

Worker Hydration

The Next Three Seconds Protects Your Life, Your Loved Ones, Your Livelihood®

The N3L3 philosophy:

our approach to protecting workers from fatal and life-changing events.

Eastern Alliance is here to help. To learn more about Eastern's N3L3 program and access other safety resources, sign in and visit the Safety Tools on www.easternalliance.com, or contact your Risk Management Consultant for assistance

1.855.533.3444

Water is an essential nutrient for all living things. It keeps us functioning at optimal performance levels by regulating our core body temperature, carrying key nutrients to vital organs and flushing internal toxins. Whether walking to your car or performing a strenuous task at the jobsite, your body is always working to maintain a balance and sustain its core temperature.

The human body is normally able to regulate its temperature through sweating, however, when certain factors such as exertion of energy, humidity, and other environmental and personal conditions are present it becomes more difficult for the body to regulate the process of heat production and heat loss. When your body is not able to successfully maintain this process it can result in heat exhaustion and heat stroke which can escalate rapidly, leading to delirium, organ damage and even death.

There are many risk factors that may influence heat-related illness and they include:

- High air temperatures and humidity
- Direct sun exposure
- Physical exertion
- Not drinking enough fluids (dehydration)
- Personal Protective Equipment (PPE) or clothing
- Lack of recent exposure (not acclimatized)
- Advanced age, people 65 and older
- People who are ill, have chronic health conditions or are on certain medications
- People who are overweight
- Completion of heat-generating jobs, i.e. working on equipment, welding/brazing, paving/rolling, etc.

Hydration plays an important role in preventing heat-related illnesses because the fluids are used to produce sweat which in turn cools your body down.

Symptoms of dehydration include:

- Thirst
- Fatigue
- Light-headedness
- Muscle cramps
- Nausea, dizziness or confusion
- Excessive perspiration
- Hot, dry skin

Implement these safe work practices to prevent dehydration and heat-related illnesses:

- Acclimate yourself into hot work environments.
- Prepare for your workday- pre-hydrate or don't dehydrate yourself the night before.
- Limit time in the heat and/or increase recovery time spent in a cool environment.
- If fans or other means of ventilation are used on the job, place them to avoid blowing air from one worker or group of workers to another.
- Discourage the sharing of water. Provide single-use bottles rather than using shared water stations or dispensers.

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- If working in the heat for less than 2 hours and involved in moderate work activities, drink 1 cup (8 oz.) of water every 15–20 minutes. Drinking too much water can also pose risks, so do not exceed more than six (6) cups an hour.
- If completing activities lasting more than 45 minutes to an hour, sports drinks may help replenish your body's electrolyte stores better than water.
- Take appropriate rest breaks to cool down and hydrate.
- Wear light-colored clothing to help keep the body cooler.

Beverages — Some beverages are better than others at preventing dehydration.

- Water is all you need if you are planning to be active in a low or moderate intensity activity, for only an hour or less.
- Moderate to high intensity activity for more than a few hours, you may want to hydrate with some kind of sports drink. These replace not only fluid, but also electrolytes like sodium and potassium, which are lost through perspiration. Too much or too little sodium and potassium in the body can cause trouble. Muscle cramping may be due to a deficiency of electrolytes.
- Alcoholic and caffeinated beverages, such as coffee, teas, and colas should be prohibited.

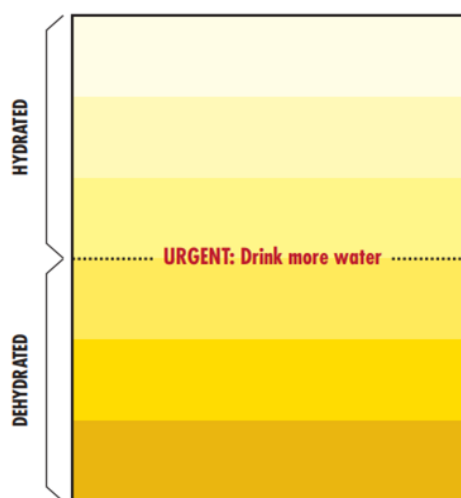
Dehydration Tests

A skin test can be completed to determine if you are dehydrated. Gently pinch the skin on your arm or hand. If the skin does not quickly spring back – you could be dehydrated.

The most efficient way to tell if you are hydrated is by utilizing a Urine Color Chart. Urine charts can be implemented as a training tool to demonstrate the concept of color change between the urine of a well-hydrated worker and that of a dehydrated worker.

Urine Color Chart

Are you hydrated?



Source: [CDC Occupational Exposure to Heat and Hot Environments](#)

For additional guidance and updated information, visit:
Centers for Disease Control and Prevention (CDC) www.cdc.gov
Occupational Safety and Health Administration (OSHA) www.osha.gov
State of California, Department of Industrial Relations www.dir.ca.gov