



Feature Story

## Peak performance in hockey – stay hydrated!

**By Dr. Rob LaPrade, MD, PhD**  
Let's Play Hockey Columnist

**Question:** What can I do to stay at a top level of performance in playoff games?

**Answer:** Proper hydration is absolutely essential for maximal on-ice performance. Dehydration can reduce one's endurance and on-ice performance. This is perhaps the one thing players and coaches can influence the most in trying to keep their teams at their highest competition levels.

It is very important for one to recognize that thirst is a poor indicator of the body's hydration status. We do not experience thirst until we have lost two percent of our body water content. Since high level active skaters have been found to lose up to two liters or more of water per hour from sweating, it is essential to replenish this loss by drinking.

Mild dehydration of 2-3 percent, which is common after a hard workout on the ice in full gear, can decrease work capacity by 15-20 percent. In this regard, one of the best ways that coaches and athletic trainers can help their teams to perform at maximal capacity is to make sure that they do have sufficient water on the bench to treat their athletes and also to make sure that they have frequent water breaks.

For every liter of fluid lost by the body by sweat or through other means, one's body core temperature can increase by 0.5° F, blood output by the heart can decline by a liter a minute and the baseline heart rate will increase 8-10 beats per minute. Since active skaters can lose between 1-2 liters of water per hour through sweating, it is essential to replenish this loss by drinking.

Cool and cold fluids are absorbed better than warm fluids. It is important to drink before, during and after exercising to maintain fluid balance. Our recommendations are to consume between 500-600 mL of cold water or a carbohydrate-electrolyte beverage 15-20 minutes before exercising. During exercising, 250 mL for every 15-20 minutes of hard on-ice activities should be a minimal replacement goal.

Fluid replacement is essential to maximize on-ice competition. Players should attempt to drink water after every shift if possible. Hockey players are at risk for mild dehydration, with a subsequent loss of on-ice skating capability, due to the gear that they wear and the hard workouts, even in refrigerated indoor ice rinks. It is important that players consume an appropriate amount of fluid replacement for practices and games to maximize their on-ice competitive levels.

*Dr. Rob LaPrade, MD, PhD, is the team physician for the University of Minnesota men's hockey team and a professor in the Department of Orthopaedic Surgery at the University of Minnesota. If you have a question for the Hockey Doc, send it to 2721 East 42nd Street, Minneapolis, MN 55406, fax it to 612-729-0259 or e-mail it to [editor@letsplayhockey.com](mailto:editor@letsplayhockey.com).*