

# MODERN WILDERNESS SURVIVAL

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From Bruce Zawalsky's presentations to ATRA  
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Most survival situations are for a maximum of one to four days. For this to happen, one needs bad planning, bad luck and being lost in a large remote area in poor weather. If you can last that long, you will likely be rescued by then. Darkness and cold temperatures are the biggest risks.

**DEFINITION:** Survival is the art of minimum investments for the maximum return -or- consider what items give the most benefit for the least energy expended. Example: an axe uses more energy for fire building than a saw. **Don't waste your energy.**

**BEFORE YOU GO:** The time to think and plan is before you go. What if you had to survive? When finalizing your plans, tell a family member or trustworthy friend where you are going, don't change your plan without notifying someone, let your contact know where you will be parking the vehicle, type of vehicle and licence number. Only walk out of an emergency situation if you are absolutely sure you have the energy to get out.

## WHEN IN TROUBLE – 'STOP':

**S = Stop** what you are doing

**T = Think** about the situation

**O = Orient** yourself to the environment

**P = Make a realistic Plan**

**FIRE LIGHTING BASICS:** the most important skill to learn. It is the basic tool of survival, used to warm, heat shelter, dry clothing, dry fuel, melt snow, boil water, cook and raise morale. Heat always goes up – make sure you put your match/lighter under the fuel.

- Twig bundles to start fire- Gather thin, dead, dry branches from under evergreens, elbow to finger tip long, 2 hand spans around and tie with grass, root, etc.
- How much wood is needed to last a night? Waist high pile of burnable wood for a cold night. Don't skimp since you need enough wood for the coldest time early in the morning.
- Looking for wood – Standing or leaning dead trees that have been topped or are less than 10 feet high. This is the best fuel, producing less smoke and less sparks. Start with conifers to get fire going, then deciduous to burn through the night. You can break trunks using leverage between 2 strong standing trees.
- Parallel fire layout – Prepare a safe area about an arm span/body length long, ½ pace wide for maximum warmth.
- Lighting a fire – Light the twig bundle and place it in the fire-pit (bigger bundles are easier to handle). Add finger and thumb size twigs, then add bigger and bigger ones. Finally add leg-thick wood to build a good coal bed.

**IMPROVISED SHELTERS:** provide quick protection for the conditions within the survival environment.

- Poncho lean-to (could use parachute, plastic, sit tarp...). Tie it between 2 trees, use a rope for a ridge pole, bungee cords are better than string/ties, pegs. Quick to set up, fire and stove friendly.

- Fallen tree shelter – Find a fallen tree not lying right on the ground (not always easy to find). Clear area under the trunk, cover sides with boughs, saplings, moss, bark, branches, piled up snow. Place fire 1 pace from side.
- Tripod Shelter – Similar to tepee, good for windy places. Use 3 logs/poles tied together to start, spread them apart to make a tripod and add more poles to make a teepee. Cover with a tarp, etc.
- Evergreen bivouac – Cut out an area right under a low branched evergreen right around its trunk. Reinforce with boughs around/overhead and snow in winter to insulate it. Make a bough chair/bed. Fire 2 paces from trunk.
- Duff bivouac – (Duff is the mess of cone stuff left under a tree from squirrels). Crude, last ditch shelter. Pile up duff from 1 or more piles and burrow in. Dirty, but provides insulation.
- Lots more shelters – but harder to make and take more time.
- Since space blankets only reflect heat for 20 min, a garbage bag or poncho would be better.

### \*\*\*TOP ELEVEN CRITICAL ITEMS\*\*\*

**The first four items should be carried around the neck (lanyard), in a pouch or fanny pack or in a secure pocket on the body (fishing vest with pockets).**

**1. Means to light a fire** – You need to be able to start a fire in any conditions. Have multiple means such as: strike anywhere matches, zirconium striker, (put these into a waterproof container with a rubber seal), lighter and tinder. It's a good idea to carry matches in two locations. Tinder: melt 1 lb wax, add 1 cup kerosene, add cotton balls, lay out on tin foil to harden, store in ziplock bag.

