Carbo loading [1]

Alice,

Before a rigorous race or heavy competition, what is meant by carbo loading? Does it mean to eat pasta or rice for days in advance, and how much should you eat of this starch? Can you carbo load with only vegetables, and what kind of fruits or vegetables would be best if carbo loading is attained by eating fruits and/or vegetables?

? Carb curious

Answer

Dear Carb curious,

If you have a competition lasting less than 90 minutes, a high carbohydrate intake for one day can adequately fuel your muscles for the event. In fact, a balanced diet is usually sufficient for daily physical activity and short workouts. Carbo loading, also known as muscle glycogen supercompensation, is a strategy that may be effective for extremely active people who are training for long endurance events over 90 minutes—such as marathons, triathlons, or long bicycle races.

Carbo loading supersaturates your muscles with stored carbohydrate (a.k.a. glycogen). The classic method of carbo loading is achieved in two stages: muscle glycogen depletion and repletion (storage). The process begins 6 to 7 days prior to the event. The first day includes exhaustive exercise to deplete glycogen in the muscles specifically used in the event. Days 2, 3, and 4 involve a low-carbohydrate, higher protein, and higher fat intake. Days 5, 6, and 7 are the carbohydrate loading phase. The athlete must also take in sufficient protein, vitamins, minerals, and abundant water. Exercise is tapered off, with complete rest the day prior to the event. The idea behind this process is to enhance your body’s glycogen storage, so that during the event, you have as much energy available to your muscles as possible. With each gram of carbohydrate your muscles store, they also hold 3 grams of water. This water becomes available during exercise, and helps to prevent dehydration, but it is also heavy! Carbo loading can result in a 3 to 4 pound weight gain. Some athletes complain of feeling sluggish and uncomfortable from this. Others feel that they couldn't complete their event without the extra stored energy. The benefits of this have yet to be conclusively demonstrated.

Currently, some athletes skip the depletion phase and just increase carbohydrate intake while decreasing training for a few days before the event. During prior training for the endurance event, a high carbohydrate diet is recommended—60 to 70 percent of calories. This provides
adequate fuel to train at your best. Carbo loading only a week before the event, without sufficient carbohydrate intake throughout training, won't work magic. A proper diet is recommended throughout all of the training cycle.

To answer your question about carbo loading with fruits and vegetables, you most likely won't be able to consume enough carbohydrates this way. An average sized woman needs at least 300 to 400 grams of carbohydrate, and an average sized man needs 500 to 600 grams or more. Considering that a medium-sized apple contains 20 grams, a medium-sized banana has 27 grams, and one cup of cooked broccoli has 9 grams, you'd have to consume an enormous quantity of food. In addition, the fiber present in such large amounts of fruits and vegetables could cause gas and discomfort. Some people experience diarrhea with very high fruit intake. If you carbo load with only refined grains, you also run the risk of becoming constipated. A more sound approach would involve choosing from a variety of carbohydrate sources. A combination of whole and refined grains, fruits, vegetables, and some sugars is generally recommended to ensure an adequate, healthful, and comfortable intake of carbohydrate.

And remember, if you are tapering your exercise, you will need fewer calories than during days when you are training heavily. Best of luck training for your event!

Alice!

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