

MEDICINE

Study New Cold Vaccine

► A PRACTICAL WAY to make an effective cold vaccine could come from use of a new immunization concept, the Johns Hopkins scientist who isolated the first true virus of the common cold reported.

Dr. Winston H. Price, who made medical history in 1957 with the announcement of the JH virus, along with development of a vaccine, told *SCIENCE SERVICE* that the trouble with this specific virus is that it occurs only in certain years and seasons. The vaccine is effective only on this virus but not on the numerous others now discovered.

"I am working on immunization for encephalitis," Dr. Price said, "in which four viruses in the right sequence can give protection to monkeys. There are 35 viruses in our group of agents, but you can't pick just any one. It takes a long time to get the right sequence."

Dr. Price suggested that the only way to get a practical vaccine for colds is to try this "sequential immunization" in which the exactly right number of a few viruses could protect against many.

Study of preschool children's colds, which show slight evidence of being caused by the viruses now known, would be valuable, Dr. Price said. Each year there are more than 20 million respiratory illnesses with fever among children under six years of age.

Either these viruses are not responsible for the colds in younger children, or there are viruses within these groups that have not been isolated, he believes.

"Years of work are ahead," he said, noting that various population groups must be studied.

The Institute of Allergy and Infectious Diseases of the National Institutes of Health, Bethesda, Md., last year awarded four new vaccine development contracts. Two of them are for the development of prototype "common cold" vaccines, and two are for clinical evaluation of prototype vaccines.

Abbot and Wyeth Laboratories are working on the prototypes. The University of Colorado Medical Center in Denver and the Research Foundation of the Children's Hospital, District of Columbia, are doing clinical trials.

Previously, Chas. Pfizer & Co. was awarded a contract by NIH that called for the development of vaccines against a number of infectious agents known to be major causes of respiratory diseases.

So far, only a progress report has been issued, and although the NIH vaccine development program shows promise, the season of summer colds now at hand will proceed as usual.

• *Science News Letter*, 83:370 June 15, 1963

MEDICINE

Breast Cancer Survivors

► ALTHOUGH ABOUT 50% of breast cancer patients survive five years, they may still die of the disease as long as 20 years later.

Only ten percent of stomach and lung cancer victims survive five years, however, so breast cancer survival outlook is comparatively favorable, and many have taken the five-year survival rate to mean cure.

More than one-half of those who died among five-year survivors of breast cancer in Connecticut died from five to 20 years later of breast cancer. However, the longer they lived, the fewer who died of breast cancer, a team of investigators reported in the *Journal of the National Cancer Institute*, 30:933, 1963.

Connecticut was studied because of the Tumor Registry operated by the Connecticut State Department of Health, which routinely receives newly diagnosed cancer reports and annual follow-up information from 36 hospitals in the state.

Virtually all the patients in this study had been treated by surgery, which means that although surgery may be the best available method of treatment, a large number of patients are not cured by it.

Ovarian cancer sometimes results from spread of breast cancer, the investigators said, and some physicians had attributed deaths to ovarian cancer as an original cause. Endometrial cancer, cancer involving the endometrium, or mucous membrane lining

of the uterus, can occur in women who have had breast cancer.

Because breast cancer is a slow, insidious disease, which can spread even after removal of lymph nodes in the arm, the researchers urged better understanding of the disease process and more effective ways of treating it.

Dr. Sidney J. Cutler and Fred Ederer of the National Cancer Institute, Bethesda, Md.; Dr. Ira S. Goldenberg of Yale University School of Medicine, New Haven, Conn.; and Dr. Henry Eisenberg of the Connecticut State Department of Health, Hartford, Conn., reported the study.

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Danger to Eyes Found In Drugs for Arthritis

► SERIOUS DANGER to the eyes, especially the retina, is a side effect of drugs used to combat several illnesses, including rheumatoid arthritis.

Normal doses of chloroquine, or Aralen, taken over a period of time to treat arthritis or malaria, caused 14 new cases of diseased retina. One case developed changes in the retina and optic nerve only five and a half months after Aralen treatment started, Dr. Samuel T. Adams of McGill University,

Montreal, reported in the *Archives of Ophthalmology*, 69:658, 1963.

Night blindness and loss of vision in the central field can result eventually in complete blindness, Dr. Adams stated. The loss of vision can continue, even several years after the drug has been discontinued.

The basis for the side effects of "quinoline" drugs is unknown. They are sometimes used for treatment of malaria, but now they are most widely used for rheumatoid arthritis and lupus erythematosus, a disease characterized by face rash extending across the nose in butterfly formation.

An editorial on retinotoxic drugs warns general practitioners as well as eye doctors of the danger of these quinoline derivatives, including hydroxychloroquine, or Plaquenil. Law suits can result from eye damage due to drugs.

Other drugs that have caused eye troubles and occasional blindness in humans are a phenothiazine with the trade name Mellaril and NP 207, used only experimentally.

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1918 Influenza Epidemic Continues in Swine

► THE TYPE of influenza that took such a heavy toll in 1918 died out in two years among humans, but it is still flaring up every fall in swine.

It should have died out in the pigs at the same time it ran its course in people, Dr. Richard E. Shope of Rockefeller Institute, who discovered the virus that caused it, said in Chicago. However, the swine lungworm, a nematode parasite in the respiratory tract, serves as a reservoir to perpetuate it. The lungworm is carried by earthworms, which collect in strawstacks on farms, as well as in other damp areas frequented by pigs.

The persistence of swine influenza has three results: 1. Pigs shrink and cannot be fattened. 2. Two percent of the affected ones die. 3. Pregnant sows with the disease abort.

Although the disease is more severe and widespread in some years than others, it occurs in the Midwest every year in late October and early November.

Dr. Shope's work on swine influenza, which still occupies most of his research time, was one of the achievements that won for him the 50th Howard Taylor Ricketts Award, one of the University of Chicago's highest honors. It was in recognition of the late Dr. Ricketts' work that the class of organisms causing typhus and spotted fever was named "rickettsia." Dr. Ricketts died of typhus in 1910.

Dr. Shope not only discovered the cause of swine influenza but he also identified the virus that caused "mad itch" disease in Midwestern cattle as the same as the pseudorabies virus of southeastern Europe. He discovered two important virus tumors in rabbits and two virus diseases of deer.

Previous honors include the Albert Lasker medal of the Public Health Association, the Kober medal of the Association of American Physicians and a series of honorary degrees.

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