

## MEDICINE

**Treat Bronchial Asthma With Baking Soda**

► INJECTIONS of sodium bicarbonate, commonly called baking soda, have been reported successful in treating acute bronchial asthma that did not respond to bronchodilators such as epinephrine.

The treatment should not be used in every case of prolonged severe attacks called status asthmaticus, researchers pointed out, but only in those which have significant respiratory acidosis.

Six patients at the Mary Imogene Bassett Hospital, Cooperstown, N.Y., were successfully treated with bicarbonate of soda injections, a team of physicians reported in the *New England Journal of Medicine*, 272: 1200, 1965.

The patients were extremely ill with continuous bronchial spasms and severe respiratory acidosis that did not respond to any treatment until the sodium bicarbonate injections were given.

The doctors said this treatment is recommended only when the diagnosis of acute intractable bronchial asthma is certain since it might be dangerous if used in treating cardiac asthma.

In situations where laboratory facilities are not available for the assessment of acidosis, and when the bronchial asthma diagnosis is certain, adults may be given injections at intervals of 15 to 30 minutes until improvement occurs.

Respiratory acidosis is due to an increase in carbonic acid concentration and is the result of an increased carbon dioxide tension in the air sacs of the lungs. The researchers said their experience had shown that bicarbonate treatment had resulted in increased lung ventilation and fall in arterial-blood carbon dioxide tension.

"This has occurred whether or not there has been severe underlying chronic pulmonary disease," they stated.

Dr. John C. Mithoefer, director of the cardio-pulmonary laboratory of the hospital, and Drs. Richard H. Runser and Monroe S. Karetzky, under training grants from the National Institutes of Health, Bethesda, Md., reported the findings.

• Science News Letter, 87:409 June 26, 1965

## PUBLIC HEALTH

**Cigarette Smoking Affects Gullet Adversely**

► CIGARETTE smoking has an adverse affect on man's gullet, a group of researchers told the annual meeting of the National Tuberculosis Association and the American Thoracic Society in Chicago.

In a study of 10,413 esophagus tissue sections taken at autopsy from 1,268 men, the scientists found 72% more pre-cancerous cells in smokers than nonsmokers. However, none of the men had died from cancer of the esophagus. The frequency of these pre-cancerous cells, with their irregular size and shape and atypical nuclei, increased with the amount the victim smoked and with his age.

Fewer pre-cancerous cells were found in

the tissue sections of former cigarette smokers when compared with current smokers. The number of atypical cells from pipe and cigar smokers fell between the number for current smokers and ex-smokers, reported Dr. Oscar Auerbach, senior medical investigator at the Veterans Administration Hospital, East Orange, N.J., Dr. A. P. Stout, professor emeritus of surgery, College of Physicians and Surgeons, Columbia University, N.Y., and Dr. E. Cuyler Hammond and Lawrence Garfinkel, both of the Statistical Section of the American Cancer Society.

These findings about the esophagus are "strikingly similar to previous studies of the trachea and bronchial tubes," the researchers noted.

However, they pointed out that the degree of the relationships between cigarette smoking and tissue changes was less pronounced in the esophagus than in the bronchial tubes.

Trained interviewers obtained information about the patients' smoking habits from members of their families. However, this background information was not available to the pathologist when he examined the tissue sections.

• Science News Letter, 87:409 June 26, 1965

## Do You Know?

Plastic *corneas* are being surgically implanted and can produce useful sight in persons who would otherwise be totally blind.

The *brain* of rats contains no pain-sensitive nerve endings.

*Infections* as mild as those produced by live vaccines against smallpox and yellow fever cause depression of nitrogen balance in children.

The earth's *crust* west of the Rockies is about 22 miles thick.

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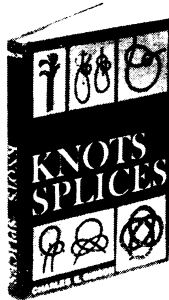
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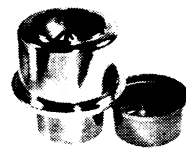
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