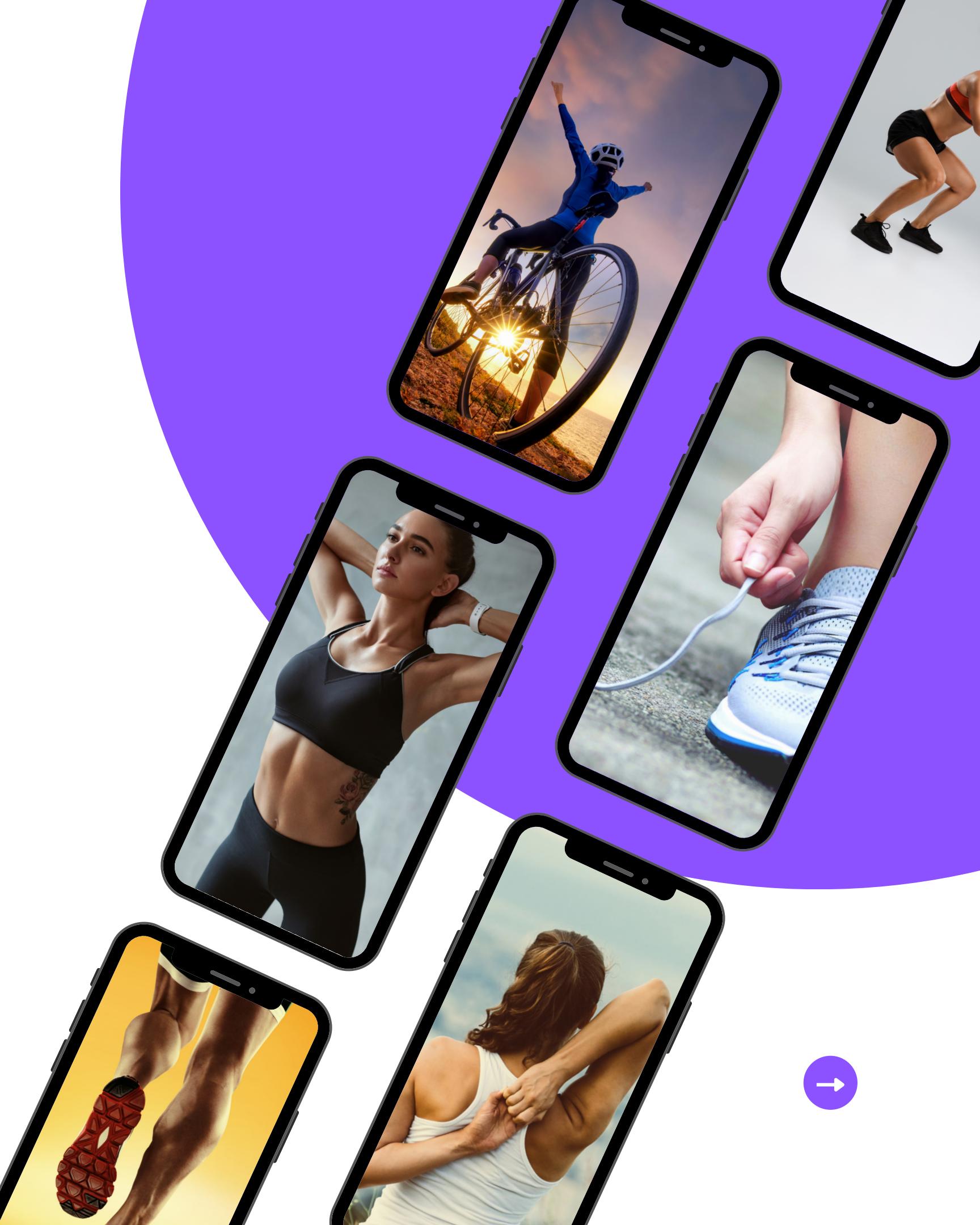


 Zakaria KASMI

# UX Research Exercise 2



# Contexte

Instructions:

Veuillez lire ces articles et extraire au moins 5 chiffres clés ou informations importantes qui peuvent être utiles pour comprendre ce que les athlètes ou les personnes pratiquant un sport vivent en rapport avec l'hydratation.



