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 through:
  o urine
  o respiration
  o diarrhea
  o 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.

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.
**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:**

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

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!