

Importance of Sports Hydration

At the beginning of the season, before athletes are heat acclimated, excessive heat and physical activity can result in fluid losses of up to 3L/hr. (Riebl and Davy, 2013)

It is not uncommon for an athlete to lose 6-10% of body weight in sweat loss. (Popkin, D'Anci & Rosenberg 2010) Evaporation of sweat from the body results in cooling of the skin. However, if athletes are not drinking enough water to compensate for the sweat loss, especially during vigorous physical activity in the intense heat, **dehydration** can easily occur.

Early signs of dehydration include:

- increased fatigue
- reduced endurance
- reduced motivation
- increased perceived effort
- headaches
- cramps
- irritability
- anxiety
- depression
- altered thermoregulatory capability
- reduced cognitive function (concentration, alertness, and short-term memory)

Mature signs of dehydration include:

- migraines
- Constipation
- heartburn or upset stomach
- back and joint pain

Roll of Electrolytes

Athletes who lose copious amounts of fluids through sweat require more than plain water to replenish hydration. The body loses salt and other minerals while sweating intensely. The results of hyponatremia (a dangerous drop in the sodium levels in the blood), include: headache, vomiting, swollen hands and feet, restlessness, undue fatigue, confusion, disorientation, and wheezing. As sodium levels drop further, the chances of swelling of the brain increase and can cause seizures, coma, brain stem herniation, respiratory arrest, and even death. (Sawka, Burke, Eichner, Maughan, Montain, Stachenfeld 2007)

