



HYDRATION

EUHYDRATION, DEHYDRATION, HYPOHYDRATION

Euhydration

- The state of optimal, total body water content as regulated by the brain.
- The ideal state one should aim to maintain when not participating in sport.
- One should begin participating in sport in this state of ideal hydration.

Dehydration

- The process of losing body water
- Water loss occurs though:
 - urine
 - respiration
 - diarrhea
 - vomiting
- Altitude, travel, and caffeine can also contribute to dehydration.

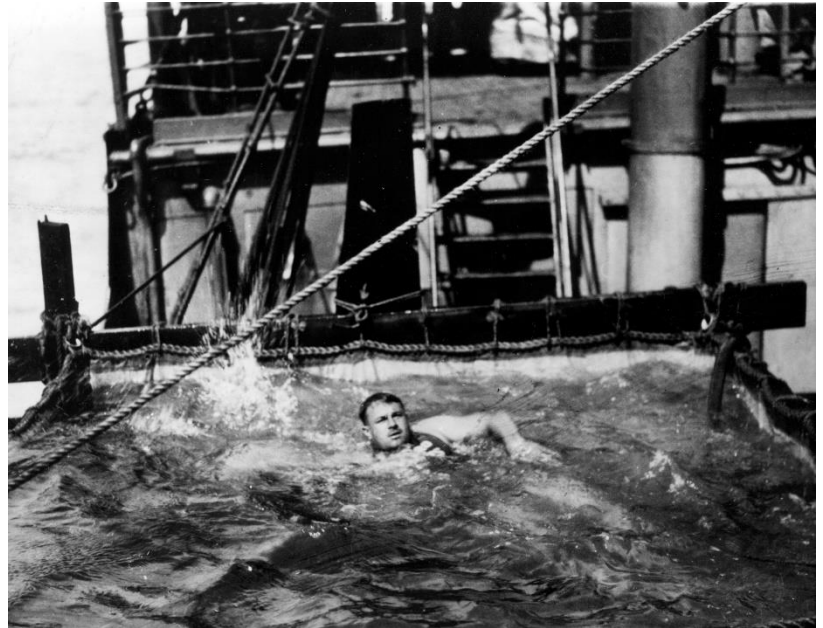
Hypohydration

- The deficit of body water caused by dehydration.
- Hypohydration is commonly referred to as being dehydrated.

Athletic performance is consistently reduced when hypohydration meets or exceeds 2% body mass loss, including:

- a noticeable decrease in strength, power and anaerobic endurance;
- compromised cognitive function, including: task performance, reaction time, short-term memory and mood state.

Electrolytes lost in sweat include: sodium, chloride, potassium, calcium and magnesium. Replace these by increasing salt in one's diet and utilizing sport drinks when rehydrating.



Harry Hebner training for the 1920 Olympic Games, aboard the S.S. Princess Matoika

Importance of Hydration

Proper hydration prior to, during and after exercises is imperative for athletic performance. The benefits of an optimal hydration status include:

- maintaining athletic performance
- maximizing the transfer of metabolic heat
- maintaining mood and facilitating recovery from exercise

When an athlete does not maintain proper hydration, negative effects may occur with both mental and physical aspects of performance.

TIPS TO STAY HYDRATED

- Carry a water bottle with you at all times, including travel.
- Have a glass of water first thing in the morning.
- Create a hydration plan to rehydrate during and after exercises.
- Utilize water and sport drinks to rehydrate.
- To enhance flavor, add herbs and/or fruit to your water.



Women's Kayak Doubles, Olympic Games Tokyo 1964

Water accounts for approximately 73% of lean body mass.

The sensation of thirst is triggered once the body has entered a state of dehydration by 2-3%.

INDIVIDUAL HYDRATION STRATEGY

The goal of an individual hydration strategy is to maximize performance and safety during exercises. It is important to begin an exercise in a state of ideally hydration or, euhydrated. To ensure this occurs before activity, athletes should be mindful of individual cues:

- thirst
- body weight
- urine color and voiding frequency

Rapidly replacing fluids after exercise restores euhydration, improves recovery, reduces hypohydration symptoms and decreases post-exercise fatigue. Up to 150% of the estimated fluid deficit needs to be consumed to effectively replace fluid losses after exercise over a short recovery period (less than four hours).

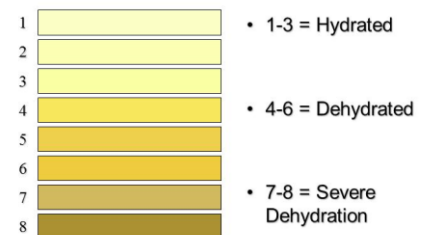
SIGNS/SYMPTOMS OF DEHYDRATION INCLUDE:

Acute body weight loss	Lethargy
Cramping	Delayed recovery
Diarrhea	Dizziness or lightheadedness
Early fatigue in training session	Flushed skin
Headache	Heat sensation or chills
Heart rate elevated above normal response	Lack of concentration
Nausea/Vomiting	Thirst

You can also assess your hydration status by paying attention to thirst perception, body mass and urine concentration.

If you notice you are dehydrated, reflect upon your hydration plan for that day, and adjust to help prevent dehydration in the future!

Hydration Urine Chart



HYDRATION PLAN DURING EXERCISE

- Two to three hours before exercise: drink approx. 16 oz.
- 15 minutes before exercise: drink 8 oz.
- During exercise: drink enough to limit dehydration
- After exercise: drink 16-24 oz. for every pound lost;
- Sodium can be added to foods or replaced with a recovery drink.
- Meet with a dietician to review specific recommendations, as needed.