MEDICINE

Strep Throat Vaccine Here

Heart damage from rheumatic fever may be curtailed by a vaccine for strep throat, an infection that often leads to rheumatic fever and heart disease

➤ A NEW VACCINE, designed to prevent streptococcus infections, which frequently lead to rheumatic fever in children or to kidney disease, in both adults and children, has been reported.

Dr. Eugene N. Fox of the University of Chicago, reported the vaccine to the American Heart Association meeting in New York. Collaborating with Dr. Fox were Dr. Albert Dorfman, and Mrs. M. K. Wittner, also of the University of Chicago.

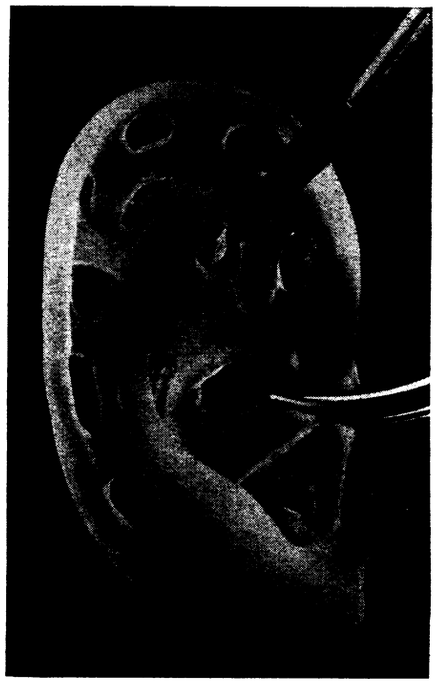
It has been well established for many years that the initial streptococcus infections may appear as simple respiratory infections, Dr. Fox said. The more severe complications, such as rheumatic fever and a kidney disease called glomerulonephritis, develop later.

Rheumatic fever, one of the most serious and widely occurring disabling diseases of childhood frequently leads to heart disease. Glomerulonephritis is a frequent result of untreated streptococcus infections and may lead to loss of kidney function.

The new vaccine has been found to be safe and effective in extensive tests with mice, rabbits, and guinea pigs. In tests on nearly 50 adults, it has led to no serious reactions and has greatly increased the levels of antibodies against streptococcus organisms. Only further testing, particularly in infants, will demonstrate the effectiveness of the new vaccine in preventing streptococcus infections under ordinary conditions, Dr. Fox said.

The vaccine is prepared by purifying a protein, called the "M protein," from the cell wall of the streptococci which cause the infections, Dr. Fox reported. The body responds to the vaccine by making antibodies against the M protein. When streptococci invade the body, the antibodies which have formed react with the M protein in the cell wall and help the body destroy the invading organisms before an infection begins.

The new vaccine is effective against several of the most common types of streptococcus organisms which cause human infections.



Dow Corning

SILICONE-RUBBER IMPLANT—This Prosthesis for ear replacement or reconstruction is a lightweight silicone elastomer framework that has the "feel" of flesh and cartilage. Skin is grafted over it for cosmetic purposes. It was developed by scientists at Dow Corning, Midland, Mich.

BIOCHEMISTRY

Mustard Affects Heart

➤ MUSTARD contains an ingredient that is the major cause of coronary disease and arteriosclerosis, an Ohio doctor believes.

Together with two other condiments common to the American table, he said, it is also responsible for most unexplained hypertension.

The key ingredients, Dr. Jackson Blair of Lakewood, Ohio, reported, are esters of isothiocyanic acid, though he admitted that he does not have definite proof of their relationship to coronary disease.

Large amounts of pepper, ginger and mustard were present in the diets of hypertensive patients studied by Dr. Blair in 1948. Several years later, he reported, he produced "statistically significant hypertension" in laboratory rats by adding the condiments to their diets.

Last year he reported twelve cases of coronary disease in patients who ate large amounts of table mustard, and he thinks that the esters, contained in the oil of mustard, corrode the arteries when they are set free during digestion.

This primary lesion is then followed by the buildup of lipids, cholesterol and lime at the site of the injury. This "hardening of the arteries" occurs in the heart and elsewhere, and the chemical, allyl-isothiocyanate, as it becomes diluted with blood, goes on to cause hypertension, Dr. Blair said.

In an early experiment, Dr. Blair and an associate found cysts in the ovaries of two out of three female rats fed pepper, ginger and mustard. Ovarian cysts are very rare in laboratory animals, he said.

Since cysts in the human ovary usually result in removal of the gland, and since removal of the ovaries makes women as prone to heart disease as men, Dr. Blair proposes that a woman's intake of mustard and mustard products (mayonnaise, salad dressing) could have resulted both in the cysts and, later, in the coronary disease.

Dr. Blair reported his findings in Medical Times.

MEDICINE

Heart Disease a Part Of General Disease

➤ MOVING pictures of the small blood vessels in the membrane covering the eye affirm that cardiovascular disease is part of a general disease of the body's blood vessels.

Dr. Roe Wells, assistant professor of medicine at Harvard, studied eye vessel conditions and levels of fat and carbohydrates in the circulating blood of patients with known cardiovascular disease, comparing them to patients with noncardiac chest pain or with valvular heart disease, which does not involve the blood vessels.

The films indicated cardiovascular disease only in those patients who suffered from it. They also indicated unrecognized diabetes mellitus in more than 50% of the patients with cardiovascular disease.

Dr. Wells and his associates concluded that their research supported the view that "cardiovascular disease appears to be part of a generalized vascular process which can be observed in other representative areas of the microcirculation."

He reported the findings at the 39th annual scientific session of the American Heart Association in New York.