

- Important of Hydration after and before the race

“Water is involved in the majority of chemical reactions involved in athletic performance. It is important that athletes are hydrated before, during and after physical activity to achieve their maximal physical performance.” - The Effects of Hydration on Athletic Performance

- dehydrated cause low tolerate heat strain

“A person's ability to tolerate heat strain appears to be impaired when dehydrated, so the critical temperature for experiencing central fatigue is likely to be nearer 39.0° C (102.2° F) when dehydrated by more than about 5% of body mass (Sawka et al. 1992). The larger rise in core temperature during exercise in the dehydrated state is associated with a bigger catecholamine response, and these effects may lead to increased rates of glycogen breakdown in the exercising muscle, which, in turn, may contribute to earlier onset of fatigue in prolonged exercise.” - Dehydration and its effects on performance - Human Kinetics

- Urine color to assess a hypohydrated state after athletes exercise

“Athletic trainers can use this test to guide diagnosis and treatment when baseline body mass is unavailable or when an athlete presents with symptoms of dehydration after activity.” - Accuracy of Urine Color to Detect Equal to or Greater Than 2% Body Mass Loss in Men

- The benefits of optimal hydration status include maintaining athletic performance

“In humans, total body water and overall hydration are normally maintained within a relatively narrow range (1% hyperhydration to 3% hypohydration)”- National Athletic Trainers' Association Position Statement: Fluid Replacement for the Physically Active

- Drinking enough water each day is crucial

“regulate body temperature, keep joints lubricated, prevent infections, deliver nutrients to cells, and keep organs functioning properly. Being well-hydrated also improves sleep quality, cognition, and mood.” - The importance of hydration - Harvard School of Public Health