

California Institute of Technology
Environment, Health, and Safety Office



HEAT STRESS

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Exposure to extreme heat can make you seriously ill. Factors that affect the probability of becoming ill include your physical activity, clothing, humidity, age, and state of health. If left unchecked, a heat-related illness can become serious in a relatively short period.

If your work keeps you outside for long periods, it is especially important that you recognize the signs of a heat-related illness.

Heat cramps, heat exhaustion, and heat stroke are conditions caused by overexposure.

HEAT CRAMPS

Heat cramps usually are the first symptom of overexposure. The symptoms of heat cramps are painful muscle spasms. Care for heat cramps is rest and fluids. DO NOT take salt tablets. Activity can resume when the cramps subside, but fluid intake should continue.

HEAT EXHAUSTION

Heat exhaustion is more severe than heat cramps. Wearing heavy clothing in hot, humid environments increases the likelihood of getting heat exhaustion. Symptoms include cool, moist, pale, or flushed skin, headache, nausea, dizziness, weakness, and exhaustion.

HEAT STROKE

Heat stroke is the most severe heat emergency. It often occurs when individuals ignore the early signals of a heat-related emergency. Heat stroke is a serious medical emergency caused when the body systems stop functioning. Symptoms include red, hot, dry skin; changes in consciousness; rapid, weak pulse; and rapid shallow breathing.

FIRST AID

Heat-related illnesses can usually be reversed in the early stages. The following steps should be taken:

- Get the victim out of the heat.
- Loosen any tight clothing and apply cool, wet cloths.
- Give cool water if the victim is conscious, about one glass every fifteen minutes.
- If the victim refuses water, vomits, or loses consciousness, call 5000 if you have not already done so.

FOR MORE INFORMATION:

Please refer to the PowerPoint document "[Caltech Heat Illness Prevention Program](#)" for more information.