

[KEEN CUISINE]

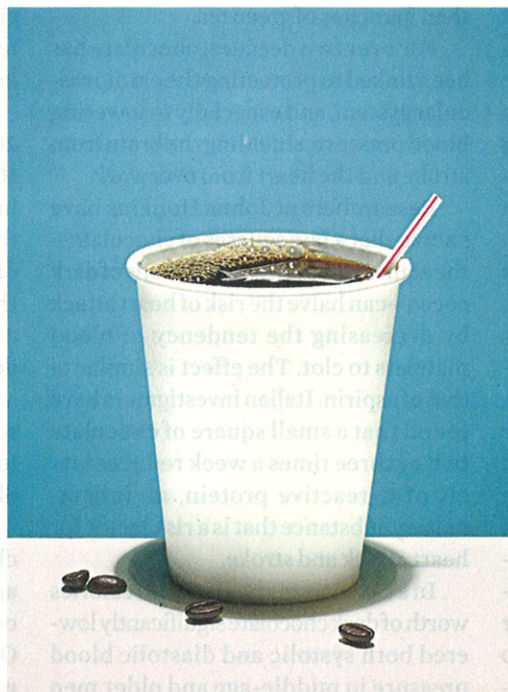
The Case for Caffeine

The most popular psychoactive substance in the world turns out to protect your brain in a variety of ways. **By Katherine Schreiber**

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RYING TO CUT your caffeine consumption? You might not want to strike it from your diet entirely. Research keeps unearthing new benefits this popular stimulant confers on your cognitive and corporeal self. Caffeine, found naturally in tea, coffee, and chocolate—it acts as

a natural pesticide in plants—and added to many sodas, belongs to a family of mild central nervous system stimulants called methylxanthines. Caffeine wakes us up by blocking adenosine,



thus preventing the brain from sensing exhaustion, and it keeps us alert by eliciting a steady stream of adrenaline. But an array of new studies shows that caffeine also has multiple neuroprotective effects. A cup of drip coffee supplies about 100 to 125 mg of caffeine, a single shot of espresso about 80 to 100 mg, while a cup of black tea weighs in at 50 mg and green tea at 30 mg. In general, dark roast coffee supplies less caffeine than lighter roasts.

■ Cancer Killer

Harvard researchers following nearly 300,000 men and women over 30 years found that those drinking five or more cups of coffee and tea a day—especially men—had a significantly lower risk of developing glioma, a tumor arising in the brain's supportive tissue. Further studies suggest a mere half cup of coffee or tea a day cuts the risk by 34 percent. Caffeine may inhibit the cellular signaling tumors rely on to multiply. Or the abundant polyphenols may repair damaged DNA.

■ Beta Buffer

Regular daily consumption of caffeine in three or more cups of coffee is known to reduce cognitive decline among the aging. It now seems to preserve—even restore—working memory in those with Alzheimer's disease, by inhibiting production of beta-amyloid, a protein that accumulates in the aging brain and forms plaques that give rise to the degenerative disease. University of South Florida scientists found that caffeine reduces amyloid deposition in the hippocampi of rats.

■ Striatum Saver

Several metabolites of caffeine (paraxanthine, theobromine, and theophylline) appear to help sufferers of Parkinson's disease, the progressive movement disorder. In animal studies, the chemicals, which protect against loss of the neurotransmitter dopamine in a region of the brain called the striatum, reverse the behavioral symptoms of Parkinson's, notably impaired motor control, and keep dopamine-producing neurons from deteriorating.

■ Pain Preventer

Be sure to stop off at the nearest Starbucks before you head to the gym for an intense physical workout. Caffeine can boost physical endurance by inhibiting perception of pain in muscles and by diminishing a sense of muscle fatigue. It works by blocking the adenosine receptors located on sensory nerve endings.

■ Mood Modulator

In blocking the adenosine receptors that pick up chemical cues of exhaustion, caffeine can not only enhance physical endurance and reverse drowsiness, it can also boost mood. Craig Olson and colleagues at the University of California, Davis, compared caffeine with another adenosine antagonist, the flavonoid quercetin. Only caffeine significantly increased self-reported vigor, reduced fatigue, and moderated mood disturbance.