# Sommaire

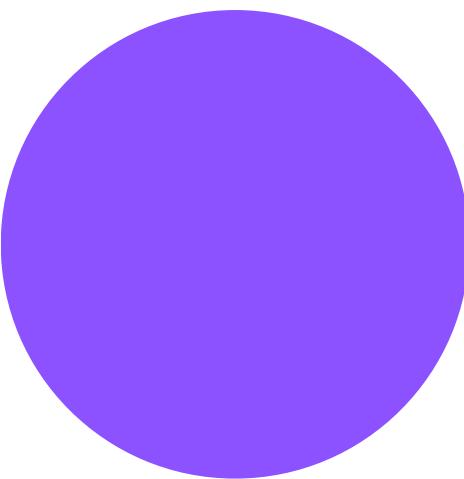
- 1 Les insights des articles**
- 2 Les insights communs**



- The effects of Hydration on Athletic Performance

## Importance de l'eau pour la régulation de la température corporelle

Water maintains blood volume, regulates body temperature, and is involved in muscle contractions (1)."



## Impact de la déshydratation sur la performance physique et mentale

"A loss of sweat equal to 2% of body weight causes a noticeable decrease of physical and mental performance (6)."

## Réduction de la capacité de travail avec une déshydratation sévère

"Losses of 5% or more of body weight during physical activities may decrease the capacity for work by roughly 30% (6)."



## Effets de la déshydratation sur le système cardiovasculaire

"Dehydration reduces plasma volume and therefore increases blood viscosity, central venous pressure decreases and reduces the amount of blood returning to the heart (2)."

## Impact de la déshydratation sur la croissance musculaire

"Athletes in a dehydrated state had an increased level of cortisol, which competes for certain enzymatic receptors in the body reducing the level of testosterone, the primary hormone required for muscle growth (3)."



- **Dehydration and its effects on performance – Human Kinetics**

### **Impact négatif de la déshydratation sur la performance athlétique**

"Exercise performance is impaired when an individual is dehydrated by as little as 2% of body weight (Armstrong et al. 1985)."



### **Réduction significative de la capacité de travail avec la déshydratation sévère**

"Losses in excess of 5% of body weight can decrease the capacity for work by about 30% (Armstrong et al. 1985)."

### **Effets de la déshydratation sur le .VO2max et la thermorégulation**

"In hot conditions, similar water deficits can cause a larger decrease in .VO2max. Dehydration also impairs the body's ability to lose heat (Jeukendrup & Gleeson)."

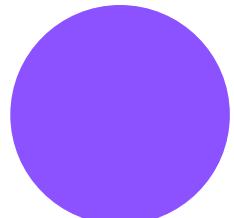
### **Rôle du .VO2max dans la diminution de la capacité de travail**

"Dehydration decreases a person's .VO2max and impairs work capacity in fatiguing exercise of an incremental nature (Jeukendrup & Gleeson)."

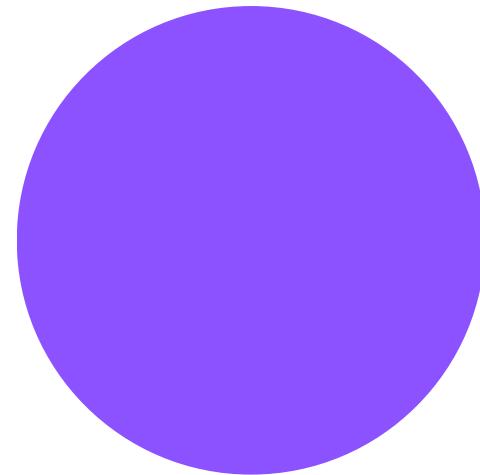
### **Effets de la déshydratation sur la thermorégulation et la fatigue centrale**

"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)."





- **Accuracy of Urine Color to Detect Equal to or Greater Than 2% Body Mass Loss in Men**  
**Journal of Athletic Training**



## L'importance de la couleur de l'urine dans l'évaluation de la déshydratation

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

## Diagnostic efficace de la déshydratation après l'exercice en milieu chaud

"Urine color was useful as a diagnostic tool to identify hypohydration after exercise in the heat."

## Fiabilité de la couleur de l'urine en l'absence d'autres mesures

"Urine color provides excellent diagnostic accuracy and value to the athletic trainer for assessing hydration status after physical activity when a baseline measurement is unavailable."

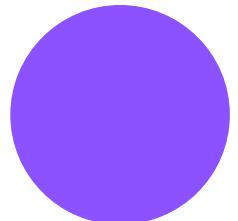
## Utilité de la couleur de l'urine pour les entraîneurs sportifs

"Athletic trainers can use this test to guide diagnosis and treatment when a baseline body mass is unavailable or when an athlete presents with symptoms of dehydration after activity."

## Reconnaissance de la perte de masse corporelle par la couleur de l'urine

"A urine color of 4.5 or greater identified a hypohydrated state due to acute hypertonic hypovolemia via exercise in the heat."





