



Randolph Composite Squadron NC -107th

December 2019 Safety Training

Don't Skip the Water When Temperatures Drop!

By: Mark Dulaney, CAP Assistant Chief of Safety

Exercising during the cooler months shouldn't mean that you skip your normal hydration routine. In fact, you may even be more likely to become dehydrated when the temps start to drop. Why? In cold weather, the body's thirst response is diminished by up to 40 percent (even when dehydrated). This happens because our blood vessels constrict when we're cold to prevent blood from flowing freely to the extremities. (If you've ever had cold hands in winter, you know the feeling.) This enables the body to conserve heat by drawing more blood to its core. But because of this, the body is fooled into thinking it's properly hydrated, e.g. you don't feel as thirsty and your body doesn't conserve water. Thus, in cold weather, we are less likely to drink water voluntarily, and additionally, our kidneys aren't signaled by hormones to conserve water and urine production increases, a condition called cold-induced urinary diuresis. Diminished thirst response and increased urine production are two contributing factors. Yet, there are several others that can lead to winter dehydration, including:

- Wearing extra clothing. Heavy jackets, long underwear and other pieces of warm clothing help your body conserve heat. But the added weight is one factor that makes the body work between 10 and 40 percent harder. By working harder, the body produces more sweat, contributing to fluid loss.
- Increased respiratory fluid loss. In cold weather, we lose more fluids through respiratory water loss. For example, when you can see your own breath, that's actually water vapor that your body is losing. The colder the temperature and the more intense the exercise, the more vapor you lose when you breathe.
- Sweat evaporates more quickly in cold air. We often think we aren't sweating in cold, dry weather, because it tends to evaporate so quickly. This is another factor that can contribute to a diminished thirst response.

Use these tips to stay hydrated this winter:

- Wear Layers.** Sweat can reduce your body temperature and force your heart to work harder to maintain blood flow and body temperature. Wear layers of clothing that will absorb perspiration.
- Replace What You Lose.** Water exits the body through exhalation, perspiration and urination. If your urine is pale and plentiful, you're well-hydrated. If it's dark and scant in volume, you need to drink more fluids.
- Match Your Drink to the Duration of Your Activity.** If you're exercising for up to 1 hour, you can rehydrate with water alone. However, after an hour, add electrolytes and carbohydrates. If you're doing a sport at higher altitudes, increase your fluid requirements.
- Hydrate with Room-Temperature Beverages.** Cold liquids are absorbed quicker. Warmer or room temperature drinks, on the other hand, are better at keeping your internal temperature optimal. Choose the latter when you're exercising in cold temperatures.