

"Evidence for compensation in smokers of
low yield cigarettes"

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This paper is concerned with the question of whether smokers of low yield cigarettes will increase the number of cigarettes a day they smoke to compensate. The method used was based on comparison of the smoking habits of subjects currently smoking cigarettes in two lar groups: "low yield" with a tar of <15 mg and a nicotine of <10 mg per cigarette and "high yield" which represented the remainder. The sample consisted of 7706 current, regular cigarette only smokers attending for Kaiser-Permanente multiphasic health check-ups in Oakland or San Francisco between July 1979 and August 1980 who provided sufficient information so that the tar and nicotine yield of the cigarette they currently smoked and the number of cigarettes could be determined.

As shown below, there was a consistent tendency for men and women at all ages in the "low yield" group to smoke more cigarettes a day than their counterparts in the "high yield" group, the differences averaging about 3 in men and 1.5 in women.

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Two major comments can be made about this paper. Firstly, similar comparisons in the U.K. tend to show the opposite relationship. From Table C2 of the new Statistics of Smoking in the U.K. 1982 Volume 1, prepared by Research Services for the Tobacco Industry Council, one can extract the following data on average annual consumption of manufactured cigarettes by age of Government Chemist "low tar" and "middle tar" smokers.

			<u>Age group</u>					
			<u>16-24</u>	<u>25-34</u>	<u>35-49</u>	<u>50-64</u>	<u>65+</u>	<u>All ages</u>
Men	Low	tar	5700	5700	7750	6600	6050	6700
	Middle	tar	6350	7600	7950	8100	6550	7350
	Difference		-650	-1900	-200	-1500	-500	-650
Women	Low	tar	4050	5050	6050	5700	4350	5350
	Middle	tar	5450	6500	6900	6000	4100	6000
	Difference		-1400	-1450	-850	-300	+250	-650

Secondly, both these sets of data are only indications of how many cigarettes smokers of different types of cigarette smoke now. One cannot infer necessarily that smokers who switch types would change the number smoked by the corresponding amount - smokers who smoke different types are self-selected and many differ in intrinsic desire to smoke. Far more useful evidence in relation to possible compensation by changing number of cigarettes smoked can be gained by

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study of people's consumption before and after switching. While Stepney (British Journal of Addiction, 1980, 75, 81-88) has shown in a review of evidence from 16 published experiments in which smokers switched to brands of lower yield for up to 6 weeks that there is some indication of a modest increase in consumption in relation to a decrease in nicotine yield (9% increase for a 50% decrease) in short-term studies, the large long-term study of Garfinkel (American Journal of Public Health, 1979, 69, 1274-1276) found no indication of long-term compensation at all. This last study is in my view the most reliable piece of evidence on compensation in terms of number smoked.

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