

# Athlete-Keep-Hydrated: Key Insights from Research Resources

## Insight 01

**Even mild levels of dehydration can have an adverse effect on athletic performance.**

“Exercise performance is impaired when an individual is dehydrated by as little as 2% of body weight. Losses in excess of 5% of body weight can decrease the capacity for work by about 30%”

Source: Dehydration and its effects on performance

## Insight 02

**Urine color can reliably be used as an indicator of hydration status.**

“A urine color of 5 or greater identified BML  $\geq 2\%$  with 88.9% sensitivity and 84.8% specificity”

Source: Accuracy of Urine Color to Detect Equal to or Greater Than 2% Body Mass Loss in Men

## Insight 03

**Daily water intake differs for males and females.**

“the Institute of Medicine has declared an estimated ideal volume of water that people should consumed daily. Male adults above the age of 18 should consume about 4 litres. Females above the age of 18 should drink about 3 litres of water.”

Source: Dehydration and its effects on performance

## Insight 04

**Overhydration can also have adverse effects on athletic performance.**

“excessive fluid consumption can lead to life-threatening exercise-associated hyponatremia (EAH), in which extracellular body water enters the cells and causes organ and tissue swelling”

Source: National Athletic Trainers' Association Position Statement: Fluid Replacement for the Physically Active

## Insight 05

**Dehydration negatively impacts an athlete's VO2 max and overall cardiovascular function.**

“A reduced maximal cardiac output (...) is the most likely physiologic mechanism whereby dehydration decreases a person's .VO2max and impairs work capacity in fatiguing exercise of an incremental nature.”

Source: Dehydration and its effects on performance

## Insight 06

**Endurance athletes need to supplement their hydration with sodium and consume carbohydrates.**

“For intense prolonged exercise lasting longer than 1 h, athletes should consume between 30 and 60 g/h and drink between 600 and 1200 mL/h of a solution containing carbohydrate and Na(+) (...)”

Source: Fluids and hydration in prolonged endurance performance

## Insight 07

**Heat exacerbates the effects of dehydration on athletic performance and increases the risk of heat-related illnesses**

“In hot conditions, similar water deficits can cause a larger decrease in .VO2max.”

Source: Dehydration and its effects on performance