

## MEDICINE

# Gas Gangrene Toxoids

► TOXOIDS for protection against gas gangrene, dangerous infection of deep, dirty wounds such as occur on battlefields, were ready for trial in the armed forces shortly before V-E day, Dr. Irvin S. Danielson of Lederle Laboratories revealed at the meeting of the New York Academy of Sciences.

The cessation of hostilities interrupted the trials, but previous tests on several hundred human volunteers gave results that scientists believed showed they were protected against four types of germs that produce gangrene. One of these was *Clostridium perfringens* which is found in 50% to 80% of gas gangrene in war wounds. Gas gangrene develops in from several percent to a fraction of one percent in war wounds, depending on the theater of operation. Mortality is high. In the central Mediterranean area it was over 60% in one series of 185 cases.

## MEDICINE

# Antitoxin For Diphtheria

► THE DIPHTHERIA patient's chance for survival depends on the day of the disease antitoxin is first given. The earlier he gets it, the better his chance for getting well, Dr. Franklin H. Top of Detroit reported to the American Public Health Association.

Cases of the severe, gravis type can be cured by antitoxin if it is given early enough and in large enough doses. Not even penicillin can take the place of antitoxin for diphtheria. The reason is that although penicillin can stop the germs in the test tube, it cannot neutralize the poison they produce. It is this poison, or toxin, that causes the symptoms and can kill the patient. Penicillin, however, may be useful in treating diphtheria patients if complications occur or

Chemical remedies and specific antiserum have not been outstanding in their ability to control the infection, Dr. Danielson pointed out. Work on development of vaccinating agents or toxoids against gas gangrene was begun in 1941, both independently and under contract with the Office of Scientific Research and Development. This work was done by scientists at the University of Cincinnati, New York University, Babies Hospital in New York, George Washington University, the National Institute of Health and the Lederle Laboratories.

As a result toxoids were developed which gave solid immunity to mice, guinea pigs, rabbits and dogs against living germs and toxins of three gas gangrene infections. These same preparations gave comparable results in the human guinea pigs.

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if the patient has streptococcus infection at the same time.

Alum-precipitated toxoid, called APT for short, is Dr. Top's favorite weapon for preventing diphtheria, although a number of other preventive substances can be used. All babies between nine months and one year of age should get this protection, given in two injections one month to six weeks apart.

Booster doses are advised at the age of two and again before entering school for the first time because the number of cases and carriers of diphtheria is declining. This decline cuts down the

chance of the child's getting a natural booster of his immunity through small doses of germs caught from carriers or patients he might come in contact with.

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## AGRICULTURE

# DDT to Halt Worms in Apples

► THE UNPLEASANT experience of finding a worm (or maybe only a half-worm) in an apple is due to become less frequent, as DDT spraying becomes more widely adopted by orchardists. This year, U. S. Department of Agriculture scientists state, this revolutionary insecticide will probably be used in from one-third to one-half of all American apple orchards.

Most of the so-called worms in apples are not really worms, but the larvae of the codling moth. Against this pest DDT is peculiarly effective. It has also been found deadly to a number of other fruit-damaging insects, including pear thrips, oriental fruit moth and grape leafhopper.

In the concentrations used at present, however, DDT does not kill leaf mites, woolly apple aphid and red-banded leaf-roller. These even increase in abundance after DDT spraying, due partly to its effect on the predatory and parasitic insects that ordinarily hold them in check. Something will have to be done about this situation before DDT can be considered an unqualified success as an orchard spray.

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The place of *cancer* in the medical school curriculum is to be made more important; a national committee is planning ways by which medical students can be informed about all the latest developments in cancer treatment.

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