



Worksite: \_\_\_\_\_ Instructor: \_\_\_\_\_ Date/Time: \_\_\_\_\_

## Topic C844: Hydration (B)

**Introduction: Hydration** describes the amount of water in the body. Too little water in the body results in **dehydration**, which can affect productivity, safety, cost and morale. Because sweat is such an important part of how the body cools itself off, dehydration puts a worker at greater risk to develop **heat-related illness** such as heat exhaustion and heat stroke. Research further suggests that hydration contributes to cognitive function and reaction time for workers. Because drinking enough water is so important, especially for those who do hard work in the heat, workers should understand the signs of dehydration and how to fight it.

Dehydration occurs when water output surpasses water input. If the amount of water you take in is less than the amount of water you lose to sweat, breathing, urination and defecation, your body will become dehydrated. Generally, the body does a good job of keeping fluid levels about right by signaling thirst when you need to drink something. However, work often puts demands on the body that make adequate hydration difficult.

The National Academy of Sciences has established an adequate daily intake for men at 3.7 liters, and for women, 2.7 liters. More physical activity, especially when it is done in the heat, requires even more water intake, while intake for those who are not physically active can safely be considerably lower. It is important to remember that everyone's water intake needs are different depending on personal factors (such as weight, gender and age), the physical demands of the work being done, and the environment.

Many people go about their daily lives in a state of slight dehydration. There is no cheap and convenient way for employers to measure worker hydration, but workers themselves can be aware of a few factors other than thirst that can point to the need for more water intake. If you only take in fluids when you are thirsty, it is a good sign that you should increase your water intake. Further, when the body doesn't receive sufficient water, urine becomes more dense and darker in color. Frequent headaches, dry skin and fatigue also point to low body fluid levels, especially when accompanied by thirst, or experienced after strenuous work or exercise.

While **over-hydration** (having too much water in your system) is possible when electrolyte levels get unbalanced or in the presence of certain medical conditions, odds are you should be drinking more water.

One of the most effective means to ensure appropriate water intake is eating and drinking during meal breaks. Most fluid intake occurs with meals, which is also the time when the body takes in most of the sodium and other electrolytes it needs to maintain hydration. Skipping a meal not only deprives the worker's body of the calories it needs to do work, it also deprives the body of the fluids it needs to keep itself cool.

Of course, meals alone will not provide workers with enough water, especially if they do strenuous work in the heat. Safety and health organizations recommend workers who face a risk of heat-related illness to drink small amounts of cool, non-alcoholic, liquids frequently — one cup every 20 minutes. However, it is important to recognize that broad guidelines such as those do not necessarily reflect the fluid intake needs of all workers in all environments at all work intensities.

In addition to easy access to clean water, employers are encouraged to provide sufficient rest breaks and bathroom facilities to accommodate fluid intake (and subsequent removal) by workers, and workers should not hesitate to take short water breaks throughout the day to maintain hydration.

**Conclusion:** Dehydration is the first step to more severe heat related illness. Strenuous labor in hot and/or exceptionally humid environments increases the body's temperature and its demand for fluids. Employers and workers must plan together to guarantee the body has the fluids it needs to function effectively and stay healthy until the job is done.

### The Three B's of Worker Hydration:

**Beverages:** Workers should be provided with sufficient non-alcoholic fluids, ideally water, and clean cups.

**Breaks:** Workers should be permitted the time needed to drink enough fluids through the day.

**Bathrooms:** Workers need access to sanitary bathroom facilities.

**Employee Attendance:** (Names or signatures of personnel who are attending this meeting)

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