

## MEDICINE

# Don't Waste Penicillin

Though there is now enough for general civilian use as well as for the armed forces, the precious drug should not be used except for certain conditions.

➤ **EVEN** though there is now enough penicillin for general civilian use as well as for the armed forces, there is not enough of it to waste any. Use of the precious mold chemical in conditions which it does not remedy would be a waste.

Experience with over 5,000 cases which have been carefully studied under the auspices of the National Research Council and the Office of Scientific Research and Development show that penicillin is good for the following conditions:

1. All staphylococcal infections with and without blood stream involvement including acute and chronic osteomyelitis, carbuncles and soft tissue abscesses, meningitis, cavernous or lateral sinus thrombosis, pneumonia, empyema, carbuncle of the kidney, wound infections, burns and endocarditis (a form of heart disease).

2. All cases of clostridia infections, which includes gas gangrene.

3. All hemolytic streptococcal infections with invasion of the germs into the blood and all serious local infections. The list of these conditions includes cellulitis, mastoiditis with brain involvement, pneumonia and empyema, childbed fever, peritonitis and endocarditis.

4. Childbed fever and local infections due to anaerobic infections.

5. Meningitis, pleurisy and endocarditis due to pneumococci and all sulfa-drug-resistant pneumococcal pneumonia.

6. All gonococcal infections, including those complicated by arthritis, eye trouble, endocarditis, peritonitis and epididymitis.

7. All cases of anthrax.

8. All cases of chronic pulmonary suppuration in which operations are contemplated.

9. All meningococcal infections in which sulfa drugs fail.

10. All cases of bacterial endocarditis in which the heart trouble is due to germs susceptible to penicillin.

Syphilis is listed as a condition in which penicillin has been found effective but its position not definitely defined.

Influenza, tularemia, undulant fever,

tuberculosis, acute rheumatic fever, acute and chronic leukemia, malaria, infantile paralysis, virus infections and cancer are listed, along with a number of less familiar ailments, as conditions for which penicillin should not be used because it does not have any effect on the illness.

*Science News Letter, March 24, 1945*

## Rushed by Air

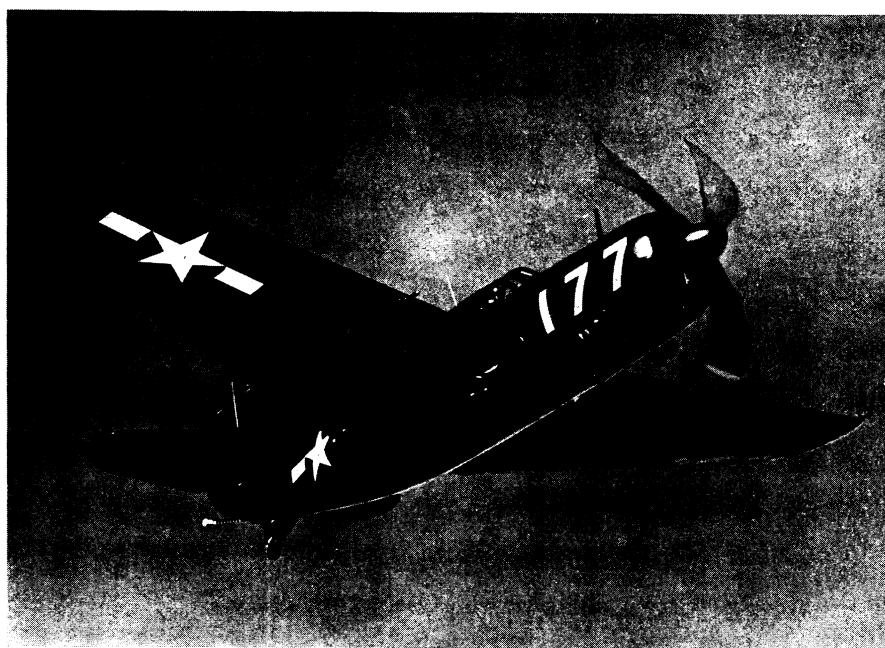
➤ **A HUNDRED** and thirty billion units of penicillin, or about 6,500,000 doses of the life-saving mold chemical, were rushed to the nation's drug stores, hospitals and drug supply houses for civilian use which began on March 15.

Between that date and April 1, a total of 130,000,000 units will be available for civilian use by War Production Board allocation. (From 5,000 to 40,000 units are needed in each injection, depending on the illness.) This is more than three times as much as has ever been released for an entire month by WPB's civilian

penicillin distribution unit in Chicago. For the month of April, the civilian allocation will be increased to 150,000,000 units. After that, monthly allocations are expected to be increased each month.

The nation's airlines are carrying large quantities of the life-saving chemical, which must be kept at a temperature of 50 degrees Fahrenheit or less. Some of it, from E. R. Squibb and Sons and Winthrop Chemical Co., was shipped by air express during the first week in March, in anticipation of the new WPB allocation. Cheplin Laboratories, at Syracuse, N. Y., shipped in excess of 5,000,000 units, most of it by air express, to about 200 distribution centers throughout the United States during Wednesday night, March 14, and Thursday morning, March 15. Charles Pfizer and Co., with a March allocation of over 50,000,000 units, is shipping to six large distributors.

