



National  
Defence

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Canada

## Fueling for Energy, Performance & Recovery

	Before Exercise			Exercise Duration		After Exercise
When	2-4 hrs	1-2 hrs	<1 hr	1-3 hrs	3+ hrs	0-2 hrs Post Exercise
<b>Drink<sup>1</sup></b>	300-600 mL water	150-350 mL water	Water to thirst	400-800 mL/hr Sip every 15-20 min	400-800 mL/hr Sip every 15-20 min Add 500-700 mg sodium (1/4 tsp salt)/L fluid	Replace fluids as soon as possible Gradually drink 1.25-1.5 L for every kg lost during exercise
<b>Eat</b>	Balanced meal <sup>2</sup> Time to digest	Easy to digest foods with carbs (low fat, low protein)	Not needed (unless you have not eaten in the past 4+ hours)	30-60 g carbs/hr	30-60 g carbs/hr Up to 90 g carbs/hr for Ultra-endurance exercise + salty foods	1+ hr 60-90 g carbs + 20-30 g protein
<b>Suggestions</b>	<ul style="list-style-type: none"> <li>Rice, vegetables, fruit, lean meat/legumes, yogurt</li> <li>Sandwich, salad, milk</li> </ul>	<ul style="list-style-type: none"> <li>Cereal, milk</li> <li>Toast, peanut butter, juice</li> <li>Smoothie with fruit and milk</li> </ul>	See your local Health Promotion office for the next Top Fuel for Top Performance course.	<ul style="list-style-type: none"> <li>Sports drink<sup>3 4</sup></li> <li>Bananas, oranges</li> <li>Dried fruit</li> <li>Granola bar</li> <li>Fig bars</li> <li>Sport gel</li> </ul>	<ul style="list-style-type: none"> <li>See 1-3 hrs suggestions</li> <li>Pretzels</li> <li>Dried cereal</li> </ul>	<ul style="list-style-type: none"> <li>Balanced meal<sup>2</sup></li> <li>Bagel and chocolate milk</li> <li>Sandwich and juice</li> <li>Granola bar and yogurt</li> <li>Pasta, lean meat/legumes, vegetables, fruit</li> <li>Crackers, cheese, fruit</li> </ul>

### Tips

Avoid trying new foods or drinks before or during competition to avoid digestive issues.

Food tolerance is individual and can be affected by the type of exercise: muscular strength, cardiovascular or endurance.

<sup>1</sup> **Drink/fluid** needs will vary due to individual sweat rates. **Urine amount** and **colour** are good indicators of hydration status. Aim for pale yellow lemonade colour.

<sup>2</sup> **Balanced meal:** Fill your plate - 1/2 with vegetables and fruit, 1/4 protein foods, 1/4 whole grains. **Water** as drink of choice.

<sup>3</sup> **Sports drinks, commercial or homemade,** should contain **4-8 g carbs** and **50-70 mg sodium/100 mL fluid**.

Use a water chaser immediately after consuming a sports drink to help reduce the impact on dental health.

<sup>4</sup> **Sports Drink Recipe** 500 mL (2 cups) 100% fruit juice | 500 mL (2 cups) water | 1.5 mL (1/4 tsp) salt.  
*Nutrition Information* Per 250 mL (1 cup) | 58 kcal, 13 g carb (5%), 150 mg sodium.



**STRENGTHENING THE  
ENERGISER LES FORCES**