- The importance of hydration – Harvard School of Public Health

## Régulation de la Température Corporelle



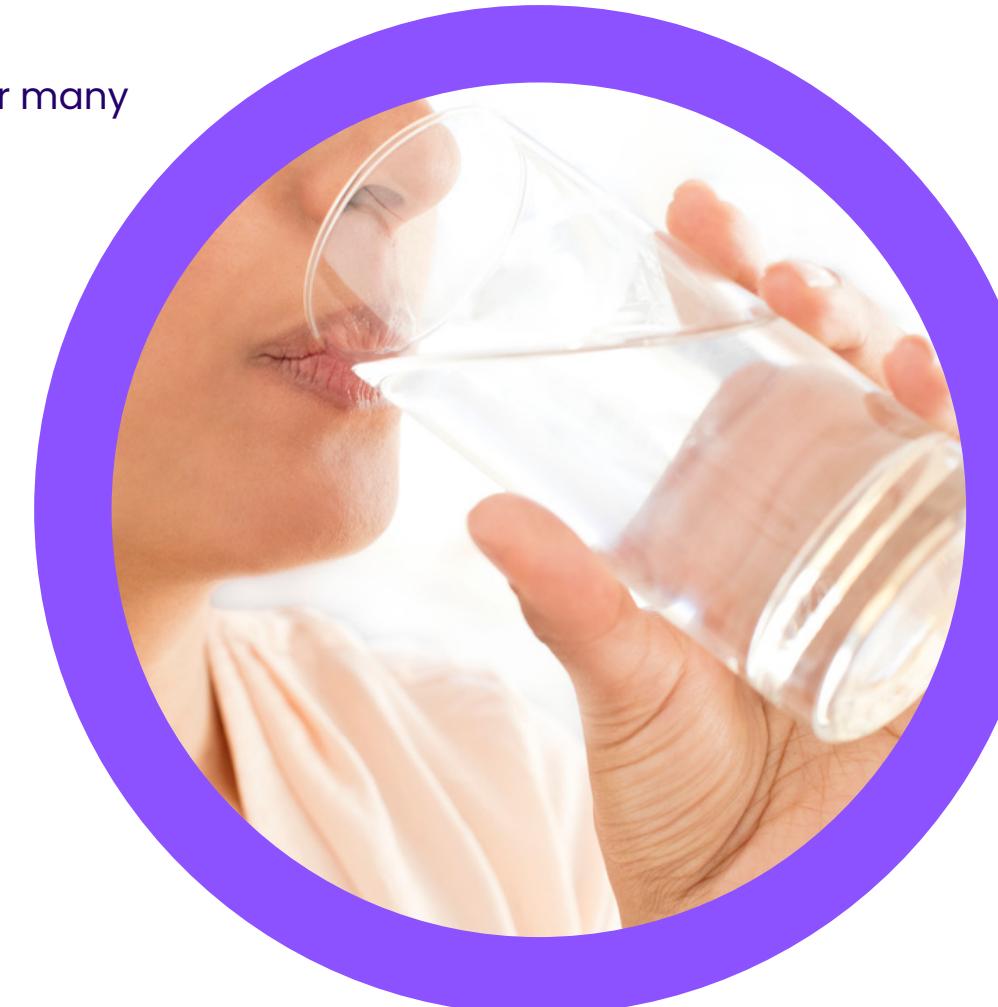
"Drinking enough water each day is crucial for many reasons: to regulate body temperature..."



## Lubrification des Articulations et Prévention des Infections



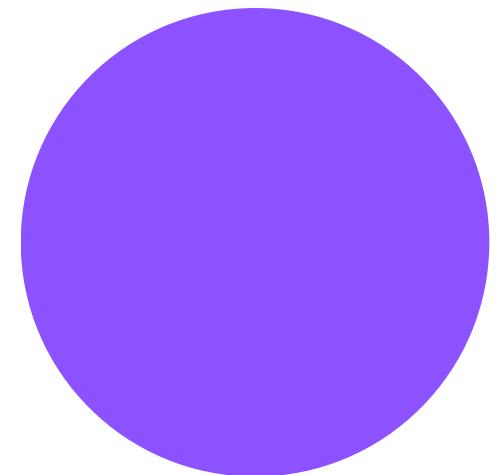
"Drinking enough water each day is crucial for many reasons: to regulate body temperature, keep joints lubricated, prevent infections..."



## Apport de Nutriments aux Cellules et Fonctionnement des Organes



"Drinking enough water each day is crucial for many reasons: to regulate body temperature, keep joints lubricated, prevent infections, deliver nutrients to cells, and keep organs functioning properly."



