# San Bernardino County Department of Public Health Protect Yourself

# **Heat Stress**

When the body is not able to cool itself by sweating, illnesses can occur such as heat stress, heat exhaustion, and the more severe heat stroke. These conditions can result in death.

# **Factors Leading to Heat Stress**

- High temperature and humidity
- direct sun or heat
- limited air movement
- physical exertion
- poor physical condition
- some medicines
- low tolerance for hot places

## **Heat Stroke**

Heat stroke is the most serious heat-related disorder. It occurs when the body is not able to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

## **Symptoms**

Symptoms of heat stroke include:

- Hot, dry skin (no sweating)
- Hallucinations
- Chills
- Throbbing headache
- High body temperature
- Confusion/dizziness
- Slurred speech

### First Aid

Take the following steps to treat a worker with heat stroke:

- Call 911 and notify their supervisor.
- Move the sick person to a cool shaded area.
- Cool the person using methods such as:
  - Soaking their clothes with water.
  - Spraying, sponging, or showering them with water.
  - Fanning their body.

## **Heat Exhaustion**

Heat exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating. People most at risk of heat exhaustion are those that are elderly, have high blood pressure, and those working in a hot environment.

## **Symptoms**

Symptoms of heat exhaustion include:

- Heavy sweating
- Extreme weakness or fatigue
- Dizziness, confusion
- Nausea
- Clammy, moist skin
- Pale or flushed complexion
- Muscle cramps
- Slightly elevated body temperature
- · Fast and shallow breathing

### First Aid

Treat a person suffering from heat exhaustion with the following:

- Have them rest in a cool, shaded or air-conditioned area.
- Have them drink plenty of water or other cool, nonalcoholic beverages.
- Have them take a cool shower, bath, or sponge bath.

# **Heat Syncope**

Heat syncope is a fainting (syncope) episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and not being able to adjust to the heat.

## **Symptoms**

Symptoms of heat syncope include:

- Light-headedness
- Dizziness
- Fainting

### First Aid

People with heat syncope should:

- Sit or lie down in a cool place when they begin to feel symptoms.
- Slowly drink water, clear juice, or a sports beverage.

# **Heat Cramps**

Heat cramps usually affect people who sweat a lot during strenuous activity. This sweating uses up the body's salt and moisture levels. Low salt levels in muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion.

## **Symptoms**

Muscle pain or spasms usually in the abdomen, arms, or legs.

## First Aid

People with heat cramps should:

- Stop all activity, and sit in a cool place.
- Drink clear juice or a sports beverage.
- Do not return to strenuous work for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention if any of the following apply:
  - The worker has heart problems.
  - The worker is on a low-sodium diet.
  - o The cramps do not subside within one hour.

## **Heat Rash**

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather.

## **Symptoms**

Symptoms of heat rash include:

- Heat rash looks like a red cluster of pimples or small blisters.
- It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

### First Aid

People who have heat rash should:

- Try to stay in a cooler, less humid environment when possible.
- Keep the affected area dry.
- Dusting powder may be used to increase comfort.

For more information visit the U.S. Centers for Disease Control and Prevention at: <a href="http://www.bt.cdc.gov/disasters/extremeheat/">http://www.bt.cdc.gov/disasters/extremeheat/</a>.