Outdoor Safety

Heat Protection
Applicability

This presentation has been prepared for those who will work outdoors in the heat
Heat Balance & Exchange

The body has to deal with metabolic heat and heat gained from the environment - it works to maintain a core body temperature of about 98.6° F (+ 1.8° F)

Some factors affecting heat exchange with the environment include:

- Air temperature
- Humidity
- Skin temperature
- Air velocity
- Sweating
- Radiant Temperature
- Clothing
Protective Mechanisms

The body dissipates heat by sweating.

When sweating is insufficient, heat-related disorders can develop, like:

- Heat stress & rash
- Heat exhaustion
- Heat stroke
Acute Heat Disorders

Some heat related disorders are more severe than others:

- Heat Stroke
- Heat Exhaustion
- Heat Stress & Rash

A person will die once their core body temperature reaches about 109°F
Heat Stroke

Heat stroke is the most serious acute heat disorder, which always requires medical attention. Treat victims with first-aid while seeking medical help. Signs and symptoms of heat stroke include:

- Breathing may be fast and deep

**First Aid**

- Remove from heat source
- Cool as rapidly as possible in a gentle way
- Administer 1/2 cup of cold water every 15 min
- Treat for shock (lay victim down and elevate their head and feet)

Victims of heat stroke need **IMMEDIATE MEDICAL ATTENTION**!
Heat Exhaustion & Cramps

The signs and symptoms of heat exhaustion & cramps include:

- Dizziness
- Headache
- Sweaty Skin
- Weakness
- Cramps
- Nausea, vomiting
- Fast heart beat
- Pale skin

**Treatment**

Sit or lie down in cooler air, hydrate well, and observe closely for signs and symptoms of heat stroke.
Heat Rash & Other Problems

The signs and symptoms of heat rash include:

- Reduced ability to cool off
- Clogged sweat glands
- Discomfort

Treatment

Victim should sit or lie down in cooler air, hydrate well & clean their skin
Protection

Do the following to protect against acute heat disorders:

- Stay well hydrated (drink a small amount of water every 15 minutes)
- Wear the proper clothing
- Replace electrolytes if sweating
- Become acclimatized to the hot environment
- If needed, select and use proper medication

Utilize
- Water
- Rest
- Shade
Proper Clothing

Clothing you wear in a hot environment needs to be designed to keep you cool (e.g. light color) and wick moisture away, which helps remove heat from your body.

Make sure clothing offers UV protection.
About Acclimatization

A person who is acclimatized can deal with heat better than they would otherwise because the body alters the volume of blood flow and improves the ability to maintain arterial pressure.

Over a narrow range of environmental conditions, people generally in good health will acclimatize in about a week after working periodically in a hot environment.

*Note: Once a person ceases working in a hot environment almost all acclimatization is lost in about a week.*
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