

# Hypothermia – Mild (Two Levels of Severity)

99 – 96 F

95 – 91 F

- Shivering and impairment to perform coordinated tasks
- **Basic treatment:** Simple re-warming by blankets (solar) and removal from the exposure (can wrap in towels and cover with sand if removal is not practical)
- Shaking, shivering, mild impairment of central nervous system with slow thinking and speech difficulty
- **Basic Treatment:** Same as prior but will take longer to reverse. Consider warm shower and watch closely.

# Hypothermia – Moderate

## 90 – 86 F

### Symptoms

- Shivering slows down and stops, with profound slowing of mental function. Confusion may include hallucinations and paradoxical undressing. Muscle rigidity with jerky motions, irregular heart beats.

### Basic Treatment

- Prevention of further heat loss with basic maneuvers as prior. No aggressive re-warming attempts since this results in shunting cold blood into the core and may further drop the core temperature. Evacuate, where warmed IV's, etc. will be considered.

# Hypothermia – Severe Less than 86 F

## Symptoms

- Coma, falling blood pressure, life threatening cardiac irregularities.

## Basic Treatment

- Time is of the essence and this is a true emergency. Evacuate and protect from further heat loss.

# Hyperthermia – Heat Edema

## Symptoms

- Swelling of hands and feet

## Basic Treatment

- Resolves spontaneously over several days of acclimatization unless there are problems with renal function or there are medications being used for underlying problems.
- See 'Acclimatization'

# Hyperthermia – Heat Syncope

## Symptoms

- Dizziness to the point of fainting in the unacclimatized athlete. This shows up typically when the athlete stands up quickly, usually in a state of dehydration.

## Basic Treatment

- Supine position with legs elevated, cool (not iced) liquids and resting in a cool place.
- See 'Acclimatization'

# Hyperthermia – Heat Cramps

## Symptoms

- Painful muscle cramps and spasms

## Basic Treatment

- Rehydration and attention to electrolytes, and massage. If unsuccessful be attentive to sodium content in blood as well as other electrolytes.
- See 'Acclimatization'

# Hyperthermia – Heat Exhaustion

## Symptoms

- Fatigue, weakness, uncoordination, mild confusion, agitation, headache, sweating, nausea, vomiting, diarrhea, muscle pain with cramping
- Body temp (core) is less than 104 F

## Basic Treatment

- See prior recommendations
- Protection from further exposure
- Spray with lukewarm water in a setting of cooling fans, cool oral rehydration.
- Removal to an emergency facility where advanced treatment is available and hyponatremia can also be ruled out.

# Hyperthermia – Heat Stroke

## Symptoms

- Dry – Skin is dry and very warm with profound confusion, loss of coordination and other CNS symptoms including seizures, coma, hallucinations.
- Wet – Less common with profuse sweating – otherwise the same

## Basic Treatment

- Medical emergency necessitating immediate transfer to an emergency facility. There gradual central cooling will be conducted with attention to potential damage to cardiac, CNS, renal, gastrointestinal, hematological, pulmonary, and musculoskeletal damage.

# Hyponatremic Collapse

## Symptoms

- Long distance events typically with loss of central nervous system function, ranging from decreased coordination and verbal capacity to coma

## Basic Treatment

- Medical emergency that cannot be evaluated or treated at the site – transport immediately!
- Water intoxication and acclimatization are frequently at the center of this medical event, though other underlying medical conditions have to be considered.