

PUBLIC HEALTH

Bad Urban Air Like Smoke

Polluted air and cigarette smoke are similar in composition but all environmental factors, including viruses, should be considered in study of lung cancer cause, Faye Marley reports.

► THERE is a remarkable similarity in the chemistry of polluted urban air and cigarette smoke, the National Conference on Air Pollution was told in Washington, D. C.

A discussion of air pollution and lung cancer is unrealistic unless all environmental factors are taken into consideration, however, Dr. Paul Kotin of the National Cancer Institute, Bethesda, Md., said. These include not only cigarette smoking but viral infections and other factors.

Dr. Ernest L. Wynder of Sloan-Kettering Division of Cornell University Medical College, New York, also spoke of the possible connection of viral infections and lung cancer. He said the "urban factor" is apparently responsible for a somewhat higher rate of this disease in cities than in rural areas, and that "studies on the possible influence of climatic factors as well as population density on the incidence of bacterial and viral infections of the lung may prove pertinent."

Dr. Roger S. Mitchell, a third speaker on the conference panel on health considerations, told of his work in Denver, Colo., at the Webb-Waring Institute for Medical Research, which contrasted the effect of Colo-

rado air on 126 autopsied lungs with findings in London on similar cases.

Polluted air, from both community and individual sources, Dr. Mitchell believes, is one of the causes of at least two major lung diseases: lung cancer and the chronic bronchitis-emphysema syndrome.

"In any discussion of air pollution and health," he said, "the problem of individual air pollution, or tobacco smoking, should be included, as we have consistently heard at this conference.

"Tobacco smoke contains numerous irritants, numerous carcinogens and a poison—carbon monoxide. It also contains unidentified substances which, like sulfur dioxide, temporarily inhibit ciliary action. It is thus quite obvious that community and individual air pollution are effective partners in crime."

Assisting Dr. Kotin in his reported study was Dr. Hans L. Falk, also of the National Institutes of Health. Dr. Dietrich Hoffmann, also of Sloan-Kettering Division of Cornell University Medical College, collaborated with Dr. Wynder in his study.

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Piasecki Aircraft

HYBRID AIRCRAFT—The Piasecki 16H is shown flying with airplane wings in addition to its helicopter rotor. The wings add speed, range and stability in combination with the pusher propeller housed in the novel ring-tail. The propeller in the ring-tail performs counter-torque function in hovering and provides propulsion for cruise flight. The aircraft is powered by a Canadian Pratt & Whitney PT-6 turbine.

MEDICINE

Cancer Death Rates Predicted for 1963

► LUNG CANCER will kill approximately 41,000 persons in the United States during 1963, the American Cancer Society predicts.

By far the leading cause of cancer deaths in men—some 35,500 men and 5,500 women are expected to die of it—the death rate is ten times what it was ten years ago. Only about five per cent of cases have five-year survival rates if there is "regional involvement." But about 75 per cent of cases could be prevented, the Society says.

Breast cancer for women leads in number of deaths. ACS estimates 25,000 deaths and 64,000 new cases in 1963. Uterine cancer, formerly the chief cause of cancer death in women, is showing a steady decline. The death rate has been cut 50 per cent for white women; 35 per cent for Negro women in the past 25 years. Last year 14,000 women died of it.

The 1963 Cancer Facts and Figures of the American Cancer Society estimate that about 177,000 persons will be saved but that about 88,000 cancer patients will probably die who might be saved by earlier and better treatment.

One cancer patient in three is being saved and the gain in lives saved adds up to some 44,000 patients each year. There are now 1,200,000 Americans alive today who have been "cured" in the sense that they are without evidence of the disease five years after diagnosis and completion of treatment.

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London Smog Emergency

► THE LONDON fog that killed more than 100 persons and hospitalized more than 1,000 aroused concern in Washington, D. C., especially because the Eastern part of the U.S. also had been blanketed with smog.

Surgeon General Luther L. Terry of the Public Health Service sent Dr. Richard A. Prindle, deputy chief of the division of air pollution, as his representative to London to observe fog conditions.

The air pollution in London was made worse than in the U.S. because of the greater amount of coal burned in the homes and factories there. Smoke concentration over London was ten times as heavy as normal, with sulfur dioxide concentration 14 times above normal.

London hospitals gave first priority to fog victims, many of whom required oxygen and antibiotic injections to assist their breathing. Smog masks were issued and the British Medical Association urged the burning of smokeless fuel to keep down smog.

This fog emergency did not reach the proportions of the one ten years ago when 4,000 persons died.

At that time most of the deaths were due to acute bronchitis aggravated by mechanical irritation of soot in the lungs.

In New York investigations are underway, the U.S. Public Health Service said, to find out whether or not hospitals ad-

mitted significant numbers of patients affected by smog.

A national conference on air pollution was held in Washington, Dec. 10-12, at which nearly 80 engineers, health officials, physicians and others explored ways to control polluted air.

Although emergencies such as killed 20 Donora, Pa., fog victims in 1948 do not occur often, the toll of disease caused by auto exhaust and other air pollutants added to fog is believed to be enormous.

On the eve of the December National Conference on Air Pollution in Washington, D. C., Dr. Terry said what has happened on London, New York and other cities here and abroad cannot be allowed to overshadow the fact that "air pollution, unless it is more effectively controlled, will go on less spectacularly but just as surely taking a heavy toll of life and property year after year."

The recent smog episode in London, however, provided the U.S. Public Health Service its first opportunity to study the immediate effects of an air pollution disaster in progress. Similar air poisoning crises in the past have always been recognized after the fact through examination of weather and death reports.

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