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A Sports Drink Based on Highly Branched Cyclic Dextrin Generates Few Gastrointestinal Disorders in Untrained Men during Bicycle Exercise

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Gastrointestinal disorders after ingesting a sports drink were investigated during bicycle exercise. The experiment consisted of a preliminary exercise, a 10 min rest, and 30 min of exercise. Seven healthy untrained volunteers ingested either water or a sports drink based on highly branched cyclic dextrin (HBCD), commercially available dextrin of DE16 or glucose immediately after the preliminary exercise. The mean gastric emptying time after ingestion of the HBCD-based sports drink was significantly faster than that of the glucose-based drink. Gastrointestinal disorders were monitored by a questionnaire. The mean degree of subjective flatulence and the mean number of belches were few with the HBCD-based drink during exercise. When volunteers drank the sports drink based on 10% HBCD during bicycle exercise, they experienced few gastrointestinal disorders and consequently could continue the exercise comfortably with little fatigue.

Keywords: [highly branched cyclic dextrin](#), [glucose](#), [sports drink](#), [gastrointestinal disorder](#), [gastric emptying time](#)

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