

Safety Corner

What is heat stroke?

Our body can reduce heat through three cooling mechanisms: convection (heat loss to air), radiation (heat loss to surrounding objects), and latent heat of evaporation (sweating). Heat stress occurs when the body cannot sufficiently cool itself via the above cooling mechanisms. The adverse health effects of heat stress include heat rashes, heat syncope, heat cramps, heat exhaustion, and heat strokes.

Of these heat-related conditions, heat stroke is the most serious one. It occurs when the body is rapidly using up its water and salt, causing sweating to stop. Heat stroke symptoms include hot, dry and flushed skin, rapid pulse, difficulty breathing, headache, confusion, strange behavior, weakness, and nausea. Heat stroke can rapidly progress to seizure and convulsions, unconsciousness, and loss of pulse. As the body, including the brain, begins to overheat rapidly with the body temperature climbs to critical levels, permanent disability or death is imminent unless immediate medical attention is provided.

One of the main causes of heat stress is dehydration while working in hot environment. To reduce heat stress, we should drink water frequently before we feel thirsty, and prior to any strenuous work or activity. We should alternate heavy work with lighter work, and move from a hot location to a cooler one periodically. If possible, outdoor heavy work should be scheduled for the morning or late afternoon when it is cooler outside. Employers should provide sufficient water at the workplace and maintain tenable working environments.

The treatment of heat stress depends on the severity of the condition. Those affected by heat cramps should be moved into the shade, have their clothing loosened and be given lightly salted fluids. In addition to the above, someone suffering heat exhaustion should be cooled quickly by fanning and having cool water poured on the body if necessary. Medical help should be summoned if the conditions persist or in doubt. When a heat stroke is suspected, the person must receive immediate medical help - call 999! Cooling must be provided quickly by spraying or sponging the person with cool water but liquids should not be given to an unconscious person.

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