. The kit should include items such as duct tape, a knife, and scissors. Consider packing a multi-tool, a compact version of many tools that can include a knife, screwdriver, can opener, etc. Be sure to bring any tools specific to your trip and your activity.
Nutrition - Food	You should always be prepared for the possibility of changes to your trip plans. Pack an extra day's supply of food, preferably no-cook items

Item	Description
	that have good nutritional value in order to keep your energy high. Salty and easy to digest snacks (e.g. trail mix, nuts, and granola bars) work well for outdoor activities.
Hydration – Water and water treatment supplies	Staying hydrated on your trip is of utmost importance! Physical activity increases your risk of dehydration (loss of water and salts from the body), which can lead to negative health consequences. If you're active outdoors (hiking, biking, running, swimming, etc.), especially in hot weather, you should drink water often and before you feel thirsty. Prepare your water before you need it and do not allow yourself to become dehydrated. Before heading out on your trip, be sure to identify if there are any bodies of water at your destination that you could collect water from and treat using your water treatment supplies. Learn more about water while hiking, see the Water (on page 11) section.
Emergency Shelter – Tent, space blanket, tarp, and bivy	Shelter is one of the most important elements during an emergency survival situation. It can protect you from severe weather conditions and exposure to the elements. A tent, tarp, bivy sack, or emergency space blanket are all light weight options for emergency shelter.

Animal Encounters

How to handle encounters with various animals in the woods.

There are a variety of wild animals in the White Mountains from rabbits and squirrels to deer and bobcats. The big dangerous animals in the White Mountains are mostly black bears and moose. They tend to avoid heavily trafficked trails, but you should be prepared if you encounter either.

If you see a bear, never try to approach it. Most bear attacks are caused by people approaching bears to get a closer look. Instead, slowly back away and keep your eyes on the bear and go around in a different

direction. Never run as it will elicit the bear's chase instinct. Keep as much distance between you. This method usually results in the bear retreating, but make sure they have a proper exit, or it may go through you.

If the bear doesn't retreat or it follows you, you need to stand your ground, make yourself look as big as possible, and make loud noises like yelling or stomping your feet. You need to show the bear you are in charge, or it will attack you instead of backing away. If the bear does attack, fight back aggressively with anything around you (rocks, trekking poles, etc) and aim at its face.

If you encounter a moose on the trail, it's best to back away slowly and give it plenty of space. The less intrusive you are, the less likely the moose will consider you a threat and instead retreat. If it does feel threatened, it may charge at you, and you should run as fast as possible away. Try to run toward a solid cover like a tree you can duck behind and if there is time, you can climb a tree. If the moose manages to knock you down, curl into a ball and stay still protecting your head with your hands. Stay there until the moose decides you are no longer a threat, leaves you, and is out of sight.



Chapter 2. Clothing

Choosing the right clothing is crucial to hiking comfortably.

Upper Body

Clothing needed for the upper body.

The ideal way of dressing for hiking is layering. It can go from very hot in the day to very cold in the evening, and layering clothes is the best way to accommodate those temperatures.

The first item needed is a shirt of some sort and is considered the base layer as it is closest to the skin. It can be a short-sleeved shirt, a tank top, a sports bra, or even no shirt if you are male. Whatever is the most comfortable is what should be worn, however, the materials that it's made from is important. A cotton shirt will absorb moisture from sweat and will not dry fast, and if worn at night could lead to hypothermia. The best materials are any synthetic fabric that will wick away moisture.

The next layer is a long-sleeved shirt or a sweatshirt for insulation. This layer aims to provide warmth and should be made from synthetics, fleece, or down feathers for the colder nights. It should also be lightweight as you will likely be carrying this throughout the day and only wearing it at night.

The last layer is the outer shell to keep moisture and wind out and keep the warm air in. This is usually worn when it is windy or raining, which are common in the Whites and should always be in your pack just in case. Without this, you will be soaked and could lead to hypothermia in the cooler temperatures.

Lower Body

Clothing needed for the lower body.

Any pair of shorts or pants will be okay for hiking as long as they are not cotton or a material that doesn't wick away moisture. Cargo pants, workout shorts, leggings, etc. are all excellent examples of the best bottoms to wear.

