

# ***HYDRATION***

***HYDRATION TO MAXIMISE PERFORMANCE***



# THE BASICS



**Consuming fluid replenishes fluids lost.** There are several ways fluid can be lost, including **urine and sweating.**



**Sweating is one of bodies main cooling mechanisms,** and sweat rate is highly variable between individuals. Sweat rate can be influenced by environmental conditions (eg heat and humidity), intensity and duration of exercise.



Poor hydration can have a **negative impact** on aerobic performance, cognitive function and strength.



**Muscle cramps** are believed to be associated with dehydration, electrolyte deficits and muscle fatigue.

**There is a considerable individual variability in performance responses to dehydration.**

# HOW DO YOU ASSESS YOUR HYDRATION STATUS?

- ✓ Dehydration will cause a **reduction in body mass** as water is lost through sweat. You should **avoid a loss of more than 2% of your body mass** to minimise effects on performance.
- ✓ **Urine colour charts** are a quick and easy way to measure hydration status. However, assessment should be taken with **caution** as it is **not 100% accurate**.
- ✓ If the chart shows that you are **dehydrated**, then you should **increase your fluid intake**.
- ✓ **IMPORTANT:** Some multi-vitamin supplements can change the color of your urine.



# WANT TO KNOW WHAT YOUR SWEAT RATE IS?

- ✓ This is a useful activity as it will give you an idea of how much **you sweat during exercise**.
- ✓ This will help guide you to **how much fluid is needed** in your training to avoid losing 2% of your body mass.
- ✓ Completing this is one of the **first steps** in avoiding **dehydration**
  - ✓ Make sure everything is measured in kilograms or litres
  - ✓ If urine loss is not measured, then an estimation of 0.3L can be used

As this requires added time to your training, this lockdown period is the perfect opportunity to understand your sweat better.

<b>A</b> <input type="text"/> Weight before	-	<b>B</b> <input type="text"/> Weight after	=	<b>C</b> <input type="text"/> Weight loss		<b>D</b> <input type="text"/> Duration of exercise (in h)
<b>X</b> <input type="text"/> Bottle weight before	-	<b>Y</b> <input type="text"/> After	=	<b>Z</b> <input type="text"/> Volume consumed		<b>U</b> <input type="text"/> Urine loss
<input type="text"/> Sweat rate (Liters per hour)	=	<input type="text"/> <b>C</b>	+	<input type="text"/> <b>Z</b>	-	<input type="text"/> <b>U</b>
		<hr/>				<input type="text"/> <b>D</b>

# HOW TO GET THE MOST OUT OF YOUR DRINK

- ✓ **Hydration tablets** can help replenish electrolytes lost in sweat. These can be added to your drink **during** or after **exercise**.
- ✓ Adding **carbohydrates to drinks** (eg sports drinks) can help provide **energy**, as well as increasing the amount of water you retain from the drink (i.e. helps to improve hydration).
- ✓ Adding **sodium** (salt) to drinks can encourage fluid intake because it increases thirst. Sodium also increases **fluid absorption and retention**.
- ✓ This is particularly important for **heavy or salty sweaters**, or after a long/high intensity session when sweat losses are high.
- ✓ Most people will know if they are a **salty sweater**. Good indicators are tasting salt in your sweat, sweat stinging your eyes and having dried salt on your skin post-exercise.
- ✓ **Drink little and often instead** of drinking large amounts at one time, this will help **retain** more of the fluid.



**GUIDELINES FOR  
FLUID INTAKE ON  
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# GUIDELINES FOR FLUID INTAKE

When?	What?
<i>24 h prior</i>	<ul style="list-style-type: none"><li>• Balanced diet</li><li>• Drink adequate fluids to prevent thirst.</li></ul>
<i>2-4 hours pre-event</i>	<ul style="list-style-type: none"><li>• 5-7 ml of fluid per kg of body weight (sodium, salt snacks or small meals may help)</li><li>• More fluid if no/dark urine</li></ul>
<i>During exercise</i>	<ul style="list-style-type: none"><li>• Sufficient fluid to limit body mass losses to less than 2% and limit excessive electrolyte loss.</li><li>• You can work this out using your sweat rate you have calculated</li></ul>
<i>Post-exercise</i>	<ul style="list-style-type: none"><li>• If you are training or have another event within 12 hours, then rapid recovery is needed. Consume 1.5L for each kg body weight lost + add some sodium.</li><li>• If you have more recovery time, then resume normal diet and drink according to thirst.</li></ul>