Hydration: The Importance of Water

In this toolbox talk, learn the dangers of dehydration on the jobsite. Plus, get our tips for staying hydrated!

Hydration / Dehydration

Construction workers are the athletes of the work world. And just like athletes, people working in the trades have a higher hydration requirement compared to someone working in an office setting.

Dehydration in any setting negatively affects performance and can lead to injury. Here, we will explore what proper hydration is and how to prevent dehydration on the worksite.

What is dehydration?

We will start with the assumption that we are all healthy and have no underlying health issues increasing our hydration needs. Given this condition, dehydration happens when you lose more body fluids than you take in, essentially placing your body in a fluid deficit. In fact, studies have shown that just a slight decrease in bodily fluid levels, as little as 2%, can result in mental complications with short term memory.

Common signs and symptoms include:

- Feeling thirsty
- Dark urine
- Headache
- Dizziness or lightheadedness
- Muscle fatigue
- Confusion
- Poor skin turgor
- Elevated body temperature

What causes dehydration?

A normal body temperature when healthy is 98.6 degrees Fahrenheit or 37 degrees Celsius. When your environment, activity level, illness, or a combination of these factors increase your body temperature, you will notice an increase in:

- Sweating
- Respiratory rate
- Feeling thirsty
- Dry mouth

These are all signs your body is working harder to keep cool and prevent your temperature from getting too high. Unfortunately, when these signs occur, dehydration has already begun, meaning your body is in a fluid or water deficit and needs to be replenished.

Sweat and construction go hand in hand since most of the work is done without the benefit of air conditioning. Consequently, workers in the skilled trades deal with dehydration primarily during the summer months. Increased heat causes the body to lose water through sweat and an increased respiratory rate. This means you will need to drink more water than usual to stay hydrated.

How to test for dehydration

If you are seeing more than one of the symptoms above, you can do a simple skin turgor test for additional confirmation.

1. Gently pinch a section of skin on a forearm with two fingers.
2. Let go and observe how long it takes the skin fold to return to normal.
3. Properly hydrated skin should return to normal in under three seconds.

Depending on the degree of dehydration, rehydration can be as simple as increasing water intake for mild cases or be so severe that intravenous fluids are needed in the emergency room.

Can dehydration happen in the colder months?

Dehydration can be more severe in cooler weather because the common symptoms and responses are diminished. In winter or cold weather, your body's thirst response is decreased by up to 40%. Couple this with your body's effort to maintain a normal 98.6 degrees, and your water requirement is now increased above normal. Your body is tricked into thinking it is properly hydrated and you are less likely to drink voluntarily.

Can I be dehydrated without sweating?

During cold weather, workers often bundle up against the cold, adding more weight with clothing, which increases the effort needed to work. Some studies estimate a workload increase of up to 40%.

The increased workload will increase your respiratory rate, which also requires more fluids. The air you breathe requires moisture, and the colder the air gets, the less moisture it has. This means your fluid requirements on a cold jobsite can be similar to what you need on a warm jobsite, even though you don't sweat as much.

Cold air can fool your body

Because cold air is drier than warm air, it actually works against you in another way. Sweat evaporates faster in cold air, which is great for helping to maintain body temperature. However, it also compounds your body's water loss. And since most people associate thirst with heat, you might not drink as much water as you should.

What conditions can increase my risk of dehydration?

There are other factors that can increase your risk of dehydration on the job. Conditions such as:

- Age
- Health conditions
- Prescribed medication
- Elevation above sea level
- Dry climates
- Poor ventilation
- Restrictive clothing

As we age, our body's ability to sweat decreases. You often hear older people remark that they can't handle hot weather. Some chronic health conditions and medications further compromise our body's ability to stay cool or increase our daily fluid requirements.

How do I prevent dehydration?

Make hydration a priority. Educating team members about common hydration best practices and common symptoms is key. Many times, there are symptoms of dehydration that can be seen before the effects are felt. Teach workers to look for signs like:

1. Dark urine
2. Less frequent urination
3. Daytime fatigue without reason

Likewise, encourage and reward proper hydration practices such as drinking 50 to 64 oz of water per day over regular breaks or intervals. Water bottles commonly come in 16 oz sizes, so individuals can make a goal of drinking at least four bottles per day, thirsty or not. This goal may need to be increased during the warmer months and when higher activity levels are needed for work.

1. Drink water

Limit beverages with caffeine and sugar. Caffeine is a natural diuretic that steals water from the body and tricks the body into feeling energized. It can compound and hide symptoms from workers and could push them into a severe case of dehydration.

Sugar increases your body’s water requirements. True, in combination with electrolytes, sugar or dextrose can be a part of maintaining hydration with drinks like Powerade or Gatorade. But even these drinks should only be used to supplement a steady intake of water.

2. Keep scheduled hydration breaks

Take regular, frequent hydration breaks. Maintain these scheduled hydration breaks in the cold months as well as the warm months. It is tempting to skip breaks and hustle through work in cold weather. Stay alert to dehydration signs when you are bundled up against the cold and continue to drink before you get thirsty.