Heat Emergencies

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The participants will be able to...

- list three signs and symptoms of heat cramps.
- explain what heat stroke is.
- identify three signs and symptoms of heat exhaustion.
- list four ways to manage heat illness.
- describe three ways to prevent heat related illness.
Who Is At Risk For Heat Illness...

- Infants and Children
- Elderly

Person’s with these medical conditions are at risk:
  - Heart disease
  - COPD
  - Diabetes
  - Dehydration
  - Obesity
  - Limited mobility

- People who drink alcohol

- Medications can increase a person’s risk
Loss Of Body Heat...

- **Conduction:**
  Transfer of heat from body to colder object.

- **Convection:**
  Transfer of heat through circulating air.

- **Evaporation:**
  Cooling of body through sweating.
• **Radiation:**
  Loss of body heat directly into a colder environment.

• **Respirations:**
  Loss of body heat during breathing.
Body Temperature...

- Normal body temperature is 98.6°F.
- Body attempts to maintain normal temperature despite ambient temperature.
- Body cools itself by sweating (evaporation) and dilation of blood vessels.
- High temperature and humidity decrease effectiveness of cooling mechanisms.
Heat Cramps...

- The exact cause of heat cramps is unknown, but it is probably related to electrolyte problems.

- Painful muscle spasms in the abdomen, arms, or legs following strenuous activity.

- Heat cramps usually affect people who sweat a lot during strenuous activity. The sweating depletes the body's salt and moisture. The low salt level in the muscles causes painful cramps.
Signs And Symptoms Of Heat Cramps...

- Severe muscle cramps in legs and abdomen
- May feel faint
- Moist, pale or normal-to-cool skin
- Heavy sweating
Care For Heat Cramps ...

- Remove the patient from hot environment.
- Rest the cramping muscle.
- Replace fluids by mouth.
- If cramps persist, call 9-1-1.
Heat Exhaustion...

- Is the most common serious illness caused by heat

- Onset while working hard or exercising in hot environment.

- Due to the body losing water and electrolytes through heavy sweating.

- In elderly and young, onset may occur while at rest in hot, humid, and poorly ventilated areas.
Signs And Symptoms Of Heat Exhaustion...

- Dizziness, weakness, or fainting
- Cold, clammy skin
- Dry tongue and thirst
- Nausea or headache
- Normal or slightly elevated body temperature
- Decrease in consciousness
Care For Heat Exhaustion...

- Call 9-1-1.

- Remove extra clothing and remove from hot environment.

- Cool the person down.

- Have patient lie down and elevate legs.

- If patient is alert, give water slowly.
Heatstroke...

- The least common but most serious illness.
- Occurs when the body is exposed to more heat than it can handle.
- Person's normal response to heat is overwhelmed.
- The body temperature rises rapidly to the level which tissues are destroyed.
Heatstroke...

- Untreated, the person will die.

- Can develop in people during vigorous physical activity, when they are outside or in a closed, poorly ventilated, humid space.

- Most common cause of death in a heat wave.
Signs And Symptoms Of Heat Stroke...

- Skin may be moist or wet in early stage.
- Person can still have heat stroke if they are still sweating.
- Hot, dry, flushed skin
- Change in behavior leading to unresponsiveness
- Pulse rate is rapid, then slows.
- Death can occur if the patient is not treated.
Care for Heat Stroke...

- Call 9-1-1
- Move the person out of the hot environment.
- Set the air conditioning to maximum cooling.
- Remove the person’s clothing.
- Apply cool packs to the person neck, groin, and armpits.
- Cover the person with wet towels or spray the person with cool water and fan him or her to evaporate the dampness on the skin.
How To Prevent Heat Illnesses...

- Wear light-colored, loose-fitting, breathable clothing such as cotton.
- Avoid non-breathing synthetic clothing.
- Gradually build up to heavy work.
- Schedule heavy work during the coolest parts of day.
- Take more breaks in extreme heat and humidity.
- Take breaks in the shade or a cool area when possible.
How To Prevent Heat Illnesses ...

- Drink water frequently.
- Drink enough water that you never become thirsty.
- Avoid drinks with caffeine, alcohol, and large amounts of sugar.
- Be aware that protective clothing or personal protective equipment may increase the risk of heat stress.
- Monitor your physical condition and that of your coworkers.
How To Prevent Heat Illnesses ...

Apparent temperature is how hot the heat-humidity combination makes it feel.
What Have You Learned...