



# 5-minute safety talk

## Hot Weather Safety

Awareness of heat-related illness is important regardless of what climate a person lives in or how well an individual may be conditioned. The effects of over heating often go unrecognized by the victim and are not well anticipated by safety personnel.

The human body gets rid of heat through four different mechanisms, the most important of which is sweating because of the cooling effect of its evaporation. As we exert ourselves and produce excess heat, we rid that heat by turning our sweat into dissolved moisture in the surrounding air. This process requires two crucial conditions.

1. A person must have enough fluid to accommodate the losses. They must be constantly replenishing this fluid to make up for losses throughout the cooling cycle.
2. The environment must have a low humidity level to allow the fluid to dissolve. Most people don't realize the risk of heat-related illness increases with air temperature as well as the relative humidity.

### Signs of Heat-Related Illness

The symptoms of heat-related illness usually start with dizziness and headache. There may be a progression to nausea and vomiting. As a person becomes more dehydrated, the body

will shunt blood away from the skin to preserve vital organs. This will reduce the blood flow to the skin and markedly reduce the ability to sweat. What occurs next is a rapid rise in body temperature since there is less heat being released. This can lead to altered mental status and seizures, a condition commonly known as heat stroke.

### Treatment

Treating heat-related illness starts with prevention. Steps to prevent heat-related illness include maintaining appropriate water intake prior to and during any strenuous exercise or job activity. Also, identify warm, humid conditions and avoid work or exercise during those times. If work cannot be avoided, then frequent breaks are crucial, as well as readily available fluids for rehydration. People who know they are going to be working in warm conditions should avoid caffeinated drinks prior to going to work.

If a person begins to feel the symptoms of a heat-related illness, they should be moved to an area where the air temperature is much cooler. This could be an office away from the work site or a vehicle with an air conditioner. Their clothing should be removed to allow the skin to contact the air and facilitate the evaporation process.

There are a few simple ways to augment the reduction of heat in the body. One is to increase evaporation by spraying a cool mist on the patient and exposing the patient to moving air. This will supply the body with fluid that will evaporate and take heat with it.

Another technique commonly used is submersion of the forearms in ice water. By doing just the forearms, the body will not shiver and generate more heat. Plus, the forearms and hands have a good vascular supply to expedite heat removal.

### Urgent Medical Care

Persons who become agitated, confused, or have seizures are showing signs of dangerous core temperatures. These people need to be cared for immediately and transferred to a hospital as soon as possible. The same techniques of cooling can be initiated at the scene, but should not delay transport to the hospital.

Heat-related illness can be a difficult problem to recognize. Vigilance surrounding working conditions, maintaining hydration, and good health can prevent many heat-related problems and allow people to stay productive.

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