

Drink... Drink... Drink... Water, That Is

Courtesy of
State Compensation Insurance Fund

No matter what the time of year; no matter what the temperature; no matter where you live or work – indoors or outdoors – staying hydrated is important to overall health and performance.

Dehydration occurs when the body takes in substantially less fluid than what is lost through the normal body processes. The body is nearly 60% water by weight; the loss of just 2.5 liters (0.66 gallons) per day can adversely affect it, if not replaced. This natural process of fluid loss occurs in all environments – cold, mild, and hot. Drinking plenty of water throughout the day, even when there is lack of thirst, replaces lost fluids.

The body is designed to maintain an internal temperature of approximately 98.6 F. The body releases excessive heat by circulating blood to the capillaries in the upper layers of the skin thus increasing heat transfer and perspiration. When the body heats up faster than it can cool itself down, mild to severe heat-related illnesses may develop.

Heat stress occurs when the body is unable to release heat and cool itself. According to the National Institute for Occupational Safety and Health (NIOSH), when air tempera-

ture is equal or warmer than the skin, blood brought to the skin's surface cannot efficiently release heat. The body's main cooling mechanism is the evaporation of perspiration (or sweat) and if evaporation cannot occur, the body is unable to rid itself of excess heat and this natural cooling process becomes impaired. If the body cannot release excess heat, it stores it and this increases the body's core temperature and heart rate. Prolonged heat stress can lead to death.

Increased air temperature, high humidity, radiant heat, and minimal air circulation can increase the risk of developing heat-related illnesses. Other risk factors include: increased age; body weight/body build; level of physical fitness; lack of acclimatization; poor nutrition; fatigue; alcohol or drug use; certain medical conditions, such as diabetes; wearing personal protective equipment (PPE), such as non-breathable protective clothing, hoods, and/or respirators, as they can increase workload and/or restrict movement; and, inadequate water/fluid replacement.

For more information on preventing heat stress, go to <http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>

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