

Race, Recover, Repeat

This is the first article in a 4-part series on how to manage and optimize your nutritional intake prior to, during, and after competition to set the stage for a strong performance.

Carbohydrate loading is a performance-enhancing strategy to boost glycogen storage in the body prior to an endurance competition. In the past, carbohydrate loading called for a very high carbohydrate intake combined with tapering of exercise in the three days preceding a long race.

More recent carbohydrate-loading strategies, devised from researchers at the University of Western Australia, have been shown to be even simpler and more effective. What they found was that a short bout of high-intensity exercise done 24 hours before a race followed by a high-carbohydrate intake can lead to glycogen levels comparable to or higher than those achieved in longer carbohydrate loading regimens.

Here's how endurance athletes can take advantage of these findings. The day before a race, perform a 3-minute-long training interval of your sport (e.g. running) at an intensity of about 30% higher than VO_2 max, followed by a 30-second all-out sprint. Then during the next 24 hours, consume 10 grams of carbohydrate per kg of body weight, focusing on carbohydrate-dense foods with a high-glycemic index (e.g. potatoes, bagels, whole grains like rice and oats, and pasta). Make sure to still include a little protein and fat with each meal. For example, an athlete who weighs 185 lbs (84 kg) will aim for 840 grams of carbohydrate. Over 6 meals in a day, that's about 140 grams of carbohydrate per meal, the equivalent of, for example, 2 large baked potatoes, or 2 bagels, or 1 cup dry-measure of brown rice, or 4 cups of cooked pasta. If that seems like a lot of food, you can also opt to sip on a high-carbohydrate sports drink throughout the day.

This is great news for endurance athletes. Doing a short, high-intensity workout the day before a race won't harm performance, yet it's enough to trigger the desired carbohydrate 'sponging' effect that was sought in the original carbohydrate-loading regimens. This allows the athlete to maintain a normal diet right up until the day before competition, while training lightly, and then load in the final 24 hours.