During the day time, it can get hot so shorts or light pants would be best. At night, it can get frigid, so having a pair of pants available to change into is recommended.

For windier or colder conditions, consider bringing an outer layer pants that can go over your base layer bottoms. The material should be something that is like a hard shell and will be protective against the rain and keep moisture out.

Feet

What shoes and socks to wear.

The best shoes to wear are trail-running or low-cut hiking shoes that are breathable and quick-drying. Hiking boots are also okay but can be uncomfortable, heavy, and hard to walk with. The bottom of the shoes should have a good grip to make climbing rocks easier and safer. If the bottoms are completely worn out, they will not grip rocks and you will have difficulty doing any bouldering.

Socks should be made from a synthetic material or a wool-synthetic mix and can be low-cut or high-cut depending on your preferences.

An optional footwear is gaiters. Gaiters go over the tops of the shoes to prevent any debris from entering the shoes. There is a lot of dirt and rocks that can end up in shoes and cause you discomfort, but most people seem to not use them in the Whites, so it's possible to hike without them.

Chapter 3. Food

What foods to bring, how to cook them, and how much water is needed.

Meals and Snacks

What kinds of food to bring and how much.

Any food can be brought hiking if you are inclined to do so, but it should be lightweight and easy to cook and consume. Refrigerated items can be brought, but they will need to be eaten the first day so they do not spoil quickly. Heavier items such as canned foods should be avoided as they can weigh down a pack and make it more difficult to hike with them.

Hiking can be very strenuous, so the food should also be nutritious and nutrient-dense to help provide the best kind of fuel for your body. A high-calorie to ounce ratio with balanced macros is best, for instance, dried fruits, nuts, and granola bars.

If you would like to have warm food on the trail, numerous pre-made dehydrated meal packs can be used. These packets are a bit pricey and hard to come by, so it's best to visit your local grocery store and look for pre-made dried meals such as oatmeal, ramen, or mac & cheese.

How much to bring depends on how strenuous the hike is and what your body composition is, but a good goal is to bring at least 3000 calories per day and adjust as needed. It's also best to bring a little more food than needed than it is to not bring enough, so always ensure you have the bare minimum of calories to sustain your hike.

Oatmeal

A recipe for oatmeal.

Here's a simple recipe for oats with a camp stove with ideas for extra flavor.

Ingredients:

- 1/2 cup instant oats
- 2 tablespoons milk powder
- 1 teaspoon of brown sugar
- Optional combinations:
 - Apple Pie: sprinkling of cinnamon, nutmeg, and cloves with a handful of dried diced apple, handful of raisins, and a handful of chopped pecans.
 - Banana Walnut: handful of dried bananas and a handful of walnuts.

- Reese's Cup: tablespoon of powdered peanut butter and a small handful of chocolate chips.
1. At home, combine instant oats, milk powder, brown sugar and optionally one of the flavor combinations into a plastic sandwich bag.
 2. At camp, set up your stove according to the stove's instructions.
 3. Add a half cup of water to the stove and bring to a boil.
 4. Turn off the stove.
 5. Add the bagged oatmeal mixture and stir well.
 6. Cover and let stand for about one minute.

Related information

- [Ramen \(on page 9\)](#)
- [Mac & Cheese \(on page 10\)](#)

Ramen

A recipe for ramen.

Here's a simple recipe for ramen with a camp stove with ideas for extra flavor.

Ingredients:

- 1 packet of ramen (any brand)
 - Optional toppings:
 - Spicy: a sprinkling of dried chili powder, crushed red pepper, or any kind of dried hot peppers.
 - Peanut: 1-2 tablespoons of peanut butter or 1-2 tablespoons of powdered peanut butter
1. At home, put any additional combination ingredients into a plastic sandwich bag.
 2. At camp, set up your stove according to the stove's instructions.
 3. Add about a cup of water to the stove and bring to a boil.
 4. Add the ramen noodles and cook until done.
 5. Turn off stove.
 6. Add the ramen flavoring packet(s) and any optional ingredients and stir well.

Related information

- [Oatmeal \(on page 8\)](#)

- [Mac & Cheese \(on page 10\)](#)

Mac & Cheese

A recipe for mac & cheese.

Here's a simple way for how to make a boxed mac & cheese with a camp stove with optional ideas for extra flavor.

