MEDICINE

# New Approach to Malaria

**Tetanus toxoid, given in conjunction with anti-malarial drugs, stimulates the body's defense forces against the disease.**

➤ A NEW approach to the world-wide fight against malaria has been discovered by Dr. Eusebio Y. Garcia, senior malariologist of the medical research clinic at Binan in the Philippines.

Bouts of chills and fever did not come back as soon to plague the malaria victim when he was given, along with atabrine or chloroquine, doses of tetanus toxoid, Dr. Garcia found.

Tetanus toxoid is the detoxified poison of the tetanus, or lockjaw, germs. Members of the U. S. armed forces during the war knew it as one of the many "shots" given them for protection against diseases they might encounter. Modern mothers know it is given their babies along with shots against diphtheria and whooping cough, so that when Junior steps on a nail he will be protected against the lockjaw danger grandmother feared from stepping on nails.

News of Dr. Garcia's work comes to American scientists through the New York Academy of Sciences which has awarded him a $200 A. Cressy Morrison prize for it.

The use of tetanus toxoid is different from chemical, or drug, treatment of malaria and different, also, from use of germ chemicals, such as penicillin, to fight other germs in the body. Tetanus toxoid, he believes, acts as a stimulator to the body's own defensive forces. Immune mechanisms is the term scientists use for these defensive forces. They are stimulated and enhanced, he thinks, by the tetanus toxoid, so that relapses in malaria patients after treatment do not come as often.

The significance of Dr. Garcia's work lies in the fact that he is using tetanus germs, which are bacteria, to fight germs which are protozoa and completely out of the bacterial germs' class. It is something like using a featherweight to stop Joe Louis, only more so because the bacteria and the protozoa are as different as plants and animals. Dr. Garcia's results are said to be the first successful attempts to check multiplication of protozoan parasites by stimulating immune mechanisms through a bacterial product.

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MEDICINE

# Painless Shots Possible

**By chilling the skin with a new metal applicator, it is possible to block the pain sensation felt by patients while getting injections.**

➤ THE needle really won't hurt next time you get a shot of penicillin or some other hypodermically-injected drug if your doctor uses a method devised by three Harvard Medical School surgeons.

The method is to chill the skin briefly to about a freezing temperature before sticking in the hypodermic needle. The chilling is done with a pre-chilled metal applicator of about one-third to one-half inch diameter at its business end. The chilling does not hurt and does block the pain sensation felt by many patients, especially sick children, when the needle is pushed through the skin.

The chilling applicator and its successful use are described by Drs. Franc D. Ingraham, Donald D. Matson and Robert P. Woods in the *New England Journal of Medicine* (Nov. 20).

After trials with carbon dioxide snow, they developed a simple instrument consisting of a brass cylinder about nine inches long and about two inches in diameter. This is closed at one end, and to the closed end is soldered a smaller brass cylinder. This smaller cylinder which becomes the business end of the instrument, is filled with solder, which is a rapid conductor of heat. The larger cylinder is wrapped with felt and filled with cracked ice to which anhydrous calcium chloride is added. A cork closes it. The contact end of the small cylinder is covered with a closely fitting hollowed-out rubber cap. For use, this rubber cap is removed, the end is wiped clean with alcohol or other antiseptic, and then applied for about 45 to 60 seconds to the previously cleansed skin where the hypodermic injection is to be given.

The instrument can also be used to kill the pain of the needle when blood is taken from a vein in the arm. It is not satisfactory, however, for injections of local anesthetics, presumably because the anesthetic fluid when injected stimulates different nerve endings in the skin from those made insensitive to pain by the chilling.

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