Complex sports drink enhances recovery from plyometric exercise

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COMPLEX SPORTS DRINK ENHANCES RECOVERY FROM PLYOMETRIC EXERCISE
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Introduction
- In many sports, good and fast recovery is primordial in order to reduce injury risk and to repeat efficiently practice sessions and competitions over the season.
- Among various drug-free recovery strategies, effective post-exercise nutrition is essential, through intake of quality nutrients.
- Following exercise, the effects of isolated nutrients such as the β-hydroxyl-β-methylbutyrate[1], glutamine or branched amino acids are well-known. But few works have examined the effects of complex sports drinks ingested immediately after strenuous exercise and dedicated to limiting muscle soreness emergence.
- Though synergistic action assumptions of the various ingredients as well as blocking or inhibition mechanisms may be envisaged.

Aims
To assess the effects of a complex sports drink (Drink N’Récup®, SPD), in comparison with a placebo drink (PLA), on recovery following combined plyometric-eccentric training session.

Methods

![Beverage contents and Protocol design](image)

<table>
<thead>
<tr>
<th>Participants</th>
<th>Beverage contents</th>
<th>Protocol design</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participants</strong></td>
<td><strong>Beverage contents</strong></td>
<td><strong>Protocol design</strong></td>
</tr>
<tr>
<td><strong>Carbohydrates</strong></td>
<td><strong>Ingested</strong></td>
<td><strong>CMJ</strong> performance change (%) ± SE)</td>
</tr>
<tr>
<td><strong>Fibers</strong></td>
<td><strong>Grain/fruit</strong></td>
<td><strong>CK</strong></td>
</tr>
<tr>
<td><strong>Protein</strong></td>
<td><strong>Plant extracts</strong></td>
<td><strong>CMJ</strong> : 3 squat jumps trials; Sprint : 3x20m sprint</td>
</tr>
<tr>
<td><strong>Sodium</strong></td>
<td><strong>Amino acids &amp; others</strong></td>
<td><strong>PLA</strong></td>
</tr>
</tbody>
</table>

**Results**

**Blood CK (U.L-1 ± SE)**

**Muscle soreness change (A.U. ± SE)**

**CMJ performance change (% ± SE)**

![Graphs showing results](image)

Discussion
- Difference between SJ and CMJ performance recovery suggests that the sports drink mainly improves recovery through action on muscle elastic components such as titin, which holds an essential role in storing and releasing energy during stretch-shortening cycle[2].
- In conclusion, complex sports drink intake immediately after plyometric and eccentric training session may offer a recovery advantage regarding counter movement jump performance and perceived muscle soreness.

References