MEDICINE

Growing Penicillin

Method suggested to enable doctors to use penicillin on wounds, boils, sinus infections, etc.: grow the mold on gauze dressings.

➤ A WAY to extend the benefits of penicillin to more civilians, by growing the mold in dressings for wounds, is suggested by Dr. George H. Robinson and Dr. Jas. E. Wallace, of Allegheny General Hospital in Pittsburgh. (*Science*, Oct. 8)

When penicillin, the potent germ-fighting remedy from mold, is given by injection into a vein, a concentrated and purified preparation must be used. Difficulties in large-scale production of this purified, concentrated penicillin limit its use, except in extreme cases, to the sick and wounded among our armed forces.

A crude, less concentrated product, however, can be used in treating wounds, sinus infections, boils, gonorrhea and other infections of the skin and mucous membranes, the Pittsburgh doctors believe.

Their method is to saturate gauze with a solution of yeast, sugar, starch and glycerin, to provide food for the penicillin-producing mold. This gauze is then sterilized and inoculated with the mold and used as dressing for infected wounds. The mold apparently grows and produces enough crude penicillin on the dressing to overcome the infection in certain cases.

One patient reported had had acute osteomyelitis and periostitis of the bone in his right upper arm for two weeks. Sulfa drugs had not given relief. Within three hours after the mold-inoculated gauze dressing was "planted" over the wound, there was less pain. In 10 days the patient was discharged from the hospital clinically well.

Another patient with a large furuncle on the back of his neck was treated with a similar dressing and by injection into the open crater of the furuncle of crude liquid penicillin prepared by the doctors. Within three days the patient was relieved of all discomfort and the wound was healing.

The method is now being used in treating three other patients, one with abscesses on the back and the others with osteomyelitis of the legs, and the patients are getting well.

Science News Letter, October 23, 1943

NUTRITION

Cheese Ripening Periods May be Shortened

➤ SPEEDING up the process of ripening cheese is a war measure: food is fuel for fighting men; its production must not be too little or too late. The period required for curing American cheddar cheese from pasteurized milk may be much shortened as a result of studies made in the laboratories of the University of Wisconsin.

Cheese ripening results from the work of enzymes, complex organic substances which cause transformations in other compounds. One particular group of enzymes active in cheese curing are known as lipases. They break down the butterfat into lower fatty acids and cause other changes. Proteinases soften the curd by "digesting" proteins.

Trials show the lipase content of cheese gradually increases as the cheese ages, but more rapidly in raw cheese than in pasteurized-milk cheese. There is no increase of proteinase during the making of cheese from pasteurized milk.

The study brings out much information on the action of enzymes in cheese ripening. The conclusion of Merlin Peterson and Marvin Johnson, who conducted the investigations, is that speed-up in ripening will probably result from adding enzyme-producing organisms to the culture used as a starter in cheese making. Continued investigations will be made to check this conclusion.

Science News Letter, October 23, 1943

PUBLIC HEALTH

Millions Have Health And Hospital Insurance

➤ HEALTH INSURANCE in the United States has reached the point where hospital insurance now covers 13,000,000 on a Blue Cross plan and is operating in 36 of the 48 states, Dr. Nathan Sinai, of the University of Michigan School of Public Health, reported at the conference of the American Public Health Association in New York.

About 4,000,000 more are covered by commercial plans for hospital insurance. Some 800,000 have insurance for medical care under plans sponsored by medical societies in 12 states and there are hundreds of industrial plans covering all varieties of health insurance.

"The prepayment plans now in existence," Dr. Sinai said, "have learned that their whole administration is as good or as bad as their local administration, a fact that public health learned many years ago."

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