HEALTH HUB

SUMMER FIT

HIIT training and its ‘afterburn’ effect

When you feel like you’re really pushing during a tough workout session, burning through energy, and melting calories, give yourself an extra pat on the back. Why? Because your hard work doesn’t stop when you do. During intense exercise, your metabolic rate increases. When you stop, it doesn’t go back to “resting” immediately, but remains elevated for a short time. This causes an increase in calorie burn, even after you’ve stretched, showered, and eaten your post-workout snack.

The additional energy expenditure that occurs after your workout is known as the afterburn effect. The afterburn effect’s scientific name is excess post-exercise oxygen consumption, or EPOC. EPOC, also known as oxygen debt, is the amount of oxygen required to return the body to its resting state.

This resting state includes:

- Restoring oxygen levels
- Removing lactic acid
- Repairing muscle and restoring levels of ATP (a molecule that provides the body with energy for processes like exercise)

Studies indicate that EPOC is highest right after a workout, but continues for a longer period. Elevated levels could persist for up to 40 hours.

Research has shown that the more intense your workout, the more expenditure it will take to return your body to its resting state. This means greater EPOC. While the duration of your workout session will also increase EPOC if the intensity level is high enough, duration alone does not have a significant impact on EPOC.
The key to inducing significant EPOC is to partake in high-intensity interval training, or HIIT.

These short rounds of intense work are broken up with equally short recovery periods. Recovery is used to replenish the ATP that your body depleted during the active interval. HIIT sessions stimulate a higher EPOC because you consume more oxygen during them. This creates a larger deficit to replace post-workout.
Spin classes also offer a similar effect as often involves short periods of high intensity exercise i.e., sprints and hills.