Although penicillin for civilian use will go into drug stores, it probably will not go directly from the producers to the neighborhood druggist or the physician. Like many other drugs, it will go from producer to local distributor and thence to the drug store and the physician. Some of the penicillin producers are drug producers with their own distribution centers. Others are chemical manufacturers who never before have been medical distributors and will dis-



**CURTIS SB2C-4**—Looking deadlier than ever in the Navy's new all-midnight blue camouflage, this is the newest version of the SB2C Helldiver dive-bomber and is revealed to carry one of the greatest loads of destructive power ever mounted in a single-engine aircraft. (See SNL, March 3.)

tribute through firms already in this business.

*Science News Letter, March 24, 1945*

## Doctors Worried

► WITH THE release of penicillin for general civilian use, physicians are beginning to worry over its possible indiscriminate use, particularly if and when it becomes available in forms the layman can give himself. These may include pills, lozenges, chewing gum, dental paste, vaginal jelly, face creams, shaving pastes and similar products.

Two physicians, Lieut. Leslie A. Falk, of the Army Medical Corps, and Dr. Herman Goodman, of New York, have already written to the editor of the *Journal of the American Medical Association* on the subject. Their letters appear in the March 17 issue of the journal.

Development of a sense of false security is perhaps the greatest danger, in the opinion of Lieut. Falk.

"Penicillin is of no use in many diseases, and in others there is danger from inadequate dosage," he points out. "For example, it is not hard to visualize that a patient with a chancre would hear that penicillin cures syphilis, would get hold of some, take it (or have it administered) in inadequate dosage, see his chancre dis-

appear, feel that he has been cured of the disease, and then develop cerebrospinal or cardiovascular syphilis many years hence. Numerous other examples can be imagined, and some have probably already occurred."

Danger of inadequate dosage is also stressed by Dr. Goodman. He suggests that not only will sick people in such cases fail to get well but that "a large army of infection carriers" may develop from persons who have not had enough of the mold chemical to eradicate the germs.

A person treating his own strep sore throat with penicillin cough drops or chewing gum is probably one example of what Dr. Goodman fears. Such a person might absorb enough penicillin to make him feel better but not enough to clear up the infection and he would go around spreading it to others.

Continuing research on best methods of using penicillin, and prevention of its abuse by the industry, medical and pharmaceutical professions and government agencies are urged by Lieut. Falk. He also stresses the need to retain enough government control to prevent development of shortages through misuse of the precious material and to prevent a "riot of commercial penicillinization of our population."

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sight to the target is the direction in which the plane is pointed, a slip or skid may cause the rocket to travel at 600 miles an hour at an angle of 45 degrees to the target. These factors, and others, must be taken into consideration by fighter pilots who are also gunners and rocketeers.

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*Dogfish shark*, the liver of which is now America's chief source of vitamin A, is so called because of its great appetite for fish; the Pacific dogfish, closely related to the Atlantic variety, is a four-foot gray shark.

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### ORDNANCE

## Rockets Prove Themselves

► THE TREMENDOUS destructive power of rockets has proved these new offensive weapons as effective against enemy ground units and moving targets. A report on the results of 323 sorties in which 1,117 rockets were expended showed that 35 locomotives, 85 tanks, 15 armored cars, 164 motor transports, 19 gun positions, 9 aircraft hangars, 6 warehouses and factories, 36 good cars and 2 ships had been destroyed in the European theater of war, by one squadron over a period of two months. This means that a total of 362 items were destroyed by rockets. About 35% of the rockets were destructive hits.

An analysis of these figures, prepared at the Fighter Gunnery school of the Army Air Forces at Foster Field showed that an average of three or less rockets are fired to get one of them accurately knocking out an enemy locomotive, a motor transport or a gun position. About five rockets are expended for each tank knocked out, tanks being such small tar-

gets that they are harder to hit.

Rockets have terrific penetration effect, but little fragmentation effect on enemy targets. A five-inch rocket launched from a P-47 or a P-38 can cut through three feet of reinforced concrete and four feet into semi-reinforced concrete. This is equivalent to the fire power of a Navy five-inch gun. Rockets thus turn a fighter plane into flying battleship.

Trained fighter pilots learn to launch rockets and fire bullets from swift combat ships at this school under the direction of Col. H. H. Van Auken, a veteran of 17 years' service with the Army Air Forces. The actual firing of machine guns and rockets by flyers is accomplished at Matagorda Peninsula on the Gulf of Mexico.

Launching a rocket from a plane is no simple procedure. Rockets are affected by the airspeed of the plane, dives, maneuvers and other factors. Slipping or skidding a plane can cause a rocket to completely miss its target. While the line of