Heat-Related Illness

Heat-related illnesses occur when the body is unable to properly cool itself. The body normally cools itself by sweating. However, under some conditions sweating is not enough. In these cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs. Some examples of heat-related illnesses include:

- **Heat stroke.** This occurs when the body is unable to regulate its temperature. The body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F (41° C) or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.
- **Heat exhaustion.** This is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and not enough fluids. It is the body's response to an excessive loss of the water and salt contained in sweat.
- **Heat cramps.** These usually affect people who sweat a lot during heavy activity. This sweating drains the body's salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. Heat cramps usually occur in the abdomen, arms, or legs. Get medical attention for cramps if you have heart problems or are on a low-sodium diet.

Those that are at greatest risk for heat-related illnesses include:

- The elderly.
- Infant and the very young.
- People with mental illness and chronic diseases.
- People who are overweight (*obese*).
- Young and healthy people can even succumb to heat if they participate in strenuous physical activities during hot weather.

CAUSES

Several factors affect the body's ability to cool itself during extremely hot weather. When the humidity is high, sweat will not evaporate as quickly. This prevents the body from releasing heat quickly. Other factors that can affect the body's ability to cool down include:

- Age.
- Obesity.
- Fever.
- Dehydration.
- Heart disease.
- Mental illness.
- Poor circulation.
- Sunburn.
- Prescription drug use.
- Alcohol use.

SYMPTOMS

Heat stroke: Warning signs of heat stroke vary, but may include:

- An extremely high body temperature (above 103°F orally).
- A fast, strong pulse.
- Dizziness.
- Confusion.
- Red, hot, and dry skin.
- No sweating.
- Throbbing headache.
- Feeling sick to your stomach (*nauseous*).
- Unconsciousness.

Heat exhaustion: Warning signs of heat exhaustion include:

- Heavy sweating.
- Tiredness.
- Headache.
- Paleness.
- Weakness.
- Feeling sick to your stomach (*nauseous*) or vomiting.
- Muscle cramps.

Heat cramps

- Muscle pains or spasms.

TREATMENT

Heat stroke

- Get into a cool environment. An indoor place that is air-conditioned may be best.
- Take a cool shower or bath. Have someone around to make sure you are okay.
- Take your temperature. Make sure it is going down.

Heat exhaustion

- Drink plenty of fluids. **Do not** drink liquids that contain caffeine, alcohol, or large amounts of sugar. These cause you to lose more body fluid. Also, avoid very cold drinks. They can cause stomach cramps.
- Get into a cool environment. An indoor place that is air-conditioned may be best.
- Take a cool shower or bath. Have someone around to make sure you are okay.
- Put on lightweight clothing.

Heat cramps

- Stop whatever activity you were doing. **Do not** attempt to do that activity for at least 3 hours after the cramps have gone away.
- Get into a cool environment. An indoor place that is air-conditioned may be best.

HOME CARE INSTRUCTIONS

To protect your health when temperatures are extremely high, follow these tips:

- During heavy exercise in a hot environment, drink two to four glasses (16-32 ounces) of cool fluids each hour. **Do not** wait until you are thirsty to drink. **Warning:** If your caregiver limits the amount of fluid you drink or has you on water pills, ask how much you should drink while the weather is hot.
- **Do not** drink liquids that contain caffeine, alcohol, or large amounts of sugar. These cause you to lose more body fluid.
- Avoid very cold drinks. They can cause stomach cramps.
- Wear appropriate clothing. Choose lightweight, light-colored, loose-fitting clothing.
- If you must be outdoors, try to limit your outdoor activity to morning and evening hours. Try to rest often in shady areas.
- If you are not used to working or exercising in a hot environment, start slowly and pick up the pace gradually.
- Stay cool in an air-conditioned place if possible. If your home does not have air conditioning, go to the shopping mall or public library.
- Taking a cool shower or bath may help you cool off.

SEEK MEDICAL CARE IF:

- You see any of the symptoms listed above. You may be dealing with a life-threatening emergency.
- Symptoms worsen or last longer than 1 hour.
- Heat cramps do not get better in 1 hour.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

FOR MORE INFORMATION CONTACT:

Centers for Disease Control

www.cdc.gov

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