Ingredients:

- 1 box of mac & cheese (any brand)
- Optional combinations:
 - Mushrooms: a handful of dried porcini mushrooms.
 - Veggie Medley: a handful of mixed dried vegetables.

1. At home, put any additional combination ingredients into a plastic sandwich bag if using.
2. At camp, set up your stove according to the stove's instructions.
3. Add about a cup of water to the stove and bring to a boil.
4. Add mushrooms and/or dried vegetables if using
5. Add pasta and cook until al dente.
6. Turn off stove.
7. Add the cheese powder packet and stir well.

Related information

- [Oatmeal \(on page 8\)](#)
- [Ramen \(on page 9\)](#)

Stoves

How to pick and use a backpacking stove.

There are three main categories of backpacking stoves:

- **Canister stoves:** These easy-to-use, low-maintenance stoves typically screw onto the threaded tops of self-sealing fuel canisters that contain two pre-pressurized gases: isobutane and propane.

- **Liquid fuel stoves:** These versatile stoves connect to refillable fuel bottles. While most liquid-fuel stoves run on white gas, you do have other options available, which can be a particular benefit if you're traveling internationally.
- **Alternative-fuel stoves:** This category includes stoves that run on fuel pellets or wood.

The most basic kind is the canister stove and is commonly seen while backpacking anywhere. They are small, lightweight, pack up compactly and are very simple to use. Thus, it is generally the most recommended for beginners and the best choice for getting started in hiking in the White Mountains.

There are many different brands and models to choose from and can be overwhelming. A guide to finding the best one based on reviews and tests is here: <https://www.outdoorgearlab.com/topics/camping-and-hiking/best-backpacking-stove>. Pick any stove from that guide that is within your budget and preferences and you'll be fine.

Along with a stove, you will need fuel. Be sure to read your stove's manual for its instructions with fuel and bring the proper kind. Using the wrong fuel can damage the stove, so it is crucial to ensure you have the correct fuel.

There are also fuel canister stands that can be used to increase the stove's stability when cooking. Stoves can be used on a flat surface, but it is easier to use with a stand to ensure the stove will not tip over easily.

Once you have your stove, fuel, and optionally a stand, you will have everything you need to cook anything on the trail. Using the stove depends on the model, so read the entire stove's instructions to understand how to use it fully. You can also try it at home before hitting the trail to test it out.

Water

How to carry water, how much to bring and where to find more.

Hydration is critical to a safe hike and needs to be appropriately planned. There are a few ways to plan water consumption regarding how to carry it, how much to bring, and how to safely filter water on the trail.

There are three main ways of carrying water and each has their pros and cons. All three choices are widely used and ultimately depend on preferences. Choose whatever method will best suit you.

- **Bladder:** a soft plastic bag of water with a hose to the front of a pack.
 - Pros: can drink without stopping.
 - Cons: difficult to clean, can get punctured and works with backpacks that have a dedicated bladder pocket.
- **Bottle:** hard plastic or metal bottle like a Nalgene bottle.
 - Pros: durable and available anywhere (you probably already own one).
 - Cons: can be heavy and/or bulky.

- Collapsible bottle: soft bag shaped like a bottle.
 - Pros: very light and compact.
 - Cons: not very durable and can puncture.

There is no exact calculation as to how much water to drink on a hike due to different body compositions, intensity of a hike, and the weather. It's also hard to simply bring more than enough as water is heavy at a hefty 2lbs per liter. Knowing exactly how much to bring will become easier on each hike, but a good general rule is about a half liter per hour of moderate activity in moderate weather. You can then increase or decrease the amount depending on the temperature and intensity of the hike.

Depending on the trail, you can also rely on a water source along the way to avoid having to carry too much. When planning a hike, always look at a map or other trail references to see if there are any water sources. To use a water source, it must be filtered properly to avoid ingesting any dangerous pathogens. There are three main kinds of filters which are squeezes, chemicals, and pumps. Squeezes, such as a Sawyer, are light and allow for a quick, easy way to filter the water and are currently the most used in the Whites. Chemical tablets are also a great lightweight and easy to use choice, but they usually require waiting for 30 minutes for proper disinfecting. Pumps can be used, but they are generally difficult to use, heavy and take a lot of effort and isn't recommended for beginners. If budget isn't an issue, consider the Sawyer, otherwise, the tablets are always cheap and easy to find.

