

# Heat Emergencies

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# The participants will be able to...

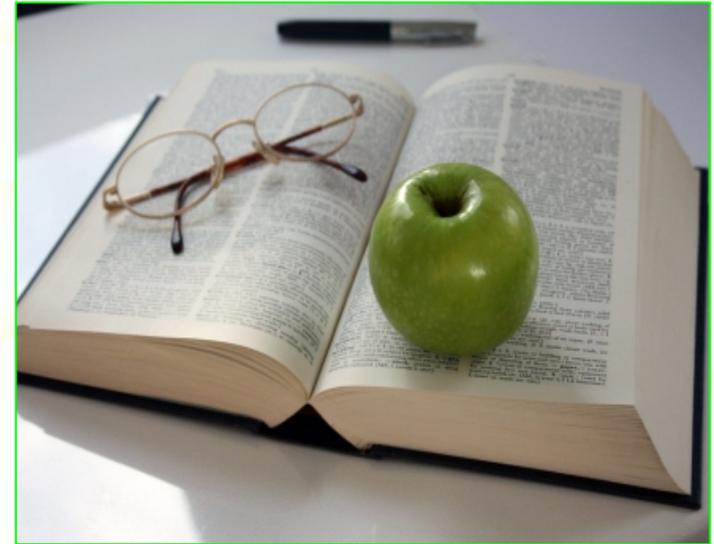
**list three signs and symptoms of heat cramps.**

**explain what heat stroke is.**

**identify three signs and symptoms of heat exhaustion.**

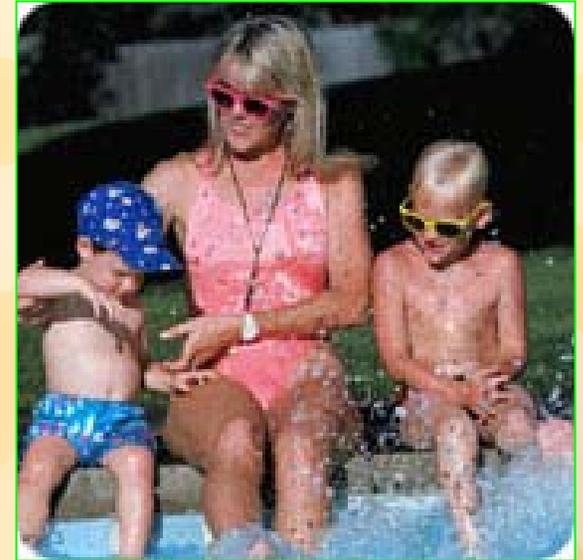
**list four ways to manage heat illness.**

**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:**

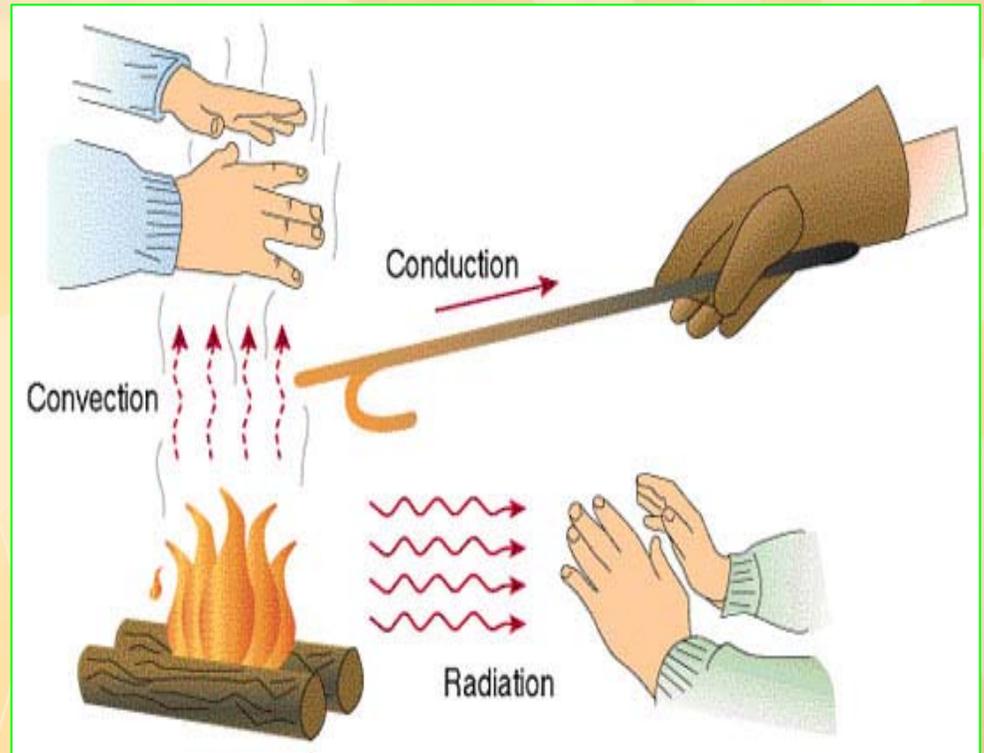
Transfer of heat from body to colder object.

