Cigarettes and Their Destruction of the Brain

Smokers generally feel more comfortable after that especially important first cigarette of the day. Within just a few seconds of "lighting up," smoking activates mind-altering changes. Smokers are well aware of the long-term risks of their habit: such as lung cancer, heart disease, emphysema, and other deadly illnesses. However, smokers are attracted by the immediate effects of smoking: "a stimulant that makes them seem to feel more alert, clearheaded and able to focus on work." Smoking however, does not really have these effects; what the smoker perceives is an illusion. Nicotine begins to act on brain cells within ten seconds of inhalation, fitting into "keyholes" on the surface of the brain; the same "keyholes" as acetylcholine(an important neurotransmitter), and mimicking epinephrine and norepinephrine, giving the smoker a rush, or stimulation. Within 30 minutes, smokers feel their energy begin to decline, as the ingested nicotine is reduced. This process continues, as the smoker's attention becomes increasingly focused on cigarettes. Nicotine causes smokers' brain cells to grow more nicotinic receptors than normal; therefore, the brain may function normally despite the irregular amount of acetylcholine-like chemical acting upon it. The brain is reshaped: the smoker feels normal with nicotine in his system, and abnormal without it. A series of tests were conducted on nonsmokers, "active" smokers, and "deprived" smokers. The "active" smokers were given a cigarette before each test, while the "deprived" smokers were not allowed cigarettes before tests.

The tests started simply, and then moved towards more complex problems. In the first test, subjects sat in front of a computer screen and pressed the space bar when a target letter, among 96, was recognized: smokers, deprived smokers, and nonsmokers, performed equally well. The next test involved scanning sequences of 20 identical letters and as one of the letters was transformed into a different one, responding with the space bar. Nonsmokers responded fastest, and active smokers were faster than those who were
deprived from smoking. In the third test, subjects were required to memorize a sequence of letters or numbers, and to respond when they observed the sequence among flashed groupings on the screen. The purpose of this experiment was to test short-term memory: nonsmokers again ranked highest, however, deprived smokers defeated the active smokers. Subjects were required to read a passage and then answer questions about it in the fourth test. "Nonsmokers remembered 19 percent more of the most important information than active smokers, and deprived smokers bested their counterparts who had smoked a cigarette just before testing. Active smokers tended not only to have poorer memories but also had trouble differentiating important from trivial details." In the final experiment, a computer-generated driving simulator(much like a video game) was used to test the subjects, who were required to operate a steering wheel, gearshift, gas pedal and brake, and to navigate through twisting roads, and sudden appearances of cars and oil slicks. Deprived smokers had 67 percent more rear-end collisions than nonsmokers, while the smokers who had just had a cigarette performed even worse: they had 3.5 times the rear-end collisions as did nonsmokers. As testing progressed, and became more complex, nonsmokers outperformed smokers by wider margins.

As a smoker, I must state that I am concerned as to the findings of this article. I have an exceptional memory, however, it is not quite as sharp as it once was. I have considered quitting smoking, yet I have not yet taken any actions toward doing so; however, I have cut down from the amount that I previously have smoked, and am still progressing in this manner. This article has definitely forced me to reconsider my habit, as I'm sure it would be beneficial. I would advise all smokers to read this article and then evaluate their personal smoking habits.

Works Cited

"How Cigarettes Cloud Your Brain." Ponte, Lowell. Reader's Digest. March 1995.