Letters

Smoking and Longevity Studies

G. H. Miller (Letters, 15 June, p. 1157) comments on Constance Holden's News and Comment article (9 Sept. 1983, p. 1034) about a study by Miller and Gerstein on smoking and longevity (*1*). I would like to correct some statements by Miller and cite several additional references dealing with this subject.

The Miller-Gerstein study used a cross-sectional, two-sample design similar to that used in the National Mortality Survey (*2–4*). Contrary to Miller's contentions, the National Mortality Survey determined mortality rates for a representative sample of the U.S. population from 1966 through 1968 as a function of cigarette smoking status. Precise definitions were used to classify persons by cigarette smoking status (never smoked, formerly smoked, or currently smoked) (*2, 3*). Former smokers were not included with persons who had never smoked. Smoking status was determined for almost 95 percent of persons who died from 1966 through 1968 and for the 1967 population-at-risk. These samples were shown to accurately represent the U.S. population as a whole (*3*). Among 35-year-old persons who had never smoked cigarettes, the life expectancy of the women was about 4 years greater than that of the men (*4*).

The Miller-Gerstein study determined the smoking status for only 59 percent of all 7400 deaths in Erie County, Pennsylvania, in 1972 through 1974 among individuals aged 30 years and older and for about 75 percent of a nonconcurrent 1979 sample of Erie County households with listed telephone numbers. No indication was given as to how accurately these samples represented Erie County as a whole. The remaining life expectancy at age 35 in Erie County was reported to be 46.0 years for males who had never smoked. This implies that it must have been about 30 years for males who had ever smoked in order to be consistent with 35 years for all Erie County males (as determined from publicly available vital statistics data). This large (16-year) difference is much greater than previous determinations of male smoker-nonsmoker longevity differences and may explain why this study showed no longevity differences between male and female nonsmokers.

In addition to the studies discussed by Holden, several others indicate that females who have never smoked outlive males who have never smoked. These include the American Cancer Society Cancer Prevention study (*4*), the California Seventh Day Adventist study (*4*), the Old Order Amish study (*5*), and the Alameda County Human Population Laboratory study (*6, 7*). Indeed, in the Alameda County, California study a detailed multiple logistic analysis was carried out of smoking and 15 other demographic and behavioral factors in an attempt to explain the male-female mortality differences, but women continued to have lower death rates than men no matter which factors were controlled for (*7*).

In summary, most existing evidence indicates that females who never smoked outlive males who never smoked by about 4 years. Thus, smoking may explain up to one half of the general male-female longevity difference, which is currently about 7.5 years at birth and 6.2 years at age 35.

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References and Notes

1. G. H. Miller and D. R. Gerstein, *Publ. Health Rep.* **98**, 343 (1983).
2. F. H. Godley, thesis, University of Maryland (1974).
3. J. E. Enstrom and F. H. Godley, *J. Nat. Cancer Inst.* **65**, 1175 (1980).
4. J. E. Enstrom, *Ca* **29**, 352 (1979).
5. R. F. Hamman, J. I. Barancik, A. M. Lilienfeld, *Am. J. Epidemiol.* **114**, 845 (1981).
6. L. Breslow and J. E. Enstrom, *Preventive Med.* **9**, 469 (1980).
7. D. L. Wingard, *Am. J. Epidemiol.* **115**, 205 (1982).

The Taub Case

In the article by Jeffrey L. Fox "Animal rights bill defeated in California" (News and Comment, 29 June, p. 1414), a misleading subheadline states, "meanwhile HHS upholds NIH halting Taub's grant because of animal misuse." The fact is that the Department of Health and Human Services (HHS) board found that the animals had not suffered misuse and that their condition was not due to inadequate veterinary care, but was a consequence of the experimental procedure, as stated later in the article. The board faulted Edward Taub's institute, IBR, for not ensuring regular visits by an attending veterinarian. Because there had been no problems in his small, stable colony, Taub had not found such assistance necessary. Taub's belief that he was providing adequate care was reinforced by the generally positive reviews given his laboratory by the U.S. Department of Agriculture veterinarian who inspected his laboratory 15 times during the period in question.

Also, Fox states that "The narrowly based HHS decision sidesteps the question of whether Taub's research is worth continuing. . . ." The importance of his research was simply not an issue. In fact, the decision explicitly states that "[b]oth NIH and the scientific experts who testified on behalf of the PI [principle investigator, Taub] at the hearing agreed that the studies were important and had valuable clinical implications."

On the basis of knowledge we have gained as expert witnesses for the defense in two court trials—in an appeal before a Public Health Service board and in the HHS hearing—we can make one thing immediately clear. The harshness with which the National Institutes of Health dealt with Taub depended in large measure on their belief that his monkeys had, indeed, suffered maltreatment at his hands. This opinion stemmed from the results of physical examinations made by two zoo veterinarians flown in by People for the Ethical Treatment of Animals. These veterinarians interpreted the conditions seen in some of the deafferented limbs as if they were present in physiologically normal limbs.

Unfortunately, NIH officials did not include someone with the expert opinion necessary to evaluate the conditions of the monkeys' limbs on the review committee that voted to suspend Taub's grant in 1981. In future cases, it is imperative that NIH be assured that it has benefited from the same degree of expert opinion in arriving at a decision to suspend or terminate a grant as it did when awarding a grant. We remain convinced that, had this been done in Taub's case at the outset of the proceedings, he would not have received such harsh treatment at NIH's hands and would have had NIH's support rather than its opposition at his court trials.

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