## Amélioration de la Qualité du Sommeil, de la Cognition et de l'Humeur

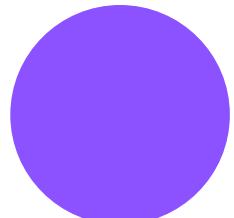


"Being well-hydrated also improves sleep quality, cognition, and mood."



## Recommandations sur la Quantité d'Eau à Consommer

"Experts recommend drinking roughly 11 cups of water per day for the average woman and 16 for men. And not all of those cups have to come from plain water..."



- [Fluids and hydration in prolonged endurance performance – Pubmed](#)

## Impact de la Déshydratation sur la Performance

"Numerous studies have confirmed that performance can be impaired when athletes are dehydrated."



## Recommandation d'Hydratation pour les Athlètes d'Endurance

"Endurance athletes should drink beverages containing carbohydrate and electrolyte during and after training or competition."

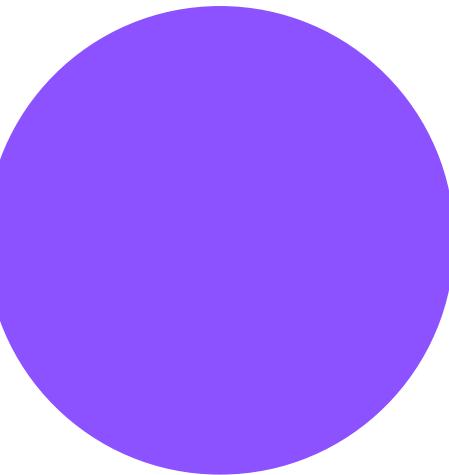


## Préférences pour la Consommation de Glucides et de Na(+)

"Carbohydrates (sugars) favor consumption and Na(+) favors retention of water."

## Importance de l'Hydratation Pendant la Compétition

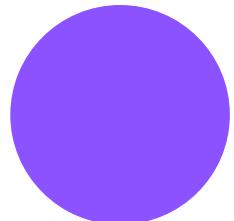
"Drinking during competition is desirable compared with fluid ingestion after or before training or competition only."



## Nécessité de Remplacer les Pertes de Liquides

"Athletes seldom replace fluids fully due to sweat loss."

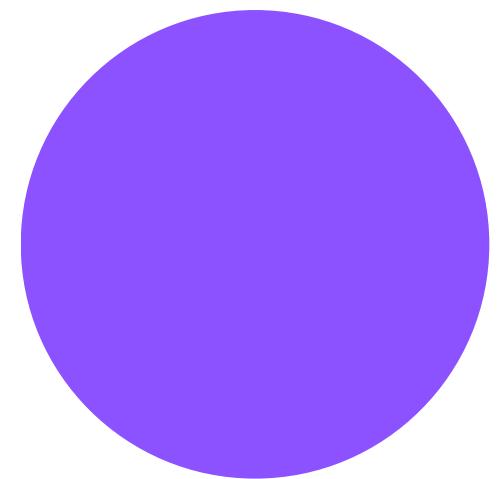




- Fluid replacement for the physically active – Journal of Athletic Training

## La Plage Normale de l'Équilibre Hydrique

"In humans, total body water and overall hydration are normally maintained within a relatively narrow range (1% hyperhydration to 3% hypohydration)."



## Impact de l'Hypohydration Modeste sur la Performance

"All may be compromised at modest levels of hypohydration (approximately 2%)."

## La Prévalence de l'Hypohydration chez les Athlètes

"A majority (more than 50%) of athletes in professional sports, collegiate athletics, and high school and youth sports arrive at workouts hypohydrated."

## Importance de l'Euhydration pour la Thermorégulation

"Maintaining hydration status with minimal variation (+1% to -1%) allows the body to optimally thermoregulate and maintain cardiovascular function."

## Risques de l'Hyponatrémie liée à l'Exercice

"Conversely, excessive fluid consumption can lead to life-threatening exercise-associated hyponatremia (EAH)... It is imperative that individuals remain within or close to the normal range of plasma volume and serum osmolality."



## **Impact de la Déshydratation sur la Performance Athlétique**



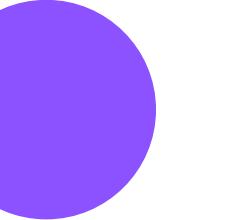
## **Risques de l'Hyponatrémie liée à l'Exercice**



## **Effets de la Déshydratation sur la Thermorégulation et la Fatigue Centrale**



## **Insights Communs**



**Importance de  
l'Hydratation  
pour la  
Régulation de la  
Température  
Corporelle**



**Recommandation  
d'Hydratation pour  
les Athlètes  
d'Endurance**





**FIN DE  
L'EXERCICE 2**

KASMI Zakaria