

ferences for each sex between the two communities for these two measurements could not be explained by differences in age or height. The differences may be due to difference in air pollution levels or to other variables which have not been examined thus far. * * * other variables in addition to age, sex, and height, which are assumed to have an effect on pulmonary function test results include weight, body surface area, smoking habits, occupation, and length of residence in the community. Each of these variables is being evaluated."

Thus, it appears far too premature to single out air pollution as even the possible cause of the difference in these two pulmonary function measurements between the two towns. For instance, a review of smoking habits reveals 21% nonsmokers in New Florence males, but only 18% in Seward males. For females, the comparable figures were 75% and 63%. Most observers believe there is little doubt about the effect of smoking on pulmonary function, so it would seem that these differences in smoking habits would more likely be responsible for the differences in pulmonary function than differences in air pollution.

In the X-ray study, the proportion of pneumoconiosis (dust disease of the lung, including silicosis) in Seward males was more than twice that for New Florence. It is speculated that this may result from the greater proportion of coal miners in Seward. Of the New Florence male group, 37.1% were "normal" on X-ray examination, whereas 36.4% of the Seward male X-ray examinations were so interpreted. However, the New Florence group shows a larger percentage of males with emphysema. On the other hand, 6 of 10 X-ray examinations of females in Seward were reported "normal," whereas only 5 of 10 of those of females in New Florence were so reported.

Dohan *et al.* (20) studied absences of 8 days or more from respiratory disease among female employees of the same company located in several cities. These absence rates were then correlated with various measures of air pollution. A correlation was found to exist between particulate sulfates in the air and this absence rate. However, for this study to have real meaning, respiratory illnesses causing absences of less than 8 days should also be studied, and absences from respiratory diseases among male employees of all durations should be studied. Additionally, looking at Dohan's data, a positive correlation can also be found between the absence rates studied and atmospheric vanadium and nickel, and a reverse correlation can be found with zinc.

Two conditions, possibly related but quite possibly distinct entities, are "Yokohama" asthma and "New Orleans" asthma. The first of these is found in U.S. servicemen stationed in the Tokyo-Yokohama region of Japan. It appears that the only sure cure is return of the patient to the United States. Just what percentage of servicemen is involved is not certain, but it seems to be considerably less than 100%, perhaps as high as 10%. Phelps and Koike (21) found that it is more likely to occur in individuals who had a past history of bronchitis or who were heavy cigarette smokers. The second condition, "New Orleans" asthma, was studied by Lewis *et al.* (22) Their studies were confined to Negroes since Negroes constituted the major patient load at the hospital where their studies were done. They found that the condition seemed to be associated with incomplete combustion particles containing silica. They believed these particles to arise from abandoned city dumps which periodically burst into flames. Certainly this could not be considered either an "industrial" pollutant or an automotive exhaust pollutant, yet there is a tendency for writers to relate the condition to ordinary general atmospheric pollutants. About the most that can be said at this time is that the exact causes of "Yokohama" or "New Orleans" asthma have not been completely worked out. Although perhaps related to air pollution, this is a relatively circumscribed air pollution which does not affect the total population, but only those persons peculiarly susceptible to it. For instance, it is not known whether Japanese residents of Yokohama are affected in the same way as United States service troops stationed there, or whether white residents of New Orleans are affected similarly to the Negro.

Zeidberg and Prindle (23) in summarizing their studies in Nashville state: "Pulmonary anthracosis appears to reflect an individual's exposure to environmental air polluted with coal dust.

"No association was found between anthracosis and specific pulmonary or cardiac symptoms or pathology."

Although no mention is made by the authors of sulfur dioxide, it must be presumed that, in a predominantly coal-burning town such as Nashville, the atmospheric sulfur dioxide levels would increase at least directionally as the