

Common Heat Stress Terms Quick Reference Guide

Acclimatization -the body's ability to adapt to heat exposure up to a certain point.

Body Core Temperature - the true indicator of body temperature. Body core temperature is the temperature of the arterial blood irrigating the thermo-regulatory centers in the hypothalamus.

Convection - the circulation of the air next to the skin which results in an increased cooling action.

Dry Bulb Temperature - the temperature of air as registered by a thermal sensor, such as an ordinary mercury-in-glass thermometer, shielded from direct radiant energy sources.

Evaporation - the cooling of the body that takes place when sweat evaporates on the skin surface.

Globe Thermometer - a black copper sphere with an internal thermal sensor used to determine the effect of surrounding radiant heat.

Heat Syncope - fainting due to the excessive pooling of blood in the extremities resulting from the body's attempt to dissipate heat.

Heat Stress - the total net heat load on the body which results from exposure to external sources and from internal metabolic heat production.

Metabolic Heat - heat produced by the body in relationship to the work that the individual is doing. The more strenuous the work, the higher the metabolic heat and the harder the body has to work to eliminate it.

Micro-Environment - a self-contained environment, such as the inside of a hazardous materials suit, in which exposure to surrounding air is limited.



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Natural Wet Bulb Temperature - used to measure the effect of humidity in air obtained by a wetted sensor, such as a wick wetted with distilled water over a mercury-in-glass thermometer that is exposed to natural air movement and unshielded from radiation.

Radiant Heat - heat which is transferred to cooler objects in the surrounding environment. Workers can incur exposure to radiant heat from the sun, hot asphalt, machines and ovens.

WBGT (Wet Bulb Globe Temperature) Index - a measure which combines the effects of humidity, air velocity, ambient air temperature and radiant energy into one single index.

Temperature Conversion Formulas

$$F = (C \times 1.8) + 32$$

$$C = \frac{F - 32}{1.8}$$

$$98.6^{\circ}F = 37^{\circ}C$$