

FIRE AND WATER

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You are driving home from the valley, or you are driving from Cape Meares to the valley. As you are nearing the summit, a magnitude 9.0 earthquake occurs in the Cascadia subduction zone. The road behind you has fallen into the canyon. The road ahead is covered by a massive rock slide. No one will be coming to help you. Your only chance for survival is to walk either west or east, whichever is closer to help. What will it take for you to succeed?

Three Hours to Live

Three hours to live. That's how long you have if you cannot maintain your body temperature at 98.6° F, or reasonably close to it.

A. Four things that will steal body heat from you

1. **Inadequate clothing:** Make sure you have a jacket or coat for each person in your car, along with a hat, cap or hood. Sturdy shoes are good to have. There is an old outdoorsman saying, "cotton kills," so an extra wool or "poly" shirt or sweater is good to have along. Wet cotton will chill you in winter. When wool is wet, it will still keep you warm. If that jacket is waterproof, that's a bonus. If not, cheap, lightweight plastic parkas are easily carried in your car grab-n-go bag.
2. **Getting wet:** Your body loses heat when you are wet. That's why you sweat on a hot day. But on cold or wet days or nights, you must keep dry to retain body heat. That is why you need clothing that sheds water when you are hiking out of the mountains in the rain. Problem: It could easily take you three days to reach help and shelter. So, you also need protection from rain or snow when you are sleeping.
3. **Wind exposure:** Air moving across your body is another body heat thief. Whether walking, resting or sleeping, protect yourself from the wind.
4. **The ground:** Sleeping on bare ground will steal heat from your body.

B. Dealing with body heat thieves

1. In your go-bag you should have, among other things, one or two contractor-size garbage bags, or a small lightweight tarp, some of those little space blankets, or maybe an old plastic shower curtain, a roll of duct tape, a few feet of paracord and a small roll up half-length sleeping pad.
2. Using these things, aided by some basic shelter techniques, can help protect you from the elements (this will be discussed in class).

C. Drinking hot fluids

1. Metal cup

2. Sterno (canned heat)
3. Mini stove

D. Fire

1. Tinder
 - a. Vaseline-saturated cotton balls (superior!)
 - b. Magnesium shavings
 - c. Dryer lint
 - d. Hand sanitizer
 - e. Duct tape
 - f. Birthday candles
 - g. Crayons
 - h. Egg carton, shavings and paraffin
 - i. Twig shavings from a knife or pencil sharpener
 - j. Pitch blisters (hard or soft)
 - k. Alcohol
 - l. Dry leaves, needles, cones or lichen
 - m. Dry cedar bark strips
 - n. Scraps of paper (including money)

Of these, only the first two can be dependably lit by just a spark. Hand sanitizer and alcohol can sometimes be lit by a spark, but the rest of the tinder items need an open flame to ignite them.

2. Kindling
 - a. Dry twigs
 - b. Fuzz sticks
 - c. Fatwood (from your go-bag)
 - d. Pitch-saturated wood or bark

3. Fuel

Both kindling and fuel) require you to find dry wood in a rain-soaked forest. How to do this will be illustrated in class.

4. Laying the fire

This will be illustrated in class.

5. Ignition (from worst choice to best)

- a. "Gopher" (book) matches
- b. Wooden "strike on the box only" matches (can be waterproofed with nail polish)
- c. Wooden "strike anywhere" matches (can be waterproofed with nail polish)
- d. Waterproof matches (good choice if the strike strip stays dry)
- e. Bic-type lighter (very dependable; replace in kit periodically)
- f. Strike-a-light, metal match, etc. (**most** dependable when used with Vaseline cotton balls)

6. Feeding the fire using "long fuel"

This will be illustrated in class.

- E. Volunteer class exercise
Making Vaseline cotton balls and using the strike-a-light.

Three Days to Live

Three days to live. That's about what you may have if you have no source of safe water to drink. You could be faced with the three D's: Dysentery, Dehydration and Death.

- A. Sources of water
 1. What you can carry (not much, @ 8.5 pounds per gallon!)
 2. Springs (uncommon)
 3. Streams, ponds and pools (great chance to get giardia and other dysentery-causing organisms)
 4. Rain catching (using plastic sheet, funneling or diverting into a container)
 5. Evaporation (summer—enclosing broadleaf branches with a plastic bag)
 6. Dew and or rain sopping

- B. Making wilderness water safe to drink
 1. Boiling
 - a. Requires container such as steel cup
 - b. Mini-stove saves time
 2. Water purification tablets
 3. LifeStraw or similar portable filter (easiest to carry and use)

The Route Out

A topo map is almost a necessity. Know that if you are traveling west, you will have more streams to cross than you will have traveling east of the summit.