

has been used for many years. It is effective but expensive. It converts the mercaptans to odorless sulfur compounds which, however, remain in the gasoline and act as "poisons" that reduce the effectiveness of tetraethyl lead in raising its octane rating.

The new process removes the mercaptans from the gasoline—takes them away entirely—by dissolving them out. The gasoline thus has already higher anti-

knock qualities than untreated or "sweetened" gasoline and requires less ethyl to raise it to the desired standard.

The solvent contains caustic soda, commonly used to clean drain pipes, and methanol, an alcohol much used as an anti-freeze in automobile radiators. After use, the solvent is itself purified and can be used over and over again.

Science News Letter, November 15, 1941

MEDICINE

Vitamin K May Help Control Hemorrhage in Tuberculosis

Vitamin Relieves Prothrombin Deficiency, Found in About a Half of Patients Proportional to Sickness

THE anti-bleeding vitamin K may help to check hemorrhage in patients with tuberculosis of the lungs, Dr. R. F. Sheely, of the White Haven, Pa., Sanatorium, reports (*Journal, American Medical Association*, Nov. 8).

In four patients given doses of this vitamin after they had had hemorrhage, the bleeding was checked fairly quickly, judging by the fact that within a day or two after the vitamin treatment the sputum was no longer streaked with blood.

Vitamin K acts to check bleeding by stimulating production of prothrombin, a substance necessary for the normal

clotting of blood that is shed. A significant deficiency of prothrombin was found in 51 of 106 patients with active and chronic pulmonary tuberculosis, Dr. Sheely reports. The sicker the patient, the greater was the prothrombin deficiency. Dr. Sheely believes that the prothrombin deficiency in tuberculous patients can be relieved by injections of vitamin K. This would also increase the tendency to clotting of the blood, which would help to control spontaneous hemorrhage and would also help to prevent hemorrhage if surgical operations needed to be performed on the patients.

Science News Letter, November 15, 1941

PUBLIC HEALTH

Pneumonia Mortality Declined During Influenza Epidemic

A DECLINE in pneumonia deaths during an influenza epidemic occurred, for the first time on record, during the winter of 1940-1941, statisticians of the Metropolitan Life Insurance Company announce.

A minimum figure for pneumonia deaths below which further sizable reduction is unlikely is being approached, their studies indicate.

Fatal pneumonia cases are now concentrated in young children and comparatively old people. Many of the deaths, about one-fourth in the opinion of attending physicians, were due to

complicating diseases with pneumonia.

Sulfa drug treatment seems to have largely replaced serum treatment, the study showed. Sulfathiazole was the favorite drug last winter, but sulfadiazine is likely to be used far more widely this coming season. Bacteriological studies to determine the germ responsible for the pneumonia in each case seem to have been largely abandoned in urban centers.

Delay in calling doctors was frequent in the fatal cases of pneumonia. Even among older people with chronic disease more are dying of pneumonia than

need to, and many people still suffer attacks of pneumonia which might be prevented.

"Further reduction in pneumonia mortality is attainable and worth fighting for," the statisticians conclude from their studies.

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recent series is under 5%, less than half that of the earlier series.

The great danger in appendicitis when the appendix ruptures is that of peritonitis from germs which escape from the appendix. Sulfathiazole helps the body to fight this germ attack as it helps fight such germ attacks as pneumonia.

Science News Letter, November 15, 1941

Iodine Without Thyroid

UPSETTING previous ideas of how the body uses iodine, a chemical known to be essential to health, Dr. Asher S. Chapman, of the Mayo Clinic, has discovered that the body can use this element even when the thyroid gland has been removed.

Thyroxine, the powerful hormone produced by the thyroid gland, contains iodine and it has generally been thought that the effects of iodine on the body and the body's need for it were determined by this gland.

Animals whose thyroid glands had been removed, Dr. Chapman found, lost more weight, utilized their food more poorly, drank more water and had a significantly lower basal metabolic rate when kept on diets very low in iodine than when given adequate iodine.

The body, it appears, from these studies, not only can use iodine when there is no thyroid gland to turn it into thyroxine for stimulating various body processes but may even make a compound like thyroxine in tissues other than the thyroid gland.

Science News Letter, November 15, 1941

● RADIO

Thursday, November 20, 3:45 p.m., EST

On "Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Morton C. Kahn, of Cornell University Medical College, will discuss the prevention of tuberculosis.

Listen in each Thursday.

Monday, November 24, 9:30 p.m., EST

Science Clubs of America programs over WRUL, Boston, on 6.04 and 11.73 megacycles.

One in a series of regular periods over this short wave station to serve science clubs, particularly in high schools, throughout the Americas. Have your science group listen in at this time.