- **Convection:**

Transfer of heat through circulating air.

- **Evaporation:**

Cooling of body through sweating.



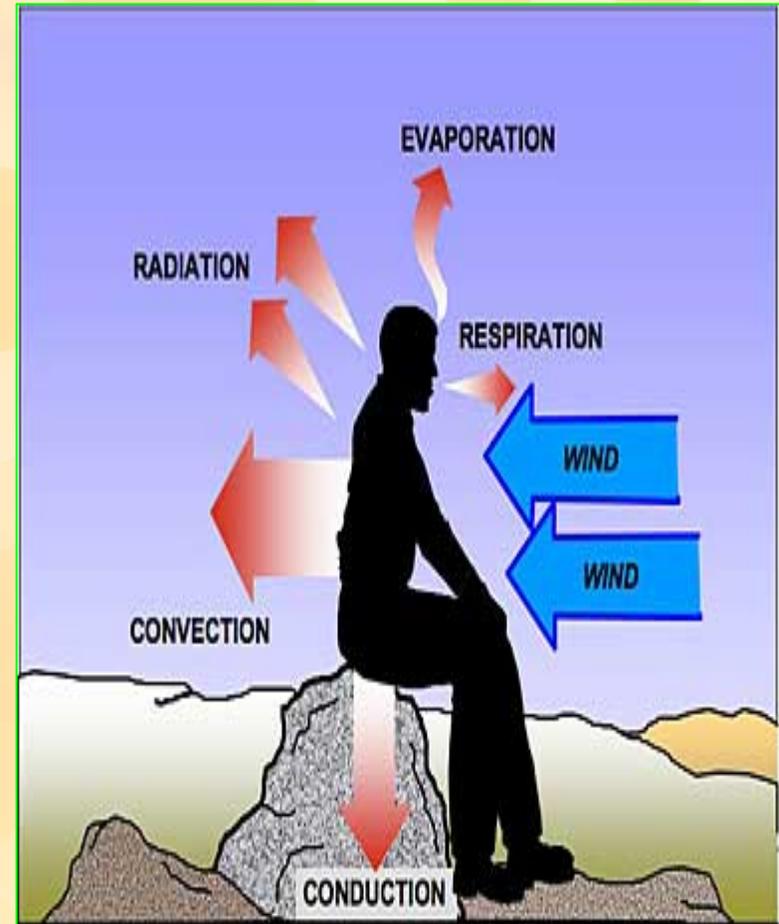
# Loss Of Body Heat Cont...

- **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**



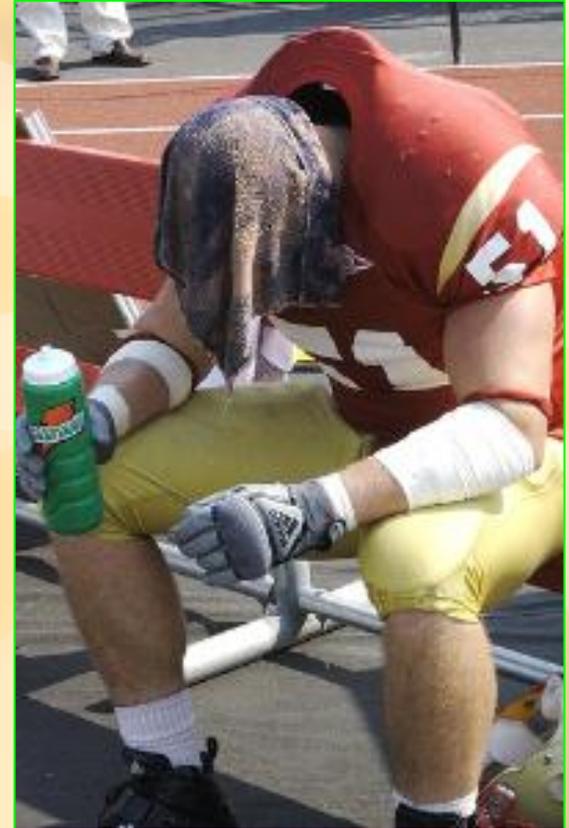
# Care For Heat Cramps ...

