



Q:

Is it true that coffee is an ergogenic aid that enhances physical performance?

A:

Caffeine is one of the world's most widely used stimulant drugs. Surveys indicate that in North America, approximately 90% of adults consume caffeine daily in one form or another. A person's caffeine intake may come from beverages like coffee, tea, soda, and energy drinks; from foods such as cocoa; or even from certain medications.

Caffeine was removed from the World Anti-Doping Agency's list of banned substances in 2004. Since then, caffeine intake during athletic training and racing events has become more popular and almost common practice for its performance enhancing effects.

In the 1970s, caffeine was originally thought to increase performance by releasing adrenaline, thereby stimulating the release of free fatty acids and reducing the need for glycogen¹. More recent research suggests that these early claims on changes in metabolism were over-stated.

More recently, caffeine has been reported to have an enhancing effect on prolonged, submaximal exercise such as long distance running. This is thought to be mostly due to the changes in the central nervous system mediated effect and possibly by altering brain neurotransmitter function².

New research says that lower doses of caffeine appear to have a positive effect on both training capacity and endurance based performance, with doses of 2-3 mg per kilogram of body weight administered

60 minutes before exercise³. Endurance-based performance tasks are often enhanced by 2% to 3% with caffeine ingestion. To put this in perspective, let's say a 150 pound (66 kg) runner consumes 130 mg to 200 mg of caffeine—roughly the equivalent of one to two cups of coffee—one hour before exercise. If this runner was able complete a 10K race in 40 minutes without caffeine, the estimated 3% caffeine-induced performance benefit could result in cutting 72 seconds off his or her time.

Some sports gels contain 20 to 50 mg of caffeine per serving; coffee and black tea can contain anywhere from 50 to 400 mg per serving; and other products like energy drinks and shots can have between 80 and 250 mg per serving. If you have a caffeine tolerance because you are used to drinking coffee daily, the caffeine in a sports gel is less likely to have a dramatic effect on you, compared to an individual who is not used to consuming caffeine every day. There is also the genetically-determined factor of "caffeine sensitivity" which can vary widely from person to person.

While caffeine has been shown to improve athletic performance, it isn't something you should rely on all the time in training. Some people experience negative side effects from caffeine, such as anxiety, irritability and insomnia. Caffeine is not a substitute for proper training or a balanced nutrition plan. **RR**

Ask a Nutritionist

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