

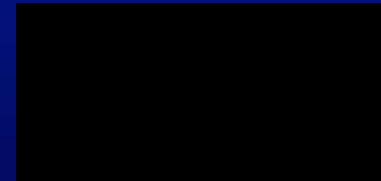
Heat Illnesses and Prevention



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Overview

Heat Stroke is the cause of death each year and many of these are preventable.

The keys are:

Recognition of Risk Factors;

Recognition of Symptoms;

Activate the Emergency Care Plan;

Provide primary care;

Provide secondary care.

Risk Factors for Heat Illness

- Environmental Clothing
- Age
- Dehydration
- Pre-activity Hydration Status
- High Body Fat
- Poor Acclimatization/Fitness Level

Risk Factors (cont'd)

- Febrile Illness
- Medications
- Sickle Cell Trait

Symptoms of Heat Illness

- Muscle spasms/cramps
- Heavy or profuse sweating
- Skin is flushed or cool and pale
- Headache
- Dizziness
- Rapid pulse, nausea, weakness

Symptoms (cont'd)

- Disoriented, confusion
- Elevated body core temperature
- Cessation of sweating
- Red, dry skin
- Shallow breathing and rapid pulse
- Loss of consciousness

Heat Illness Emergency Plan

When one exercises, the core temperature rises. It can rise as much 10 to 20 times from when at rest. Excess heat is expelled by the pores on the skin opening up. The perspiration thereby helps to cool the skin as well as relieve the core temperature.

When the temperature and humidity are at such a level as to not allow the evaporation of the fluid on the skin, the core temperature cannot cool. This results in heat illness.

The Emergency Plan encompasses:

Pre-hydration: planning on fluid intake during hot humid days prior to the event;

Clothing: cool, light colored uniforms that dissipate heat quickly;

Recognition of those at risk: those on medication, those overweight, etc.

Preparation for Heat Illness Prevention:

❖ Appropriate fluids for hydration:

- ❖ Water
- ❖ Electrolytes

❖ Cooling mechanisms:

- ❖ Water
- ❖ Hose
- ❖ Baby Pool (!)



- ❖ EMS activation:
 - ❖ Cell phone
 - ❖ Field location
 - ❖ Someone to meet EMS
- ❖ Heat and humidity tools:
 - ❖ Sling Psychrometer
 - ❖ Chart



Category	Apparent Temperature	General Effect
Extreme danger	130 or higher	Heatstroke/sunstroke highly likely
Danger	105 - 130	Sunstroke, heat cramps or heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity
Extreme caution	90 - 105	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity
Caution	80 - 90	Fatigue possible with prolonged exposure and/or physical activity

Source : National Weather Service

Type of Heat Illness

Heat Cramps:

Cramping of the legs and abdominal area;

Elevated body temperature

Treatment:

- Stop the activity
- Gently stretch the muscles
- Give cold water or an electrolyte drink

Heat Exhaustion/Heat Syncope

(note: this can progress quickly into heat stroke if not recognized and action taken).

Exhaustion, nausea, vomiting and dizziness

Weakness, fatigue and fainting

Elevated body temperature

Treatment:

Remove the athlete from the hot environment and rest in a cool, shaded area;

Remove restrictive clothing;

Give fluids orally, if the athlete is conscious;

Apply active cooling measures such as a fan or ice towels;

Refer to a physician or take to emergency treatment center for further medical attention, especially if nauseated.

Heat Stroke

Acute medical emergency due to thermoregulatory failure;

Nausea, seizures, disorientation and possible unconsciousness or coma;

Hot, dry skin and high body temperature (105°F).

This is a *MEDICAL EMERGENCY*

- Activate EMS immediately;
- Monitor core body temperature and lower it as quickly as possible;
- Remove as much clothing as possible;
- Immersion in an ice bath has been shown to be the best method to decrease core temperature;
- Apply ice packs in the armpits, groin and neck areas;
- Continue cooling efforts until EMS arrives.

Hydration Recommendations

Before Exercise:

- Drink 17-20 ounces of water or sports drink 2-3 hours before exercise
- Drink an additional 7-10 ounces of water or sports drink 10-20 minutes before exercise

During Exercise:

- Drink early
- As a general guide, drink 7-10 ounces of water or sports drink every 10-20 minutes.
- Do not wait until thirsty; to maintain hydration, need to drink beyond thirst.

After Exercise:

- Drink enough fluids to replace any weight loss within two hours of completion of activity.
- For each pound of weight loss, drink 20-24 ounces of a sports drink.

Acclimatization

Acclimatization to Heat:

Acclimatization means becoming

- adapted to the weather or climate.
- The process takes 7 to 12 days.
- Studies have shown adolescents take longer to acclimatize to heat than adults

General Prevention Strategies

When outdoors, schedule practice at the coolest times of the day;

Allow appropriate breaks for water;

Quick recognition of any athlete who is mentally distracted, sweating profusely, seemingly confused for removal and cooling;

Educate coaches, officials, athletes and parents on heat illness and prevention;

Weigh athletes prior to and after practice to determine fluid loss;

Every institution should have a plan for the prevention and treatment of heat illness.

Game considerations:

Check the field/air conditions one hour prior to the contest;

High Risk – consider altering game conditions: more timeouts, more water breaks; etc.

Extremely High Risk – consider postponing the event.

Practice Considerations:

Consider canceling or shortening the practice session;

Reschedule to an early morning or early evening practice.

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