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Effects of Carbohydrate Supplementation on Exercise Performance

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Message from the Guest Editor

Muscle glycogen is a fundamental energy source for exercise, and its depletion impairs muscle contraction by attenuating Ca^{2+} release from the sarcoplasmic reticulum and suppressing Na-K-ATPase functions. Consumption of a high-carbohydrate diet for a few days increases muscle glycogen to approximately twice the basal value. Such carbohydrate loading improves exercise performance. Previous studies have suggested that almost all marathon runners require carbohydrate loading to avoid experiencing the “hitting the wall” phenomenon during a race. As well, blood glucose responses to exercise were influenced by carbohydrate supplementation. Literature demonstrates that carbohydrate supplementation improves intermittent high-intensity exercise capacity, athlete’s strength or skill performance. We are now calling for original articles and reviews on the effects of carbohydrate supplementation on exercise performance for this Special Issue. Both positive and negative results of carbohydrate supplementation are welcomed.



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Special Issue



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