Chapter 4. Shelter

How to determine where and how to sleep for an overnight hike.

Where to Set Up

Where it is appropriate to set up a shelter.

If you are planning on backpacking, you'll need to figure out where to set up your camp. You can pretty much set up anywhere as long as it is a little off the trail and not above treeline.

There are some designated campsites throughout the area that include amenities such as a toilet, water source, and a bear box to store food. They are first-come, first served, so it's better to get there as early as possible to ensure you get a spot. These campsites also have a caretaker that oversees the area in the summer. When there is a caretaker, there is a fee to use the site (usually \$10) and it must be cash. Outside of summer, there is no caretaker and usually does not require a fee.

For a more indoor and comfortable experience, there are some AMC shelters near some bigger peaks. These shelters are a cabin with rooms, a kitchen, toilets, and other amenities, including a dinner and breakfast cooked by the shelter's hosts. The shelters are pricey and spots need to be reserved ahead of time, but it is a fun and more luxurious experience to splurge on.

Tent

How to use a tent.

Tents are the easiest shelter to set up and are recommended for beginners. All it takes to set one up is to snap together the poles, click them into the tent loops, and stake it down. It's also best to lay down a tarp under the tent to protect it against sharp rocks and provide a thicker layer against the ground.

There are numerous kinds of tents, but ideally, it should be lightweight and not too difficult to setup. There are also tents that come with everything needed like the stakes and tarp if a kit is best for you. If you plan on hiking with a partner, there are two person tents to share and lessen the load between both people.

Along with the tent, you should bring a sleeping bag or quilt and a sleeping pad. Any combination of these will work, but make sure that it will be warm enough for the weather. In the Whites, it's best to have at least items that are rated for 40 degrees.

The downside to tents is that you need to find an open flat area, otherwise it will be uncomfortable and you may slide down during the night. However, since there are so many people that use tents, there are

areas that are frequently used for tents along the trail and have over the years flattened out with no objects in the way.

Hammock

How to use a hammock.

Hammocks are an alternative to the more popular tent and are comfortable, but they involve a bit of practice to get the hang of them. There are a few kinds of hammocks and various ways to set them up, but the standard kind is the typical U-shaped.

The best hammock depends on your preferences, but ideally should be lightweight and easy to set up if you don't have much experience. A good place to start looking for recommendations is here: <https://www.outdoorgearlab.com/topics/camping-and-hiking/best-hammock>.

The next item to consider is how to hang the hammock up on trees. The easiest way is to have Atlas straps and hook the hammock to the appropriate loop. There is nothing wrong with this way, but it is quite heavy. The more efficient and lightweight way is to have about two 15' single-loop tree straps to ensure that they will wrap around the tree and not harm it. There are many ways to connect the straps to the hammock loop ends, but the most common way is simply a hook or carabiner that is usually recommended by the hammock model's guide or a hitch knot using a stake.

To protect against the wind, rain, or other bad weather, a tarp should be used as well. A tarp should at least be slightly longer than the length of the hammock. There are other options like having doors or having the ability to have multiple configurations like making a porch, but a tarp that is just a rectangle with four stake loops and two loops to connect to the tree is the bare minimum needed. Any kind of stake should work, just have enough for each tent loop that goes to the ground.

To keep warm while sleeping in the hammock, there are two items needed. The first item is something that will be underneath you while sleeping which could either be a sleeping pad or an under quilt. A sleeping pad could be foam or a small blow-up mattress while an under quilt is a type of blanket that wraps the hammock underneath. The other item is something to sleep in like a sleeping bag or a backpacking quilt that wraps you up like a sleeping bag. Any combination of the two will work as long as they are at least rated for 40-degree weather. If you will be hiking outside of summer, consider items that are rated for 20-degree weather to ensure you stay warm.

Once all items are acquired, you can try it out. Essentially, you need to find sturdy trees that are about 15' apart, wrap them with tree straps so that they are taller than you, connect the hammock, set up the tarp above the hammock, and put the warmth items in the hammock accordingly. If you've never used a hammock before, it would be best to try to set it up in your backyard or at a local park and refer to any hammock set up videos on YouTube for a visual demonstration.

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