Dietary carbohydrate, muscle glycogen, and exercise performance during 7 d of training

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Published: Am J Clin Nutr 1993:57:27-31

The effects of moderate- or high-carbohydrate diets on muscle glycogen and performance in runners and cyclists over 7 consecutive days of training were determined. Muscle biopsies were performed on 4 separate days before exercise for 1 h at 75% peak oxygen consumption (VO2) followed by five, 1-min sprints. After the training session on day 7, subjects ran or cycled to exhaustion at 80% peak VO2. Muscle glycogen for cyclists and runners was maintained with the high-carbohydrate diet but was reduced 30-36% (P < 0.05) with the moderate-carbohydrate diet. All subjects completed all training sessions and there were no differences in times to exhaustion on day 7. for cyclists and runners, consuming a moderate-carbohydrate diet over 7 d of intense training reduces muscle glycogen but has no apparent deleterious effect on training capability of high-intensity exercise performance. A high-carbohydrate diet maintains muscle glycogen, but this has no apparent benefit on training capability or high-intensity exercise performance.