

A coffee to go at the gym

Boost your workout with a caffeine hit that will frappé the fat

by Peta Bee

It used to be that a bottle of water or sports drink were the only ways to keep hydrated and to prevent yourself from flagging at the gym. But stopping off at Starbucks for a double espresso before you hit the treadmill is set to become a fashionable practice for the fitterati.

Much maligned by some health experts when taken in excess, caffeinated drinks, such as coffee, tea and cola, are emerging as the best boost for a workout in studies that have looked at their effect on fitness. Not only does a caffeine jolt help people to keep exercising for longer, it will lead to greater fat loss, too.

Higher intakes of caffeine have been shown in some studies to raise the risk of osteoporosis and cardiovascular problems, but researchers investigating caffeine's influence on fitness and sports performance are discovering that an amount considered acceptable by most health experts — only a cup or two a day — is needed to get better results at the gym.

They have shown that there are substances in caffeine which trigger the release of body fats into the bloodstream during activity. This means fat is burnt during exercise, rather than carbohydrate. Carbohydrates are stored in the muscle as glycogen but the amount that can be stored is limited. If you burn body fat first, it reserves carbohydrate for later use. The upshot? You have more energy and can exercise for longer.

Although most research into caffeine's fitness benefits has been carried out on elite athletes for whom its boost could mean the difference between winning and losing, its effects are equally helpful to anyone looking to get more out of their gym session. Jane Griffin, a sports dietitian and author of *Food For Sport* (Crowood Press), believes that caffeine's ability to help the body to "use fat efficiently" means that "when taken in conjunction with regular aerobic exercise, in theory it could help you to lose weight more quickly".

Caffeine can also prevent workout fatigue. Feeling wired after a coffee is the result of caffeine's stimulant effects. It works by increasing neurone activity in the brain, which then triggers the pituitary gland into secreting more adrenalin. The result? A perceived injection of energy that leaves you thinking that you aren't suffering as much on the treadmill as you thought. A study at the University of South Carolina, published in the *American Journal of Physiology* (2003), revealed that one or two cups of coffee up to an hour before a gym session can delay or prevent post-exercise tiredness by up to 60 per cent: "People seem to be able to work harder without realising it when they take caffeine before a workout," says Louise Sutton, the principal lecturer in sport and exercise nutrition at Leeds Metropolitan University.

Jeanette Crosland, the consultant nutritionist to the British Olympic Association, agrees that it can aid the pursuit of slenderness: "Used with exercise and diet, caffeine could help you to reach your fitness goals faster." When a study at the University of Birmingham, published in April's *Journal of Applied Physiology*, put cyclists through three two-hour exercise sessions, it found just that. For each of the trials, the cyclists took one of three different drinks — glucose, glucose mixed with caffeine, and plain water. Results showed that caffeine increased the amount of carbohydrates absorbed from the drink by 26 per cent.

In two separate trials, Professor Louise Burke and her colleagues at the Australian Institute of Sport's nutrition department confirmed that caffeine does boost performance. In one study, published in the *Journal of Applied Physiology* three years ago, cyclists who drank flat cola or black coffee an hour before exercise kept going faster and for longer than those who drank plain water. In the second study, this year, it was found that drinking 1mg of caffeine, in the form of cola or coffee, per kilogram of an athlete's body weight, during exercise enhanced performance in endurance activities such as running and cycling.

Widely held concerns that caffeine promotes dehydration during exercise, resulting in a negative effect on performance, have now been dismissed. A review paper by Ron Maughan, a professor of human physiology at Loughborough University, and Griffin, published in the *Journal of Human Nutrition and Dietetics* two years ago, states that: "Any evidence that caffeine promotes the loss of water from the body has been overplayed. It makes no difference if people drink tea, cola, coffee or water when they exercise."

So how much caffeine do you need to boost your workout? Crosland says: "A response to caffeine is individual and depends on your body size, metabolism and how much you are used to taking." Peter Fricker, the director of the Australian Institute of Sport, says that one to two cups before or during exercise is enough for most people and more isn't better: "It works in small doses and there are no gains in performance by taking larger doses." Taken in excess, caffeine is known to have unhealthy side-effects. It is addictive and consuming the equivalent of six or more cups of coffee a day has been shown to trigger migraines, irritable bowel syndrome and other gastrointestinal problems.

Stimulating facts

Where to get your caffeine kick:

Espresso 100mg to 150mg a cup.

Chocolate 150mg a family-sized bar.

Instant coffee 65mg to 100mg a cup.

Red Bull Marketed as an energy drink, a 250ml can provides taurine, a stimulating amino acid, and about 80mg of caffeine.

Decaffeinated, instant 2mg to 3mg a cup.

ProPlus With 50mg of caffeine a tablet, it has gained a reputation for giving an instant jolt to the weary.

Tea 40mg to 80mg a cup

Cocoa and chocolate drinks 40mg to 80mg a cup.

Guarana This berry, grown in northern Brazil, produces seeds with the caffeine-containing substance guaranine. Drunk as carbonated cola, it contains two to three times more caffeine than coffee or tea

Cola 35mg to 50mg a 330ml can.

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