

Employee Safety

Heat Stress Solutions

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HYDRATION SOLUTIONS FOR THE WORKING WORLD

Understanding how worker performance and efficiency is affected by environmental conditions is critical to reducing dehydration-related illnesses and accidents. Sqwincher is committed to providing hydration education and solutions that help companies meet the needs of all workers — 365 days a year.

FACTS: THE BODY IS 60-70% WATER*

Maintaining and balancing the body's fluid level is imperative. Factors that contribute to fluid loss include:

- Sweating
- Exhaling
- Urination
- Diuretic intake
- Natural body exertion to maintain core temperature

*Varying factors: age, gender, environment and conditioning

CONSEQUENCES OF FLUID LOSS

2% - Impaired performance
4% - Muscular function and capacity declines
6% - Heat exhaustion
8% - Hallucination
10% - Circulatory collapse and heat stroke

HYDRATION LEVEL CHART USE THE COLOR CHART TO IDENTIFY HYDRATION LEVEL.

TARGET LEVEL

Maintain level



PROPERLY HYDRATED — If urine resembles or matches these colors.

DEHYDRATED

Needs improvement



DEHYDRATED — If urine resembles or matches these colors more fluids should be consumed.

SEVERELY DEHYDRATED

Immediate attention



SEVERELY DEHYDRATED — If urine matches these colors, **SERIOUS DEHYDRATION** has occurred. Contact a physician.

HEAT FACTORS:

Contributing to elevated body temperature and rapid fluid loss:

- High temperature and humidity
- Level of exertion/work load or strain
- PPE and heavy clothing
- Poor air flow and circulation
- Machine/equipment heat
- Direct sunlight exposure
- Medical precondition
- Lack of physical conditioning

HEAT INDEX:

APPARENT DANGERS POSED BY HEAT STRESS

90° to 100° F	101° to 129° F	130° F +
Possible sunstroke, heat cramps and heat exhaustion with prolonged exposure and physical activity.	Probable sunstroke, heat cramps and heat exhaustion and possible heat stroke with prolonged exposure and physical activity.	Imminent heat stroke or sunstroke.

RECOMMENDATION FOR PROPER HYDRATION

WATER — Recommended intake:

- 13 cups (men) a day
- 9 cups (women) a day

In hotter environments and/or strenuous activity, an increase in fluid intake may be necessary.

Source: Water: How much should you drink every day?

<http://www.mayoclinic.com/health/water/NU00283>

ELECTROLYTES — Recommended intake:

6-10 oz. every 15-20 minutes during strenuous activity, especially in hot environments.*

Water is necessary, but water alone will not replace lost nutrients and minerals such as electrolytes. Electrolytes consist of minerals such as sodium, potassium, magnesium and calcium, which are critical for cell and muscular function.**

*Individual circumstances may vary. Include water with electrolyte consumption.

**Source: Role of Carbohydrate-Electrolyte Fluid Replacement in the Industrial Environment. Human Performance Laboratory, University of Alabama.

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