

## Strong coffee aids post-exercise recovery

If you want to recover fast after that run, eat carbs washed down with several cups of strong coffee.

This is according to a study published by *Journal of Applied Physiology*. Muscle glycogen is replenished faster after exhaustive exercise when athletes eat both carbohydrates and drink caffeine. Researchers found that athletes who followed this regime had 66% more glycogen in their muscles four hours after finishing intense, glycogen-depleting exercise, compared to eating carbohydrate alone.

The study was conducted on seven well-trained endurance cyclists who participated in four sessions. The participants first rode a cycle ergometer until exhaustion, and then consumed a low-carbohydrate dinner before going home. This exercise bout was designed to reduce the athletes' muscle glycogen stores prior to the experimental trial the next day.

The athletes did not eat again until they returned to the lab the next day for the second session when they again cycled until exhaustion. They then ingested a drink that contained carbohydrate alone or carbohydrate plus caffeine and rested in the laboratory for four hours. During this post-exercise rest time, the researchers took several muscle biopsies and multiple blood samples to measure the amount of glycogen being replenished in the muscle, along with the concentrations of glucose-regulating metabolites and hormones in the blood, including glucose and insulin.

The entire two-session process was repeated 7-10 days later and the athletes swapped regimes.

This study used high-dose caffeine, with all its potential side effects. The next step, according to the authors, is to repeat the research with a lower dose of caffeine to reduce side effects.