

## MEDICINE

**Cigarette Smoking Harms Lung Tissue**

➤ CIGARETTE SMOKING scars tissue essential to breathing, the National Tuberculosis Association meeting was told.

Specimens of lung tissue removed from 1,582 patients, mostly men, who had died at the East Orange, N.J., Veterans Administration Hospital, were used to make the tissue study, which was correlated with information obtained from relatives regarding smoking habits and other factors.

Dr. Oscar Auerbach, senior medical investigator at the hospital, said in Denver that only 11 of the patients appeared to have been exposed to heavy occupational dusts, fumes or vapors, which can produce serious changes in the lungs.

These 11 men were excluded from the "matched pair" comparisons, which consisted of workers in similar occupations, with the same occupational exposure.

Among those who continue to smoke cigarettes, Dr. Auerbach said, the degree of change in lung tissue increases greatly with advancing age.

Other findings included:

Those who smoked less than a pack of cigarettes a day had more scar tissue than those who had never smoked regularly.

Those who smoked from one to two packs a day had far more scarring than those who had smoked less than a pack a day.

Current pipe and cigar smokers showed somewhat more changes than did persons who had never smoked.

Collaborating with Dr. Auerbach in the study were Dr. A. P. Stout, also of the East Orange VA hospital, and Dr. E. Cuyler Hammond, director, statistical research section, American Cancer Society, and Lawrence Garfinkel, also of the society.

• Science News Letter, 83:399 June 22, 1963

## MEDICINE

**More Than 75% of New U. S. TB Cases Advanced**

➤ BETWEEN 75% and 80% of the more than 50,000 new tuberculosis cases reported annually in the United States are in an advanced stage, a symposium on the private physician and tuberculosis was told.

The hopeful outlook is that more effective treatment is available than ever before, Dr. J. Arthur Myers of the University of Minnesota told the meeting at Washington, D. C. Eradication of TB needs the help of physicians in diagnosing the disease by way of the tuberculin reaction. Immediate examination should follow up the tuberculin test, and if clinical disease is not found, he said periodic examinations should be made as long as TB is not detected.

This means that the great bulk of TB work can be done in a private physician's office, Dr. Myers pointed out. He praised the contribution that both physicians and veterinarians had made to the decline in TB.

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American Medical Association

**WARNING SYMBOL**—A new universal symbol to be worn by persons with a special physical condition such as diabetic coma or allergy to penicillin has been announced by the American Medical Association. It will be sold commercially and the price will depend upon the material used. For information, write to the American Medical Association Department of Health Education, 535 N. Dearborn St., Chicago 10.

## BIOCHEMISTRY

**Poison Chemical Found In Smokers' Bodies**

➤ A POISONOUS chemical has been found in the body fluids of smokers. In non-smokers it is virtually absent.

The chemical, called either acetonitrile or methyl cyanide, comes from tobacco smoke. One cigarette produces about one milligram of the poison.

Research indicates that measuring the amount of acetonitrile in body fluids may be more accurate than counting the number of cigarettes smoked, for telling how much actual tobacco smoke exposure a person has had.

Drs. John K. Campbell, John W. Rhoades and Arthur L. Gross of the Southwest Research Institute, San Antonio, Texas, reported their findings in the British scientific journal Nature, 198:991, 1963.

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## SURGERY

**Help Kidney Function With Plastic Tube**

➤ KIDNEY FUNCTION can now be replaced by a plastic tube that works like a conduit to take out wastes.

The conduit has been used successfully in four patients at Ann Arbor, Mich., who were near death with complete kidney failure. Five others have been treated in the same way at Peter Bent Brigham Hospital, Boston.

Although not in general use, this is the way the experimental conduit works:

A simple surgical operation makes it possible to sew the silicon rubber conduit into the patient's abdomen. Then at least once a week a special fluid is poured

through the tube into the abdomen to surround the intestines and extract kidney wastes by a process of osmosis. For some 12 to 72 hours, the fluid enters and drains through the same plastic porthole, after which the patient gets a new lease on life.

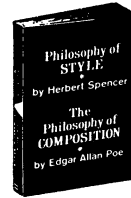
At the University of Michigan Medical Center, one patient set a medical precedent when his kidneys began functioning again after seven months of "peritoneal dialysis."

The peritoneum is the transparent membrane that covers the intestines, and it is used to replace kidney function in dialysis, which separates substances in solution.

Teflon plastic, the material used to coat the insides of greaseless frying pans, may be used instead of silicon rubber. The important thing is to use plastics that are so inert the body will tolerate them for extended periods of time.

Dr. Harold P. McDonald, assisted by Drs. John M. Weller and Robert E. Stevens, is working on the still experimental project.

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