

A white ceramic coffee mug is positioned in the lower-left quadrant of the image. The mug is filled with coffee, and steam is rising from it. The background is a dense field of dark brown, roasted coffee beans. The text 'CAFFEINE'S NEW PERKS' is printed on the side of the mug in a large, brown, sans-serif font. The word 'NEW' is in a smaller font size than 'PERKS'.

CAFFEINE'S NEW PERKS

By Andrea Renskoff

Bad for you, good for you—there's hardly a substance on earth that has generated more opinions than caffeine. In decades past, doctors cautioned patients to avoid caffeine due to its stimulating and diuretic effects on the body. But in recent years, the thinking has changed. Moderate amounts of caffeine are well tolerated by most people, and its use to increase endurance and relieve fatigue is no longer frowned upon. Coffee, in particular, is now believed to have some positive benefits. Recent research even suggests that caffeine helps block muscle pain caused by exercise, a development which may help us to lead healthier and more active lifestyles.

Caffeine has a long history. Its uses are thought to have been discovered as far back as the Stone Age. In the area now known as Ethiopia, nomads found that animals that ate the berries from coffee trees would have an energy boost. And so the nomads began eating the berries as well. By the 4th Century AD, the Arab world was making



coffee into a drink, and coffeehouses opened throughout Mecca. Coffee was incorporated into religious ceremonies so that people could pray all night. The controversies began. Was this dark, flavorful beverage a medicinal cure-all, or was it the devil's brew?

As caffeine use spread to Europe, and was also found naturally present in tea and cocoa, its effects were studied in detail. In some people, too much caffeine can cause heart palpitations, jitteriness, and sleep disturbances. Its use is limited or discouraged for some cardiac patients or those with other medical conditions. But for typical, moderate users—those who drink between two to four cups of coffee or its equivalent a day—caffeine has not been proven to pose any health risk.

Athletes have been utilizing caffeine for centuries. They've found it helped them to train harder and to push past physical limits, although they didn't really know why. Modern research into the topic is beginning to provide some answers. Caffeine may help block the activity of a chemical in our body called adenosine. When adenosine is released in our cells, it activates pain receptors. During exercise, our muscles contract and produce chemicals that stimulate those pain receptors, even though that may be a signal of healthy exertion rather than injury. But by suppressing the receptors, we may be able to avoid the feeling of pain.

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In a study at the University of Illinois at Urbana-Champaign, a test group of fit men were observed. During one session, they were given a caffeine pill equivalent to approximately three cups of coffee one hour before exercising. In another session, they were given a pill containing only a placebo. After high-intensity workouts on a stationary cycle, the group reported a significant reduction in quadricep-muscle pain after the session in which they had taken the caffeine. Furthermore, half of the men regularly drank four cups of coffee a day while the other half were not habitual caffeine users. That's significant, because both halves of the group had the same results, which may mean that our bodies

don't build up a tolerance to caffeine and its pain-blocking effects.

Another study compared caffeine's capabilities to other pain relievers. At the University of Georgia, a group of young women who did not exercise regularly were tested with strenuous activity. After taking naproxen (the active ingredient in medications such as Aleve), they reported a 30 percent reduction in pain versus a placebo. With aspirin, the result was 25 percent. But when given caffeine in pill form, the women reported a 48 percent reduction in muscle pain after exercise.

Findings like these lead researchers to believe that caffeine may make it easier to start a new exercise regimen or to take on a new physical activity that would normally cause soreness. Some people can't drink coffee, but might be able to utilize caffeine in energy drinks or over-the-counter pain relievers such as Excedrin and Anacin. (Tea and cocoa contain significantly less caffeine per serving than these other options.) Certainly, non-caffeine users should speak with their doctors before trying it in conjunction with exercise. And remember: The equivalent of two to four cups of coffee per day may be beneficial. Anything more than that can be harmful.

DR. STARBUCKS?

Many studies are focusing on the health benefits of coffee. Here are some findings:

Coffee contains antioxidants, minerals and a compound called quinines that may increase the body's response to insulin, thereby lowering its risk of developing diabetes.

Low levels of dopamine are associated with Parkinson's Disease, and caffeine helps keep dopamine molecules active.

Caffeine's ability to block adenosine may slow the build-up of brain plaque related to Alzheimer's Disease.

Emerging research suggests coffee may reduce the risk of colon cancer, liver cirrhosis, and gallstones, and may help manage asthma and headaches.

