

MEDICINE

Longer-Lasting Penicillin

New mold remedy preparation will linger in the body at germ-fighting level for four days after a one-shot dose of penicillin.

► A ONE-SHOT dose of penicillin that lingers in the body at an effective germ-fighting level for four days was announced by a five-man research team at the venereal disease symposium held in Washington by the U. S. Public Health Service.

The painful, every three hours day and night injections that patients getting penicillin treatment have had to undergo will be a thing of the past when the new product is on the market, scientists believe.

Named so far only as product F, the new penicillin preparation was invented by Dr. F. H. Buckwalter, director of products development at Bristol Laboratories. Working with him in its development was Dr. H. L. Dickison, director of pharmaceutical research for Bristol. Dr. D. K. Kitchen, medical director of Bristol-Myers Company, reported at the meeting on tests conducted by himself and Drs. Evan Thomas, Richard H. Lyons, M. J. Romansky, and Charles R. Rein at Bellevue Hospital, Syracuse University Hospital and New York Post-Graduate Hospital.

The new, long-lasting penicillin preparation consists of procaine penicillin G in peanut oil with two percent aluminum monostearate in small particle size.

Ever since penicillin was first used to treat patients, scientists have sought a way to keep the precious mold chemical in the body longer. In the early days when the chemical was very scarce, doctors resorted to extracting it from the urine of patients getting the drug, so as to conserve every bit.

Mixing penicillin with peanut oil and beeswax was one of the first methods tried for holding it in the body longer. Combining penicillin with procaine is one of the most recent developments. The monostearate used in the newest penicillin preparation delays the excretion of penicillin. In addition, it is said to be a perfect suspending agent because it produces a thixotropic gel. This means that the material is in a solid jelly form so long as it is standing undisturbed. But when the doctor is ready to inject it, he taps the tube or ampule, and the gel immediately turns into a liquid.

A sister preparation, made of the

same chemicals with penicillin, is already on the market under the name of Flo-cillin. The only difference between this and the new F product is in the size of the penicillin particles in the gel. In Flo-cillin they are large, in line with findings of a year or so ago that large penicillin particles were absorbed more slowly and the effect lasted longer. In the gel preparation, however, the small particles turned out to be even

more effective than the large ones.

While a single shot of product F stays in the blood in germ-fighting amounts for four days (96 hours), the same dose of Flo-cillin lasts only 48 hours while four other penicillin preparations dropped below germ-fighting levels in 24 to 30 hours.

Among patients given the same dose of penicillin in six different preparations, including product F, Flo-cillin stayed at germ-fighting levels for 48 hours in just over half the patients (52.2%). The next best was procaine penicillin G in peanut oil which lasted 48 hours in 40% of the patients. But the new product was at germ-fighting levels after 48 hours in 88.1% of the patients, and after 96 hours in 75%.

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ANTHROPOLOGY

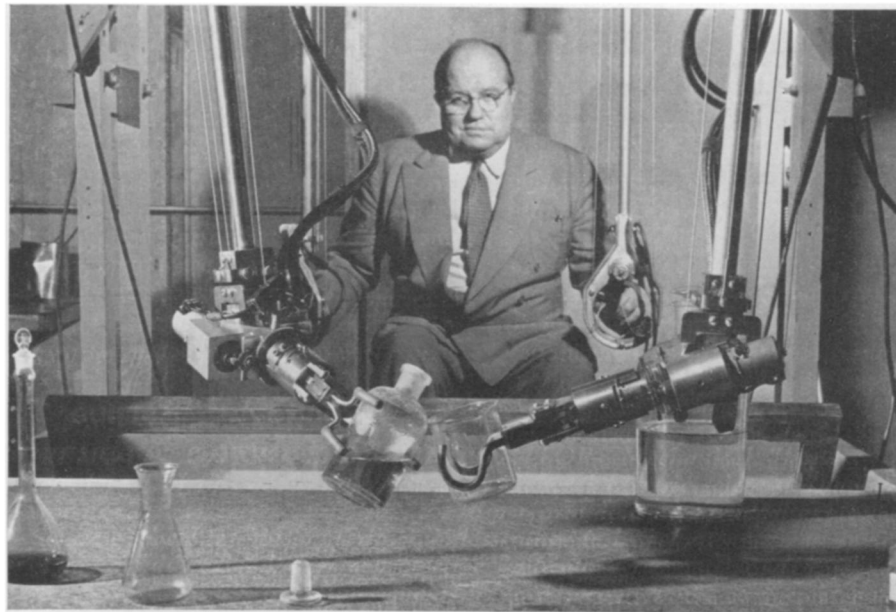
Identifying GIs' Bones

► THE sad task of bringing back the remains of Americans who died in service overseas is being helped by physical anthropologists, the scientists whose job is the close study of the human body and the bones that are in it. Men of this discipline have been able to assist in identifying the bodies, or even the bare bones, of fallen soldiers whose "dog-tags" and personal papers had become

lost in the turmoil of modern battle.

At the meeting of the American Association of Physical Anthropologists in Washington, Dr. H. L. Shapiro of the American Museum of Natural History, who was active in setting up the identification service of the Army, told of some of the problems the scientists faced.

In some instances it even went so far as to require the sorting out of non-



REMOTE-CONTROLLED MANIPULATOR—Mechanical "hands," principal part of this device, developed by General Electric scientist John Payne for use in radioactive areas, are able to perform delicate chemical experiments, operate machine tools, and do countless other tasks requiring great dexterity. The "hands" extend over a protective wall into a radioactive area, while the operator remains in an adjacent room.