SMOKING AND JUDGMENT

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[Reprinted with permission from the University of California, Berkeley Wellness Letter.] The effects of nicotine on the body are basically not good news, but one claim that smokers make has been borne out by scientific research: that smoking helps them think and keeps them alert. Thus nicotine, a psychogenic drug, is thought to improve performance--a benefit that smokers often cite as a reason for not quitting.

But new evidence says it probably isn't so. Reporting to the American Psychological Association, George Spilich of Washington College in Chestertown, Maryland, suggested that the earlier studies, though well conducted, were "based on tasks which demand little or nothing from high-order mental processes". Spilich set groups of smokers and nonsmokers at such tasks as driving (using a computerized simulator), reading and recalling a short story, and remembering a series of letters on a short-term basis. There were three groups: nonsmokers, smokers who were allowed to smoke freely, and smokers who weren't allowed to smoke for an hour before the experiment. All groups abstained from coffee and soft drinks for two hours before the experiment. The nonsmoking groups were asked to "sham smoke~' to equalize the effects on performance of simply handling cigarettes.

Both smoking smokers and abstaining smokers performed slightly, but not significantly, better than nonsmokers on simple, monotonous tasks, but as the tasks increased in complexity, the tables turned. In the simulated driving test, for example, the smoking smokers ,"'ere involved in almost three times as many rear-end collisions as the nonsmokers and almost twice as many as the abstaining group.

The study concluded that smoking may help with simple tasks, but "it exerts a negative effect upon more complex tasks which require access to working memory, long-term memory, and one's extensive knowledge base". From his data, Spilich also suggests that this negative effect becomes more pronounced when the situation demands the most complex thinking, as when a pilot is taking off or landing or when a machine operator is faced with a serious malfunction. The moral of the story is that drivers driving, pilots piloting, and others performing complex and important tasks will probably not perform optimally if they smoke while they work. And if smokers really are more accident-prone, this may influence liability suits, as well as industrial safety regulations and the cost of automobile insurance.