

Beet it: To exercise longer, try beetroot juice

October 2 2010, By MARIA CHENG , AP Medical Writer



Professional runner Chris Carver prepares to drink beetroot juice in his home in Otley, England, Friday Sept. 17, 2010. When Chris Carver ran an ultra-marathon in Scotland last year, which challenges athletes to run as far as possible within 24 hours, he ran 140 miles. Determined to do better in this year's race, Carver added something extra to his training regime: beetroot juice. For a week before the race, he drank the dark purple juice every day. Last month, Carver won it by running 148 miles. (AP Photo/Tim Hales)

(AP) -- When Chris Carver ran an ultra-marathon in Scotland last year, which challenges athletes to run as far as possible within 24 hours, he ran 140 miles (225 kilometers).

Determined to do better in this year's race, Carver added something extra to his training regime: [beetroot juice](#). For a week before the race, he drank the dark purple juice every day. Last month, Carver won it by running 148 miles (238 kilometers).

"The only thing I did differently this year was the beetroot juice," said Carver, 46, a professional runner based near Leeds, in northern England.

He said more exercise would have improved his endurance, but to get the same result he attributes to the juice - an extra eight miles - it would likely have taken an entire year.

Some experts say adding beetroot juice to your diet - like other foods such as [cherry juice](#) or milk - could provide a performance boost even beyond the blood, sweat and tears of more training.

In two studies conducted at Exeter University on 15 men, Stephen Bailey and colleagues found cyclists who drank a half-liter (about a half-quart) of beetroot juice several hours before setting off were able to ride up to 20 percent longer than those who drank a [placebo](#) blackcurrant juice.

By examining the cyclists under a scanner that analyzes how much energy is needed for a muscle to contract, Bailey and colleagues discovered beetroot juice allows cyclists to exercise using less oxygen than normal.

"The beetroot juice was effective even without any additional training," Bailey said. "It reduces the energy requirements on your muscles so you can last longer." While the beetroot juice was provided free by its manufacturer, Exeter University paid for the research.

Bailey said the high nitrate content of beetroot juice is responsible for its athletic benefits. Scientists aren't exactly sure how it works, but suspect having more [nitric oxide](#) in your body, a byproduct of nitrate, helps you exercise with less oxygen. Bailey said the same effects might be possible if people ate more nitrate-rich foods like beetroot, lettuce or spinach.

Bailey and colleagues calculated beetroot juice could translate into a 1 to

2 percent better race time, a tiny improvement likely only to matter to elite athletes. They are still tweaking the dosage but say athletes should consume the juice a few hours before training so their body has time to digest it. Their latest study was published in June in the Journal of Applied Physiology.

"Drinking beetroot juice is not going to turn a recreational runner into an Olympic champion, but it might make tolerating more exercise easier so you can train more," said Dr. Andy Franklyn-Miller, a sports medicine expert at the Centre for Human Performance in London. He was not connected to the research and has not received any funding from beetroot juice makers.

Franklyn-Miller said since people often reach an athletic plateau where more training doesn't help, beetroot juice could give you an extra edge you wouldn't get otherwise.

"It's not banned, so there's no reason not to try it," he said. Still, he warned drinking too much of the juice could lead to side effects like abdominal cramps, diarrhea or purple urine.

Previous studies in Britain and the U.S. have found beetroot helps the heart by lowering blood pressure.

Other experts warned manipulating your diet can't replace the benefits of training. "Certain foods can help you maximize the benefits from exercise, not reduce the amount you're doing," said Roger Fielding, director of the Nutrition, Exercise Physiology and Sarcopenia Laboratory at Tufts University. He was not connected to any research on beetroot or any other nutritional supplements.

For serious athletes, Fielding said changing your diet could help. "If a very small improvement is valuable to you, it's possible something like

beetroot juice could do that," he said.

Other studies have shown drinking things like pickle juice or having a small carbohydrate snack during a marathon, can prevent cramps and improve performance. Scientists have also found cherry juice, which helps reduce exercise-induced swelling, could be strong enough to reduce some athletes' use of anti-inflammatory pain medication.

Fielding said the benefits of beetroot juice and other foods and drinks could have wider benefits and might one day be used to help elderly people with muscle weakness.

Some elite athletes warned beetroot juice may not be to everybody's taste. "A few of my friends think it's really disgusting," said Colin McCourt, 25, a British runner competing at the Commonwealth Games in New Delhi this month.

In April, McCourt started drinking cherry and beetroot juice, which he credits with helping him train longer and more often. "I feel like I get a benefit from it, even if it's minimal," he told Associated Press Television.

McCourt said he will continue to adjust his training regimen in preparation for the London 2012 Olympics, but plans to maintain his juice habit. "There will be a lot more beetroot juice if my stomach can take it."

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