- **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.**
- **Persons 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.**

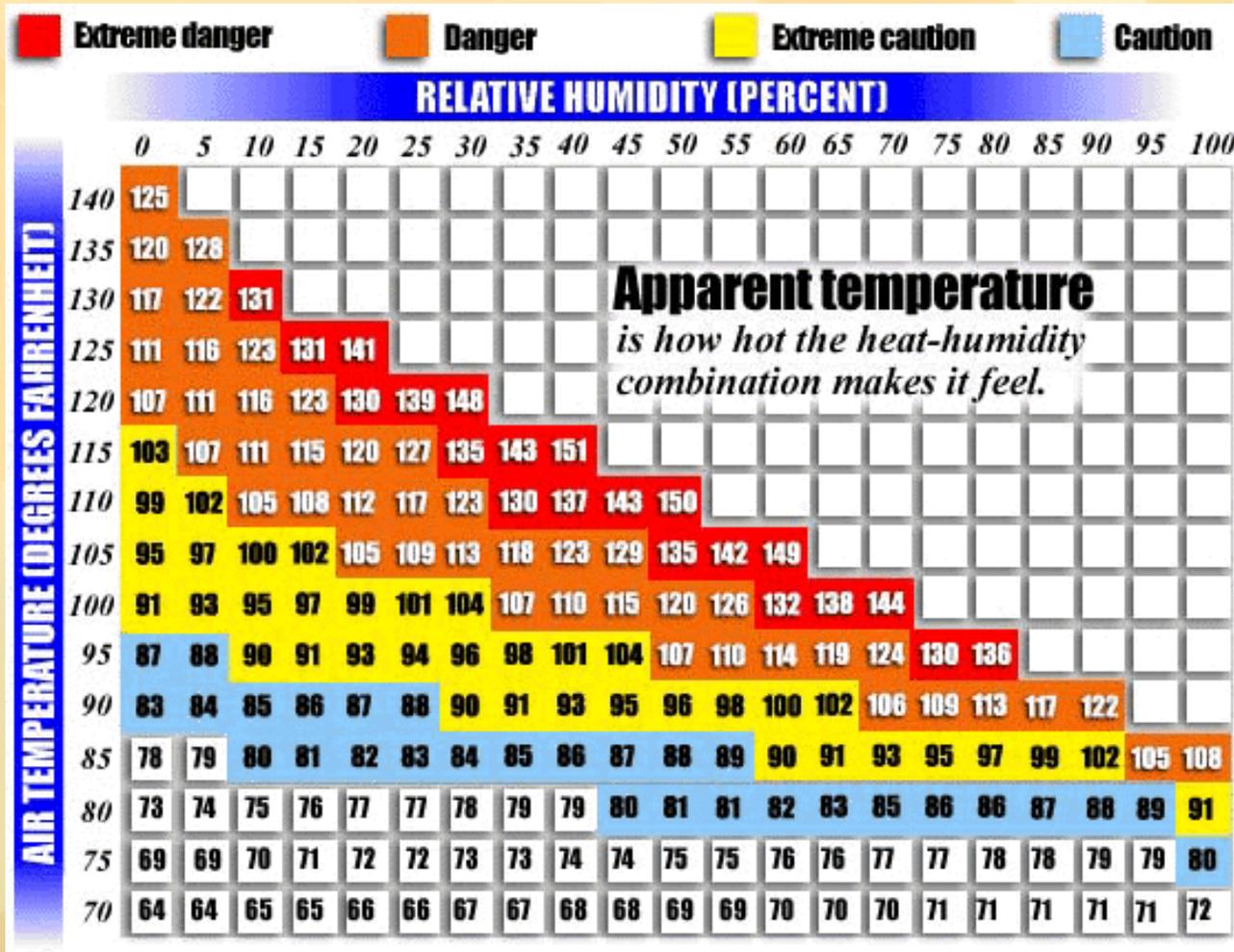


# How To Prevent Heat Illnesses ...

- **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 ...



# What Have You Learned...

