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Research article

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2014**Effects of a Carbohydrate-Electrolyte Drink on Specific Soccer Tests and Performance**Sergej M. Ostojic<sup>1</sup>,  Sanja Mazic<sup>2</sup>Citations in  
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The aim of this study was to examine the effects of a carbohydrate-electrolyte drink on specific soccer tests and performance. Twenty-two professional male soccer players volunteered to participate in the study. The players were allocated to two assigned trials ingesting carbohydrate-electrolyte drink (7% carbohydrates, sodium 24 mmol.l-1, chloride 12 mmol.l-1, potassium 3 mmol.l-1) or placebo during a 90 min on-field soccer match. The trials were matched for subjects' age, weight, height and maximal oxygen uptake. Immediately after the match, players completed four soccer-specific skill tests. Blood glucose concentration [mean (SD)] was higher at the end of the match-play in the carbohydrate-electrolyte trial than in the placebo trial (4.4 (0.3) vs. 4.0 (0.3) mmol.l-1,  $P < 0.05$ ). Subjects in the carbohydrate-electrolyte trial finished the specific dribble test faster in comparison with subjects in the placebo trial (12.9 (0.4) vs. 13.6 (0.5) s,  $P < 0.05$ ). Ratings of the precision test were higher in the carbohydrate-electrolyte trial as compared to the placebo trial (17.2 (4.8) vs. 15.1 (5.2),  $P < 0.05$ ) but there were no differences in coordination test and power test results between trials. The main finding of the present study indicates that supplementation with carbohydrate-electrolyte solution improved soccer-specific skill performance and recovery after an on-field soccer match compared with ingestion of placebo. This suggests that soccer players should consume carbohydrate-electrolyte fluid throughout a game to help prevent deterioration in specific skill performance.

**Key words:** Fluid ingestion, soccer match, blood glucose

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