

HOW TO START A FIRE IN SNOW Being able to light a fire in a time of need could mean your life. Consider yourself in a group with little gear heading for a hut. You've arrived at the trailhead late. A recent storm has covered the previous group's tracks. You lose the poorly marked trail. Everyone is exhausted and it's dark. Or maybe you're out on a day trip and get a little lost and you must spend the night out. Perhaps someone in your group is injured and you can't move. Are you dressed warm enough to sit around all night without dinner? Are you wet, tired, and cold already? Over the years, it is likely that it will happen to you at sometime. To carry an emergency kit in your daypack equipped with materials that simplify making a fire is imperative. In my opinion they would be...

- * A large sheath knife.
- * A very sharp small knife.
- * A source of kindling.
- * A flammable substance that helps get the wood burning.
- * A bunch of wooden strike-anywhere matches and a new disposable lighter.
- * A small metal container suitable for melting snow over a fire.
- * A headlamp with fresh batteries.
- A shovel. (You carry this anyway, right?)

The procedure is to first find a place where you are sheltered from the wind and have an ample supply of dead wood. The wood must be dead and dry, not dead and rotted or dead but still green. An aspen forest usually has a lot of dead wood but offers little cover. A fir, spruce, or pine forest could offer all you need.

The spot you pick should have a forked or double trunked tree nearby. Be careful about building the fire under a tree full of snow. Remember Jack London's short story "To Light A Fire". Read it if you haven't and get psyched to develop this skill. If there is a blizzard it might be wise to build under the bows of a sheltering tree. It's a judgement call. The fire will melt down into the snow and drown itself out. Even when built on a platform of logs it will do this. You should dig a pit down close to the ground and mold a circular seat around the center in the walls of the pit. This is a lot of work but it will serve as a "fireplace" as well as a reflector of the heat. It will keep you out of the wind too especially if it is deep. Keep in mind a wind whipped fire burns wood a lot faster and you lose most of the heat.

Next, you need to gather a lot of wood. Look for large sticks or logs about six inches in diameter or less. Drag them to the forked or double trunked tree. Slide the fat, butt end in between the two trunks first while you have the advantage of leverage in the length. Walk the other end around until the log breaks. It will tend to break at the forked tree. In this manner you can break up small logs that you never could by jumping on them or by slamming them over your knee. If you start with the fat end first, the log gets thinner as you lose your leverage. Don't be particular about making every billet 18 inches long and if you have a log too tough to break let it go. Logs that are too long can be burned in half and in half again. You just need to have some shorter pieces to manipulate in the fire to insure good burning.

Gathering sticks that you can easily break in your hands is OK too but you'll want some thicker logs for slow steady burning if you are counting on this fire to last the night. The thinner sticks will get the fatter logs going. Alone the thinner sticks tend to flash hot but burn out fast. If you have no light source you'd better get all the wood in before dark. If there are a bunch of people all this work can be done more easily. Keep in mind that the decision to stop and make a fire must be made before total exhaustion and if you don't have headlamps/flashlights, before dark too.

Now you need kindling. Something that will easily light with a match or lighter and in turn light the larger stuff above. In Colorado dead twigs under the bows of conifers are often thin enough and dry enough. In an aspen forest it may be hard to find "thin enough". In maritime climates or hardwood forests it may be impossible to find thin, dry kindling. You must be a woodsman and split open dead wood to it's dry core. You may well want to do this even if you have the natural kindling to further insure your success on the first attempt. Choose a billet that has straight grain (no knots), is about 12 to 18 inches long, is solid, dead, and probably dry inside. Dead conifer wood is best. Dry aspen is just as good. Cedar is great. Hardwood is terrible for kindling. Birch bark is great but birch wood is almost always useless for fires. Conifer wood tends to repel moisture with it's pitch. Hold it vertically with the lower end on a solid base. Since your sheath knife will probably strike this base it should be wood to protect the edge rather than rock or dirt. Place the blade of your knife down on the top end and with another billet, used as a mallet, drive the blade through the vertical piece until it has split. The knife blade must be larger than the diameter of the billet being split. This way you can hammer it all the way through by hitting it's tip. Split the halves into halves until you have chop sticks. Skin off any wet exterior wood or bark. In this way you will make several piles of bone dry, deadwood sorted by size from thin chop sticks to larger, 2 inch diameter pieces. The idea is that once the largest pieces of dry split wood are burning you can throw your wet sticks/logs on top and they will catch.

You still haven't made your smallest kindling. If there is none naturally available and none in your emergency kit you must make shavings. This is why I like to have a sharp small knife. The big sheath knife will due but a little thin blade can produce shavings easier without shooting them five feet off. All this splitting and shaving takes time. If it's snowing or raining you must keep your work dry. Have someone hold a tarp, jacket, or whatever over your work area or pick them up and stash them as you make them. Make more than you think you'll need and get that fire going the first time. This process takes time and to burn all your split wood and kindling without starting the wetter stuff is a big waste of time and energy.

Set several dry billets parallel to each other in the bottom of the snow pit or where ever you plan to light this fire. These pieces might have to be split too if everything is wet. You want a dry platform. If it's snowing or raining do this at the last minute and shelter the spot with your body or have someone shelter it with a coat or tarp or something. Now it's time to set up the kindling and smallest sticks. Although there are several methods I make an ample pile of shavings on the platform in a choice spot. I then set the small split sticks in a teepee or just placed carefully over the kindling. The key is to

not compress the kindling with the weight of the small sticks so it won't get air. On the other hand don't make a teepee so high above the kindling that it's heat won't reach up to them. A wooden match is best to reach in between the mess and light a key shaving. A lighter has the advantage of lasting longer than a match and saves your matches. Light it up wind so the breeze will fan it into the rest of the pile. As it catches gently add more small split stuff to the places where the flames are growing best. Avoid placing all the sticks in the same direction. If they are parallel they tend to block air from reaching their surfaces. Cross the sticks. Nurse the flames to larger and larger split wood. When you think it's ready, add the unprocessed stuff. All this wood needs to be in easy reach of the operation.

If it is not life and death at this point you might want to stand back or take off your expensive gortex parka. Flying sparks will burn little holes here and there.

Obviously, this is a skill that should be practiced once in a while if you want to pull it off deftly in an emergency.

Along with my sheath knife I carry a cedar shingle used in siding houses because it will make small split stuff easily. Cedar is light wood and has an oil in it that makes it catch easy. I also carry a little bottle of motor oil to pour over the kindling and the little split sticks. This will insure success in an emergency but when I practice I only use what's natural.

Dave Sauer

[Back to:Colorado Firstrax Homepage](#)