

PUBLIC HEALTH

Anti-Smoking Bill Planned

See Front Cover

► **LEGISLATION** empowering the Government to take action against the health hazards of cigarette smoking will be asked by Sen. Maurine Neuberger (D-Ore.).

The U.S. Public Health Service report on smoking and health makes such a bill a live issue.

The U.S. Food and Drug Administration frankly admits that it now has no jurisdiction over labeling of tobacco packages because tobacco has not been considered either a drug or a food in legal terms. It does not fit into any neat category like aspirin bottles, which carry warnings: "Please keep this and all other medicines out of the reach of children."

The follow-up committee to recommend regulations, legislation or other measures based on the first report of the Advisory Committee has not yet been appointed.

The Departments of Labor and Commerce, as well as other agencies and the tobacco industry, must be taken into consideration in appointing the second committee. The White House itself may be responsible for enforcing any recommendations.

The 1962 report on Smoking and Health of the Royal College of Physicians in London did include suggested preventive meas-

ures and British cigarette consumption dipped about 12% shortly after its release, but cigarette sales in Britain are now back to normal.

On this week's front cover is a picture of a typical tobacco field in the United States which may become a less frequent sight if cigarette smoking declines. (See SNL, 84:373, Dec. 14, 1963.)

Some of the suggestions in the British report that may be considered in this country:

1. Remove harmful substances from tobacco smoke. If filters are used, they should be tested by some official agency.
2. Modify the hazardous content of tobacco, possibly reducing cancer-causing tar.
3. Adopt safer smoking habits, including the stubbing out of the second half of the cigarette.
4. Substitute pipe and cigar smoking for cigarettes.
5. Discourage smoking by adolescents as well as adults.
6. Restrict the advertising of cigarettes and educate the public on the danger of cigarette smoking.
7. Label cigarettes as to the amount of tar, volatile irritants and nicotine in the smoke.
8. Restrict smoking in public places.
9. Increase taxes on tobacco.

• Science News Letter, 85:37 Jan. 18, 1963

PUBLIC HEALTH

Lose Eight Years of Life

► **SMOKING SHORTENS** life four years, on the average, whereas radioactive fallout cuts down the average lifetime only one week, two-time Nobel Prize winner, Dr. Linus Pauling charged.

Speaking on the eve of the long-awaited report by the Government's advisory committee concerning the effects of smoking on health, Dr. Pauling said that there was "no comparison" between the dangers of smoking and fallout.

Dr. Pauling of the Center for the Study of Democratic Institutions, Santa Barbara, Calif., won the 1962 Nobel Prize for Peace for his battle against continued testing of nuclear weapons, with the resulting hazards of radioactive fallout. His other Nobel Prize was awarded in 1954 for chemical discoveries.

Smoking, he told the Women's National Press Club in Washington, D. C., is "much more dangerous" than radioactivity from weapons tests.

Since the average figure for lifetime decrease is four years, this means a smoker's life would be shortened as much as eight years, while the nonsmoker's would not be cut at all.

Although decrease in life expectancy due to radioactive fallout is only one week, any one person might suffer a loss of five to 15 years from his life. And that person would be selected by chance, not by his

own choice as in the case of a cigarette smoker.

Dr. Pauling put his grim statistics another way: a 50-year-old man who smokes a pack of cigarettes a day has aged as much as a 58-year-old man who does not smoke.

On the more cheerful side, Dr. Pauling noted that it might some day be possible to determine before conception the sex of a human child. This has been done already for rabbits, he said. The sex-determining chromosomes are separated by electrophoresis and the sperm of the desired sex implanted in the egg by artificial insemination.

Dr. Pauling also called again for public pressure on Congress to reduce the money spent for the U.S. space program by the National Aeronautics and Space Administration and for defense by the military. Human suffering could be greatly reduced if these funds were spent for research to gain basic understanding of disease processes, he said.

From this could come methods of controlling such diseases as cardiovascular ailments, mental illness and cancer.

Dr. Pauling suggested that one method of maintaining peace and preventing nuclear war would be to place the U. S. nuclear stockpile under the control of both the U. S. and the United Nations, and the USSR stockpile, in like manner, under the control of both Russia and the United Nations.

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BIOCHEMISTRY

No Blood Barrier Seen In Thymus Gland Study

► **THE THYMUS**, master gland of the immune response, which scientists believe holds the secret to rejection or acceptance of organ transplants, has no absolute blood barrier to the uptake of substances injected to stimulate antigens, a New York scientist believes.

This contradicts conclusions of other investigators and encourages further investigation of possible medical use.

If the mysterious gland, located underneath the breast bone, does not respond to substances ordinarily administered, it is not because the antigenic stimuli do not reach the thymus, Dr. Ira Green of Montefiori Hospital, New York, reported in the British scientific journal *Nature*, 200:1099, 1963. It is a matter of degree of slowness or speed, he said.

Both newborn and adult mice were used for injection of trypan blue and other chemicals including thorotrast and carbon.

Thorotrast, which is a radiopaque colloidal solution of thorium dioxide, and carbon were frequently found in the newborn mouse thymus. The adult thymus was receptive to trypan blue.

"The fact that the thymus of the newborn appears more permeable to particulate (fine-particle) material than the adult thymus is of interest and deserves further investigation," Dr. Green concluded.

Dr. Green was assisted in the study by Kathryn Bloch.

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Bell Telephone Laboratories

MINIATURE LASER—Dr. Alan D. White of Bell Telephone Laboratories, New York, adjusts a new miniature helium-neon gas laser which he developed with Dr. Eugene I. Gordon. The laser has a gas discharge length of only two inches and is capable of oscillating at a single frequency of visible red light.