Sports Bars, Gels & Drinks: Maximize your energy for endurance sports!

Consuming sports bars, gels and/or drinks during endurance activity can help you meet your energy and fluid goals by:

- maintaining energy levels and delaying fatigue;
- preventing dehydration;
- sustaining blood glucose levels.

**CAUTION:** Not all sport foods are created equal. Whichever type or combination you prefer to use, follow the guidelines below to ensure you are getting the right mix of appropriate nutrients.

**WHEN SHOULD I CONSUME THEM?**

- Multi-day events or events that take 60 minutes or longer to complete will benefit from consuming 30 to 60 g of carbohydrates per hour.
- Ingest these products starting 15-20 min after the beginning of the activity and then at 15-20 minute intervals during the activity.

**SPORTS DRINKS**

- Sports drinks provide carbohydrates and electrolytes, in varying amounts between brands, but are designed specifically to replace energy (carbohydrate), sodium, potassium, and fluids lost during exercise.
- The quantity to consume will depend on sweat rate and can range between 0.3 to 2.4 litres/hr.
- High intensity exercise and/or hot humid conditions will cause greater sweat loss.
- As a guide: start consuming small amounts every 15-20 minutes with an average of least 400 to 800 ml/hr.

**Guidelines for choosing sports drinks:**

<table>
<thead>
<tr>
<th>Carbohydrate</th>
<th>Aim for 6-8% carbohydrate (i.e. 6 to 8 g of carbohydrate/100 ml); primarily glucose, sucrose, or maltodextrin with some fructose.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>There is insufficient evidence to recommend sports drinks containing protein or amino acids for use during endurance events.</td>
</tr>
<tr>
<td>Sodium</td>
<td>500-700 mg/litre</td>
</tr>
<tr>
<td>Potassium</td>
<td>80-200 mg/litre</td>
</tr>
</tbody>
</table>
SPORTS GELS

- Sports gels provide a highly concentrated source of carbohydrates, compared to sports drinks, and are portable as well as quickly digested (small volume).
- They should be consumed with an alternative electrolyte beverage (if no electrolytes are present in your preferred gel) or with water to meet hydration needs.

Guidelines for choosing sports gels:

- A blend of glucose and fructose is effective in increasing muscle oxidation of carbohydrates, in the amount of 65-75% or 65-75 g/100 ml (Most provide ~20-30 g/32-45 g pack).
- They may have other added nutrients such as electrolytes, amino acids, vitamins, and caffeine, or other substances claimed to enhance performance. **These are not essential for the purpose of providing a quick source of highly concentrated carbohydrate and should be tested for tolerance in specific sport situations.**

SPORTS BARS

- Sports bars provide a solid form of carbohydrate! Recent research has shown that they produce similar rates of fuel utilization to liquid forms (e.g. sports drinks) when consumed during endurance exercise.
- They vary between the amount of calories, amount and type of carbohydrate, and amount of protein and fibre provided.
- They may have other added nutrients such as vitamins/minerals or other substances claimed to enhance performance.
- Fluid needs should also be considered in order to meet complete nutrition and hydration goals.

Guidelines for choosing sports bars:

<table>
<thead>
<tr>
<th>Before or during exercise (for easy digestion):</th>
<th>After exercise (for recovery):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher carbohydrate (&gt;25 g)</td>
<td>Higher carbohydrate (&gt;25 g)</td>
</tr>
<tr>
<td>Lower fibre (&lt;4 g)</td>
<td>Can be higher in fibre (&gt;4 g)</td>
</tr>
<tr>
<td>Lower fat (&lt;4 g)</td>
<td>Can be lower fat (&lt;4 g)</td>
</tr>
<tr>
<td>Lower protein (&lt;4 g)</td>
<td>Higher protein (10-25 g)</td>
</tr>
</tbody>
</table>