lungs and digestive tract through the nose and mouth, they do not stop direct irradiation.

Continuing in action on contaminated ships would necessitate calling on the men to risk a very high casualty rate from a new and therefore terrifying cause. In the history of American wars, volunteers have never been lacking for ultra-hazardous missions, such as underwater demolitions and parachute jumps. Nevertheless, it is felt that asking men to stick at their posts and be "rayed" to death is a serious responsibility to impose on any officer.

Science News Letter, August 17, 1946

MEDICINE

Penicillin for Skin Anthrax

Studies during the war prove skin anthrax can be cured by penicillin. Former treatments used were anti-anthrax serum and cutting out sores.

➤ RECOVERY of 25 patients with skin anthrax by penicillin treatment was achieved at Camp Detrick, Md., where biological, or germ, warfare studies were conducted during the war. Presumably the patients acquired the disease during efforts to develop anthrax as a weapon or to develop defenses against it in expectation of its use by the enemy.

The first three cases occurred before December, 1944, although dates of occurrence of the others and how the patients got the disease are not mentioned in the report by Maj. Harold V. Ellingson, Capt. Paul J. Kadull and Capt. Henry L. Bookwalter, Army, and Lieut. Calderon Howe, Navy, in the *Journal of the American Medical Association,* (Aug. 3).

In three of the patients, anthrax germs got into the blood as well as the skin sores. In the past this was considered a sign that the patient might not recover. These three patients, however, did get well through the penicillin treatment.

Anthrax germs disappeared from the skin sores in 24 hours or less in 22 of the patients, the Army and Navy doctors point out. In spite of this the sores went through the stages of getting larger, deep red, bleeding, breaking of the blisters, and drying with a tough black crust typical of anthrax before the days of penicillin treatment.

This suggested that a "tissue damaging factor" was produced by the germs before treatment was begun. Such a factor was subsequently discovered and will be reported by other scientists.

Anthrax is a disease of cattle which humans get from handling infected hides or hair. Aside from any potential use as a weapon in war, it is an important medical problem in the wool and leather industry. It used to kill 13 of every 100 attacked.

Cutting out the sores was the standard treatment years ago, but deaths ran high. Antianthrax serum, arsenical drugs and sulfa drugs were later used.

First report of penicillin treatment, by which three women wool workers were cured, was by Drs. Franklin D. Murphy, Alfred C. La Bocetta and John S. Lockwood, of the University of Pennsylvania. That report was made in December, 1944 (*SNL,* Dec. 16, 1944). The Army and Navy doctors at Camp Detrick, however, had already given penicillin to their first three patients but for security reasons no report was made public.

Science News Letter, August 17, 1946

CHEMISTRY

Acetylene May Be Made From Natural Gas

➤ ACETYLENE gas, best known in America for its use in welding, may soon be commercially produced in this country from natural gas instead of from calcium carbide as at present. A German process of making it from coal gas is one of the important discoveries of American scientists investigating chemical secrets of former enemies.

In addition to its use in the oxy-acetylene flame for welding and cutting metals, acetylene is the starting point in the synthesis of a large number of organic compounds, and its manufacture in America was a $15,000,000 industry in prewar days. Acetic acid is made from it in great quantities by a catalytic hydration process. Acetic acid is well known in vinegar but its greatest use is in making plastics of the cellulose acetate type, including cellulose acetate silk, the best kind of rayon.

The German methods for deriving acetylene from coal gas are said to be more efficient than American processes. The United States has large quantities of natural gas, of which only a relatively small amount is now used for the production of chemicals. Chemists feel that the German methods are adaptable to the production of acetylene from natural gas, giving America another source of this important basic chemical.

Further investigation of the German process is now being made by American chemists overseas. The findings will be made public through the Office of the Publication Board, U. S. Department of Commerce.

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