

Fabric -- Clothing

General preparedness ideas:

1. When big emergencies happen, local police, fire and EMTs are overwhelmed. You cannot count on them immediately following. If you have family members with special needs, you must make your own preparation for them.
2. Plan at least two ways (less traveled ways are better) to get out of town.
3. Before an emergency think of three places you could evacuate to. One near, one farther away and a third still farther.
4. After an emergency, the most immediate needs are clothing to protect you from the weather, and water to drink. Store lots of water in lots of places. Do not use milk jugs as they are designed to break down quickly in the environment. Use empty juice or soda bottles. Clean well with bleach water then fill with tap water.

Cold weather layering systems

Some of the following information is taken from our class. The rest is taken from a book called 98.6 Degrees: The Art of Keeping Yourself Alive by Cody Lundin (Gibbs Smith Publisher, Layton, UT ISBN 10: 1-58685-234-5 ISBN 13:978-1-58685-234-4). All information in quotation marks is taken directly from the 98.6 book. My sincere apologies go to those who this sloppy form of annotation offends.

It does not take much cold to impair or kill us. Most deaths from hypothermia occur in the temperature range of 30 to 50 degrees Fahrenheit. "The critical temperature for maintaining manual dexterity is 54 degrees and for touch sensitivity 46 degrees."

The layering system includes three basic layers: A base layer, insulating layers and an environmental layer.

Base layer- This is worn next to the skin. It should be made of a fabric that insulates well but does not irritate or constrict. The fiber should also be good at wicking moisture away from the skin.

Insulating layers- These can be added and subtracted as needed and should also wick moisture away from the body. Each layer should be larger to avoid constricting. Constricted blood flow decreases the body's ability to keep the constricted part warm.

Environment layer- This layer is to protect from environment factors such as wind, sun, rain, snow and scratchy bushes. These layers should be loose-fitting, durable and easy to vent. Some of these layers are water-resistant while others are waterproof. Some attention should be given to this. Waterproof materials are good for times like rain storms but can cause serious problems. They allow moisture to build up inside your clothing. Damp clothing loses much of its insulating properties. Moisture resistant environmental layers are better in most cases. Be aware that they can also cause problems with trapped moisture because they release water more slowly than wicking fibers.

Attention to the handling of moisture is imperative. Water travels naturally from warm to cold temperatures. If clothing allows passage of the water, it will move out to the environment. If not, it travels as far as it can, reaches the cold and freezes. Trapped sweat or insensible perspira-

tion (the moisture our skin loses continually) causes clothing to lose its insulating abilities. Layers must be added, subtracted and vented to keep temperature regulated. One strategy to keep from sweating in your clothes is to run slightly on the cold side. "The ideal scenario in the cold is to regulate clothing layers and activities to allow you to operate at peak performances without wasting water and energy to sweating or shivering."

"Winter wear acronym:

C- Clean- keep yourself and clothes clean

O- Overheating- avoid it

L- Loose Layers of clothing

D- Dry- stay that way"

Properties of Different Fabrics

Cotton: Cotton is hydrophilic or water-loving. It soaks up and holds on to water. Once it becomes wet, it loses 90% of its insulating properties. This will carry heat away from you 25 times faster than if it were dry. Cotton makes a wonderful summer fabric, but a terrible winter fabric.

Wool: Of the natural fibers, wool is the best for water handling, but does not wick water as well as synthetics. It readily soaks up water, but its insulating properties do not diminish as much when wet. "Wool can soak up 35 to 55% of its weight before it feels cold and damp." It also loses less heat as it dries than synthetic fibers. One advantage for wool in outside layers is that it is flame resistant. Synthetics can be a melting hazard near fire. Emergency situations often involve the use of fire for warmth and cooking.

Polypropylene: This fiber is hydrophobic. It does not absorb water well. It transfers moisture from the skin to other fabric or the environment very well. It is soft and easy to care for. One problem is that smells can build up in it.

Polyester: This fabric is the most widely used in outdoor clothing. It is cheap and easy to care for. It is lightweight and can absorb a fair amount of water before it feels damp and cold. It is also hydrophobic and therefore slow to absorb water.

Nylon: Nylon is a light weight fabric that does not soak up much water. It is usually used in environmental layers as it is strong and wind resistant. Some nylons are coated to become waterproof. "A wind of 9 miles per hour can reduce the effectiveness of clothing insulation by 30%."