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The Afterburn Effect: Keep Burning Calories After a Workout

While virtually all activity from backgammon to deep thought requires energy, studies suggest so-called "vigorous" exercise is especially effective at burning calories not only during the activity itself but also long after . So that latest gym session could keep on giving even after stepping off the treadmill.

The so-called "afterburn effect" — which sounds like rocket science and is more officially known as "excess post-exercise oxygen consumption" or EPOC — isn't new in the world of fitness. Several studies suggest a strong correlation between the number of calories burned post-exercise and the activity's intensity . Basically, the longer and more intense the exercise, the more oxygen the body consumes afterward. This means a higher sustained metabolic rate and thus more calories burned throughout the day. In one study, participants who cycled vigorously for 45 minutes burned roughly 190 calories more in the 14 hours after exercise than on days when they didn't work out at all .

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But what actually constitutes "vigorous" or intense exercise? While the above study involved 10 young, male participants, the number of calories burned both during and after exercise can vary greatly among individuals. For most people, optimal post-exercise calorie burn will occur with exercise performed at 70 to 85 percent of the individual's max heart rate. And the longer the bout of exercise (up to 60 minutes in some studies), the more potent the effect (and more calories burned during rest) . Of course, all-out 60-minute sessions might not be the most friendly workouts several times a week, and shorter high intensity workouts (like the 4-minute Tabata Protocol) have also been shown to trigger calorie afterburn.

And it's not just steady-state cardio that gets the metabolism going for hours afterward. High intensity interval training has been shown to elicit an even greater post-workout burn, as has resistance training performed at quick paces and/or high intensity . (Again, the effect is influenced by the length and intensity of activity.) So no matter the particular training regime, to keep burning calories long after the last mile or rep, it might pay to go hard.

The Takeaway

Vigorous exercise could keep the body burning calories for hours after the workout is through.

Jason Edmonds: "In addition to burning calories post workout, it's also worth mentioning that this is the best time to consume a "cheat" or "guilty pleasure" carbohydrate based food. After intense exercise (resistance exercise, sprinting etc), skeletal muscle is low on glycogen, which is what muscle uses as fuel during intense excertion. Consequently, a sugary or starchy treat is more likely to be used to restore that glycogen depot instead of being stored as fat."

Matt Miller: "This is exactly what I have been preaching to my clients for years! 45 minutes of 'vigorous' exercise may be a bit much to ask of novice exercisers though. I ask my clients that are looking to shed pounds of fat to perform High Intensity Intervals that resemble a 1x2 or 1x3 ratio. As they progress, the rest can be lessened to increase their metabolic performance. A typical beginner High Intensity Interval can look like this: 5 min warm-up, 60 seconds of a fast run, 120 seconds of a recovery walk, repeat for 6-8 rounds of the 60x120, 5 min cool-down."

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