

Heat Illness Production

Types of heat exchange-

Metabolic heat production - body heat caused by natural body metabolism
Higher the metabolic rate = higher the body heat produced

Conductive heat exchange - physical contact with objects
Artificial turf, asphalt, ice rink

Convective heat exchange - circulating medium such as air or water
Cool air removes heat, warm air increased heat

Radiant heat exchange - object giving off heat such as the sun
Sun vs. Shade

Evaporative heat loss - sweat to skin carries heat. As sweat evap heat is lost.
Normal person = loss of 1qt of H₂O/hr for approx 2 hours
Sweating does not cause heat loss - evaporation of sweat does
Evaporation is impaired @ 65% Rh and stops @ 75% Rh

Best work out conditions?

- a. 75 degrees and 85% Rh on a sunny, calm day
- b. 90 degrees and 50% Rh on a cloudy, windy day
- c. 80 degrees and 40% Rh on a cloudy, windy day

On a hot humid day will pouring water on your head and back to cool off work? Why or why not?

What part of the country would be the best place to exercise to reduce heat injury? Why or why not?