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CIGARETTE SMOKING AND LUNG CANCER

The question as to the propriety of launching drives in high schools against smoking of cigarettes because this habit causes lung cancer is debatable.

—Cigarette smoking as a cause of cancer of the lung is accepted almost entirely on the basis of statistical evidence.

—Statisticians of international reputation have analyzed the statistics on which the conclusions are based and failed to arrive at the same or similar conclusions.

—Errors in diagnosis of primary carcinoma of the lung are being reported in increasing numbers.

—Proponents of this theory have failed to take any other possible, if not probable cause of lung cancer into account.

—More and more, other etiologic factors are being proved from time to time, either with or instead of cigarette smoking.

—Items of proven truth continue to crop up as the sole or major cause of lung cancer.

As support for these theses let us mention a few items of recently publicized knowledge:

—*Viruses* have long been accused as possible causes of cancer. Now, more and more data are accumulating that certain viruses *do* produce cancer (including leukemia) in a greater number of birds and animals, and certain data point strongly to the possibility that some of these do produce cancer in man. (Note report of 17th Annual Symposium on Fundamental Cancer Research, University of Texas M. D. Anderson Hospital and Cancer Research Institute, February 20-22, 1963).

—Lung cancer is less frequent in Australia than in Great Britain, but Australians smoke more cigarettes. Also, men and women who migrate from Great Britain to Australia have become heavier smokers in accord with local habits, but have experienced a decline in the rate of lung cancer to a point 40 per cent below that of a similar group in Great Britain. This is interpreted to mean that other factors such as lack of air pollution (not with cigarette smoke) may account for the marked decline in lung cancer rate upon moving to Australia. ("Lung Cancer in Australia." The Med J Australia, June 30, 1962).

—A study of 13,307 death records at the Massachusetts Cancer Registry which comprised the accumulated life-time records of nearly all patients of the 30 state cancer clinics, reveals a more than 20 per cent overstatement of the actual number of deaths from cancer of the lung. This, in an institution where the greatest accuracy should be expected. ("An Appraisal of the Cancer Death Record." Proceedings of the National Academy of Sciences, December, 1962).

—Two articles have come to my attention that throw a further light on the causes of cancer of the lung:

a. (Tokuhata, George K., and Lilienfeld, A. M., Department of Chronic Diseases, School of Hygiene and Public Health, Baltimore, Maryland: Familial Aggregation of Lung Cancer in Humans. J. National Cancer Institute 30:289-312 (Feb.,) 1963).

In the summary, the first statement is as follows:

> Analysis of the data from a comparison of relatives of 270 lung cancer probands with those of the race-sex-age-resident matched controls indicates a significant excess mortality among proband relatives. This excess mortality was not accounted for by age, sex, generation, and cigarette smoking . . . .

b. Tokuhata, George K., and Lilienfeld, A. M.: Familial Aggregation of Lung Cancer Among Hospital Patients. Public Health Reports 78:277-283 (April) 1963.

This study was carried on like that quoted above under "a" excepting no attention was given to cigarette smoking. It included meticulous records on the patient, his past, and his family in patients admitted to Ros-

well Park Memorial Institute, Buffalo, N.Y. This is a hospital and research institution devoted to the study and diagnosis of patients suspected of having cancer and for treatment of cancer patients. Admissions between 1957 and 1960 were studied. These included 493 patients suffering from lung cancer. Lacking complete data, 132 were eliminated from the study, leaving 361. As controls, 722 noncancerous patients were selected.

In the summary of this study, these authors state:

> Results of an epidemiologic study among lung cancer patients and noncancerous patients admitted to the state hospital and their relatives are consistent with a genetic-constitutional hypotheses in lung cancer.
>
> A significant excess in lung cancer mortality was found among case relatives, particularly females, which was not accounted for by sex, age, generation factors associated with relatives. No such relationship was found among spouses of the cases and controls . . .

In concluding let us repeat our opening statement, in the form of a question. Is it in accord with our acclaimed scientific outlook to enter the nation's high schools and advise the students against cigarette smoking *on the grounds that lung cancer is due to this habit?* Sure, tell them they will be better off physically and economically and run no risk of dropping ashes in the nursing baby's eyes if they do not smoke; or use any other reasonable argument, but let us not tell them they are going to get lung cancer on the basis of cigarette smoking. Such a course might save us very red faces in the near future.

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