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Fact Sheet: Heat Exhaustion/Stroke

Symptoms of heat exhaustion generally develop after prolonged periods of outdoor activity in high heat. If left untreated, heat exhaustion may turn into a more serious condition called heat stroke, which can be life threatening. Heat stroke is defined as having a body temperature of 104°F or higher, not related to fever. At this point, your body cannot regulate temperature, as sweating has stopped.

Symptoms

➤ Heat Exhaustion

- Cool, moist skin with goose bumps when in the heat
- Heavy sweating
- Dizziness
- Fatigue
- Weak, rapid pulse
- Low blood pressure when standing
- Muscle cramps
- Nausea
- Headache

➤ Heat Stroke

- High body temperature
- Nausea
- Sweating has stopped
- Rapid pulse
- Rapid breathing
- Flushed skin
- Loss of consciousness
- Confusion
- Skin hot, dry to the touch
- Shock

Prevention

- Look up the heat index prior to planned work.
 - A heat index higher than 91°F monitor for heat exhaustion and plan for regular rest/water breaks.
 - Consider rescheduling work when the heat index is above 103°F.
 - Do not perform work if the heat index is over 115°F.

- Schedule work for cooler parts of the day.
- Use a buddy system to monitor for symptoms throughout the work.
- To prevent heat exhaustion, drink plenty of fluids. Drink water at least every 15 minutes, even if you are not thirsty.
- Wear loose fitting, breathable clothing.
- Take frequent rest breaks preferably in a cool building, but at least in a fully shaded area. More frequent, shorter periods of exposure to heat are better than fewer, longer exposures. Shorten work periods and increase rest periods:
 - As temperature rises
 - As humidity increases
 - When there is no air movement
 - When protective clothing or gear is worn
 - For more strenuous work
- Slowly acclimatize personnel to working in hot weather by starting with less strenuous tasks and more frequent breaks.
- Consider that some health conditions can put workers at greater risk of heat-related illness. These include diabetes, kidney and heart problems, pregnancy, and being overweight. Encourage personnel to consult with physician about how their health may be affected by expected working conditions.

First Aid Treatment

- Remove the person from the heat source, preferably in a cool building, but at least in a fully shaded area.
- Remove excess clothing.
- Cool the patient with whatever means are available.
- Immerse the patient in a cool tub of water or a cool shower, sponge with cool water, or place cold, wet towels on the person's head, neck, armpits and groin.
- Do not cover their entire body or torso with wet towels/clothing, as this may prevent efficient heat loss.
- If they are able to drink, give them cool water.
- Seek emergency medical attention if you suspect someone is experiencing heat stroke, as heat stroke can cause damage to the liver, kidneys, and affect blood clotting.
- Continue cooling the patient until help arrives.

References and Additional Resources

- OSHA [Heat Illness](#)
- Adapted from *Heat Exhaustion/Stroke Fact Sheet*, by University of Maryland: Department of Environmental Safety, Sustainability & Risk (<https://essr.umd.edu/documents/fact-sheets>) with permission.