**2. Good survival knife** – flat knife, palm length blade, sharp on one side, flat top. A carbon steel sheath knife like the Swedish Mora knife allows you to hit the top of the knife with a baton of wood to more effectively cut through items. (Campers Village - \$12)

**3. Whistle** – good quality plastic, no pea so it can't freeze up, wear around neck (eg. Fox 40). Sound carries much farther than a voice, you can still signal if you get hoarse from calling.

**4. Personal 1<sup>st</sup> aid kit** – Pick wisely. Include wound closure strips, moleskin for blisters. Carry more pressure dressings, waterproof everything. Match the size of the bandage material to the tool being used: bandage if using a knife, large wound dressing if using an axe. It is important to stop bleeding, take a wilderness survival course.

**5. Proper clothing** – Socks, toque, head/neck cover, gloves, fleece sweater. Keep all in a water proof sack. Dress for the worst possible conditions. Use the loose and layered approach. Cotton will kill you in winter because it absorbs and retains moisture, so use cotton in summer. In winter use a polypropylene or wicking layer closest to skin. Carry a light weight neck cowl (tube) that is big enough to cover head if necessary (75% of heat is lost through neck and head). Also use fleece (100% man made) since fleece fibres will not absorb water. (Berber fleece is best as it provide the greatest dead air space). Second best is wool because it absorbs less moisture than cotton while retaining 80% of body heat. Insulated leather gloves can be used around the fire, waterproof gloves may be useful. Take suitable rain gear – if using 'goretex', wash it regularly and waterproof it with spray-on 'Scotchguard'.

**6. Signal mirror** – high quality glass heliograph with a 20 km reach. Put in first aid kit to protect it from damage. Practice using it.

**7. Magnetic compass** – liquid filled sighting magnetic compass. Learn how to use it first. It allows you to keep a straight course.

**8. Chunk of cord** – two 15 m sections of quality nylon cord or parachute cord – useful for many jobs.

**9. Cooking pot** – 2 L with lid and handle. Nature can not provide this and it is hard to improvise. Use to heat and purify water. In Alberta, only 1% of surface water is still drinkable without treating, so don't count on the mountain streams to be safe to drink. Water needs 3 minutes at a rolling boil to make it safe. In case of an emergency, warm water is an emotional necessity. Carry a tea bag to mask the flavour of hot smoky campfire water. Carry **water purification tablets** ('Pristine' works well – avoid iodine). You could use a wide mouth metal water bottle, using a wire around the rim to hold it over the fire. One must stay hydrated – a 3% loss of water drastically reduces endurance and most heat loss is through respiration. Water is the one essential nutrient. Suck on a snow lump (not chew) to avoid chapped lips.

**10. Bow saw** – 21"/50 cm blade is able to saw through a 10 cm+ log. Uses ¼ of the calories of using an axe and is safer to use.

**11. Pack or waterproof container** – Large enough and sturdy enough to carry the critical items.

**Other useful items:** \*water purification tablets or water filtration system \*water container (1L) \*toilet paper \*hand warmers \*waterproof flashlight and spare batteries (head lamp allows for hands-free work) \*survival candle \*2 heavy duty orange garbage bags \*sunglasses \*sun hat \*suntan lotion \*mosquito repellent and mosquito netting for head \*ORS (oral rehydration solution) \*high energy snacks (2 Eat-More bars keep well and provide good energy for the first 2 hours) \*brew kit (tea, sugar, etc) \*emergency rations (1 day's food) \*sharpening stone or board \*sewing kit (with awl) \*repair kit (duct tape and tie wraps) \*spare insulative clothing. Comfort items: Sleeping bag and protective cover (a breathable bivy bag will add 5 degrees of comfort to a sleeping bag). Mattress – a sleeping pad need only be 2-3 feet long to rest the body core on.

**'SPOT' SATELLITE MESSENGER:** – Cheap one is <\$175, yearly fee \$100-165. Alternative to satellite phone. Uses communication satellites for messages, must have clear sky view. Limited message options. Pocket size and light weight. SPOT 1 uses 2 AA lithium batteries, SPOT 2 needs 3 batteries.

**KEEP IN MIND:** – Treat casualties, analyze the situation, recall what you know, take an inventory of supplies, plan a positive situation and set priorities, keep busy, stay put, re-evaluate your plan. Boldly implement the positive solution.

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