



Ask the Expert with Dr. Darrell Menard

Find Answers to your Sport Medicine Questions!

Can Athletes Drink too Much Water?

Q: *I recently ran in the Ottawa Race Weekend and the temperature was 32 C. A more experienced competitor advised me to drink a lot of water before and during my race to avoid becoming dehydrated. I took this advice seriously and drank quite a bit of fluid before and during my 10k race. When the race was over, I did not feel well and someone suggested I may have consumed too much water. Can drinking too much water be dangerous? A novice runner*

A: Dear novice runner – I covered the finish line at that race and it was extremely hot. You were wise to be well hydrated for your race but as strange as this may sound, drinking too much of something as good for you as water can be potentially dangerous. People who over hydrate can develop a medical condition known as dilutional hyponatremia and some people are more vulnerable than others. People who develop this condition basically drink so much water that their body weight will actually increase during the race while the concentration of sodium in their blood becomes significantly reduced. This condition tends to occur in longer races such as the half marathon and beyond. Sodium is an electrolyte that is extremely important for the effective functioning of many things in the body. Your body carefully controls the level of sodium in your blood and when the level gets too low a number of bad things can happen including: fatigue, muscle weakness, headache, irritability, reduced appetite, muscle spasms/cramps, nausea, vomiting, mental confusion, reduced consciousness, hallucinations, convulsions, coma and death. Fortunately, death from dilutional hyponatremia is quite rare.

It is very important to keep in mind that while dilutional hyponatremia can be life threatening it is quite uncommon. What is not uncommon is athletes becoming ill because of dehydration at sports events held in hot weather. This is why sport medicine physicians continue to urge athletes training and competing in hot climates to ensure they drink adequate amounts of fluid before, during and after their practices and events. As a general rule, if you are competing for less than one hour you really only need to drink water. However, if you are competing for more than an hour you will benefit from consuming an electrolyte replacement drink. The hydration needs of athletes are highly individual and you need to spend some time in your training and racing learning what works best for you. Please keep in mind that it is not at all uncommon for runners to lose 1-2% of their body weight in sweat depending on the length of the race, the ambient temperature and how heavily they tend to sweat.

The bottom line is when you train and compete in hot weather you need to ensure you remain well hydrated. While water may be absolutely essential to life, please keep in mind that too much of a good thing could put your life at risk.

Dr. Darrell Menard MD Dip Sport Med

Dr. Darrell Menard is the Surgeon General's specialist advisor in sport medicine. He has worked extensively with athletes from multiple sports and has covered Canadian teams competing at multiple games including the 2012 Olympics and the 2016 Paralympic games. These articles were originally published in the Canadian Forces Journal, the Maple Leaf.

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