

Preventing Heat Stress

Hot conditions put your body under a lot of stress. Physical activity stresses the body even more. When heat is combined with physical activity, loss of fluids, fatigue, and other conditions can lead to a number of heat-related illnesses and injuries. Death is even possible. This discusses ways to prevent heat stress and how to recognize the symptoms of a number of heat-stress conditions.

Heat stress is commonly associated with warm weather. It's true that warm weather increases the number of heat-stress injuries and illnesses. Warm weather isn't the only cause of heat stress, though. Heat stress can occur any time the surrounding temperature is elevated. Even if the weather is cool, you may work in warm areas, indoors or out. Be alert for conditions which could cause heat stress and take precautions to prevent it. Six main factors are involved in causing heat stress:

- temperature
- humidity
- movement of air
- radiant temperature of the surroundings
- clothing
- physical activity

Adjusting to these factors and/or controlling them reduce the chance of heat stress.

Your body can adjust to working in a warm environment through a process known as "acclimatization." Check with your company's safety people for the exact way to properly acclimatize yourself. Acclimatization processes involve gradually increasing the amount of time you spend working in a hot environment. This gradual increase allows your body to properly adjust to the heat.

Keep in mind, though, even if you're already acclimatized, conditions can change which stress your body even more. Bright sunshine, high humidity, and sources of heat in the workplace can affect your body's ability to cool itself. If conditions change, make sure you re-acclimate yourself to the new conditions. If you're away from work for a few days or if you experience a brief period of cooler temperatures while working, you will need to re-acclimate yourself before you try to work the full shift in the hot conditions.

Engineering controls can be implemented to reduce the possibility of heat stress. These include:

- control the heat source through use of insulation and reflective barriers
- exhaust hot air or steam away from the work area
- use of air-conditioning
- use of air-conditioned rest areas
- use of fans to circulate the air
- reduce the physical demands of the work by using mechanical equipment

Administrative controls are also effective to prevent heat stress injuries. These include:

- increase the frequency and duration of rest breaks
- schedule tasks to avoid heavy physical activity during the hottest parts of the day
- provide cool drinking water or an electrolyte-replacement drink and encourage its consumption
- use additional workers for the job or slow down the pace of the work
- make sure everyone understands the signs and symptoms of heat stress

Common-sense precautions, such as dressing properly for the job, include:

- wear lightweight clothing which allows moisture to evaporate quickly
- wear reflective clothing or cooling suits for jobs which require them
- use extra caution if you are required to wear clothing on the job which limits evaporation--you could succumb to heat stress much more quickly