



## Hydration is Key

For workers in many industries, hot, humid and hard-working conditions are a fact of life. Construction, utility and agriculture workers regularly toil outside in hot, humid weather. Employees in manufacturing plants, metal processing facilities and foundries also face severe heat from these indoor operations. Workers who must wear heavy, protective apparel on the job feel the heat no matter what the weather.

Without easy access to fluids, workers can become dehydrated, which is a prime cause of heat illness. In addition to the health benefits of proper hydration, workers who hydrate correctly are more comfortable, cool and alert -- making for a more productive and healthier work force.

### How to Hydrate

Replacing body fluids lost during sweating, therefore, is the single most important way to control heat stress and keep workers comfortable, productive, alert and safe. In fact, physiological studies have shown that fluid ingestion reduces the rise in body temperature by promoting higher skin blood flow. The greatest rates of skin blood flow occurred in these studies when the largest volumes of fluid were ingested during physical activity.

Hydration experts from NIOSH, ACGIH and OSHA recommend drinking every 15 to 20 minutes -- not just during rest breaks -- to stay sufficiently hydrated and maintain a safe core body temperature. This puts less strain on the cardiovascular system and can lead to fewer heat-related illnesses and injuries.

### Other tips for keeping workers hydrated and healthy:

- Drink before, during and after physical labor to replace body fluid lost in sweating.
- Anticipate conditions that will increase the need for water, including high temperature, humidity, protective clothing and difficulty of work.
- Keep in mind that by the time you are thirsty, you are already about 2 percent dehydrated. Once you are dehydrated, it's difficult to make up for that lost hydration.
- Drink 5 to 7 ounces of fluids every 15 to 20 minutes to ensure proper hydration.
- Keep individual containers of cool, clean water within easy reach at all times.
- Drink cool water, which is absorbed more quickly by the body than warm or very cold fluids.
- Try electrolyte drinks to help avoid heat cramps that can occur up to several hours after working.
- Avoid caffeine (coffee, tea or soda) which act as diuretics, further depleting the body of fluid. Never drink alcohol while working.



### **BUT – Beware the Energy Drink**

Energy drinks pose several health risks to humans, especially during the heat of summer. Those cans of liquid energy also contain high levels of sugar and caffeine.

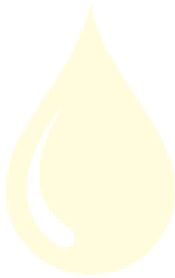
To further complicate the diuretic effects of the caffeine, energy drinks cause the heart to pump faster. As the heart pumps faster, it raises blood pressure, increasing a person's risk for heat stress.

### **SAFETY REMINDER**

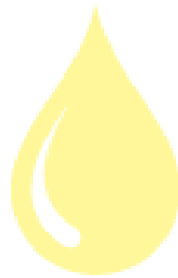
**The color of your urine can be used to determine your level of dehydration and what actions you should take to help return your body to a normal level of hydration.**



# Dehydrated? **Urine trouble.**



**Well hydrated**  
No trouble here!  
Maintain hydration.



**Hydrated**  
Drink a little more water  
to stay out of trouble!



**Dehydrated**  
Trouble! Drink water until  
you are well hydrated.



**Severely dehydrated**  
Big trouble!  
Drink water  
immediately!

**Don't wait to hydrate! Prevent heat illness.**



**Heat Illness  
Prevention**

[osha.gov/heat](https://www.osha.gov/heat)

