

# Claremont-Mudd-Scripps Sports Medicine FAQs

## Frequently Asked Questions

**Question:** How important are electrolytes? What are they?

Suggested by Maxanne Retzlaff (Women's Tennis Coach), Ryan Larsen (FB) and Ashton Clarke (FB).

**Answer:** Electrolytes are various minerals found in the body that are important for proper muscular function and maintaining proper fluid concentrations in the body. Electrolytes, including sodium (Na), chloride (Cl), potassium (K), calcium (Ca), and magnesium (Mg) are lost in various concentrations with sweat (water) during exercise.<sup>1</sup> It is important to replace electrolytes lost through sweat and the most important electrolyte(s) to replace is salt (NaCl). While the amount a person sweats depends on season, heat acclimatization, sport, position, and equipment, a person's sweat rate can vary from .29 L/hr (water polo) to as much as 2.6 L/hr (men's tennis).<sup>1</sup> During periods of exertion lasting over an hour, if electrolytes, especially salt, are not replenished while drinking water, cramps, heat illness, dehydration, or even more serious exercise/heat related conditions may result.<sup>1-3</sup> It is recommended to drink fluids during exercise and competition at the rate of ~ 200 to 300 ml (~7-10 oz) every ~15 minutes.<sup>1-3</sup> There are many products that contain electrolytes available in the marketplace including drinks, powders, and tablets which may help maintain electrolyte balances when used with water. Also, it is important for athletes to not avoid salt in their daily diet, as this is the primary source of sodium replacement.

1. Sawka MN, Burke LM, Eichner ER, Maughan RJ, Montain SJ, Stachenfeld NS. American College of Sports Medicine position stand. Exercise and fluid replacement. *Med Sci Sports Exerc.* 2007 Feb 2007;39(2).

2. Casa DJ, Armstrong LE, Hillman SK, et al. National Athletic Trainers' Association Position Statement: Fluid Replacement for Athletes. *Journal of Athletic Training.* 2000;35(2):212-224.

3. Dunford M. *Advanced Exercise Nutrition.* 1.1 ed. Champaign, IL: Human Kinetics; 2007.

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