

PUBLIC HEALTH

Flu Vaccine Kept Current

► **FLU VACCINE** is expected to be effective against viruses current this year. A flurry last year over reported ineffectiveness of flu vaccine really referred to vaccines used in 1962.

"Flu virus is not like tetanus or polio virus," Dr. Donald A. Henderson, chief, surveillance section, Epidemiology Branch, Communicable Disease Center, Atlanta, Ga., told *SCIENCE SERVICE*. "Every 10 to 15 years a marked change occurs in the flu viruses, and lesser changes occur every few years, as between 1957 and 1962." (All vaccines contain suspensions of weakened or killed microorganisms.)

A 1957 virus in the 1962 vaccine made it ineffective at that time. This report at the 1963 meeting of the American Public Health Association made some persons wary of flu vaccine.

Dr. Alexander D. Langmuir, CDC Epidemiology Branch chief, who made the report jointly with Dr. Henderson, was referring to the need of periodical change in vaccines, a change that was made last year.

Flu shots are being given now, especially to high-risk persons such as those over 65, those with chronic heart and lung diseases, and pregnant women. Types A, A-1, A-2 and B viruses, brought up to date, are included in the vaccine.

Persons not vaccinated since July 1963 should receive the new vaccine in use since then. A second dose should be given approximately two months later, but even

a single dose will afford significant protection. About 80% who take the proper number of shots can expect protection.

In cooperation with the World Health Organization, 75 laboratories in the Western Hemisphere report viruses discovered in all flu outbreaks to the PHS Communicable Disease Center, Atlanta, Ga., where Dr. Roslyn Q. Robinson directs the International Influenza Center for the Americas. An equal number of laboratories sends virus specimens to a center for other parts of the world located in London.

Research on the effectiveness of flu vaccine in a Scottish textile mill employing 700 persons was recently reported in *World-Wide Abstracts*, by Drs. I. M. Richardson and S. J. Kilpatrick of the University of Aberdeen, Scotland.

During three winters of illness studied, the proportion of "no absences" from work was slightly higher among those who had been vaccinated with A and B influenza virus strains. No clear evidence of protection against influenza could be obtained, however, and as a result the investigators recommended routine examination for only susceptible groups.

At least in non-epidemic periods, they said, controlled trials of influenza vaccine should continue on a strictly research basis. U.S. Public Health Service officials say that only in flu epidemics can the vaccine be rightly evaluated.

• *Science News Letter*, 86:244 October 17, 1964

PUBLIC HEALTH

Excitement Risks Heart

► **IN A BIG-TIME** football game a long touchdown run can deal quite a blow to the opposing team, but the run can be a much greater menace to a spectator with a heart ailment.

"Stadium death," or the name applied to a death of a spectator caused by over-excitement during a sports match, has been studied by two physicians of the University of Nebraska Health Service in Lincoln.

Almost every stadium in the country has recorded at least one spectator death from a heart attack, Drs. Kenneth D. Rose and F. Lowell Dunn report.

Using an improved testing procedure, radiotelecardiography, the physicians kept a continuous record of the heart action of ten men during football games in the 1962 and 1963 seasons.

The men, fitted with electrodes and lead wires, had FM transmitters fastened around their waists so that their heart action could be "broadcast" to a remote cardiograph.

As many as 65 electrocardiograms, which measure the heartbeat, were taken of each man during a three-hour period, before, during and after important games. Nine of the ten men had close ties with the school and thus were emotionally involved throughout the contest.

The mere observation of rapid heart beat in the spectators at a competitive athletic event is not striking, the physicians reported. The surprising fact is that the rate of heart beat becomes very high and lasts for a long period.

In almost every case the heartbeat "broadcast" showed a pattern of greatly accelerated heart rate.

One subject showed an average rate of 146 beats per minute throughout the game. The average normal rate is 72 beats per minute.

Closely fought games with such spectacular plays as long runs or passes caused the greatest heart throbs in the fans. Touchdowns, usually considered the ultimate in gridiron excitement, failed to create as much excitement as the plays involving "prolonged suspense."

The researchers suggested that a physician advising a heart patient remind him not only to avoid physical strain, but also to avoid such "entertainment" activities that would bring about sustained rapid heart action. In *Medical Times*, Oct. 1964, they emphasized, however, that their conclusions are in no way to be considered a general brief for or against football.

• *Science News Letter*, 86:244 October 17, 1964

Questions

BIOLOGY—What is the food source of zooplanktons? p. 245.

ENGINEERING—How does the supply of copper for future needs compare with that of uranium? p. 248.

MEDICINE—What is the most important site of cholesterol absorption in the body? p. 243.

GEODESY—What do photographs taken by Echos I and II indicate regarding the position of Bermuda? p. 249.

ORNITHOLOGY—How are scientists studying the homing behavior of penguins? p. 255.

SURGERY—What new way has been devised to prevent pulmonary embolism? p. 242.

SCIENCE NEWS LETTER

VOL. 86 OCTOBER 17, 1964 NO. 16

Edited by WATSON DAVIS

The Weekly Summary of Current Science, published every Saturday by *SCIENCE SERVICE, Inc.*, 1719 N St., N.W., Washington, D. C. 20036. NOrth 7-2255. Cable Address: *SCIENSERV.*

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; ten or more copies in one package to one address, 7½ cents per copy per week; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage. Change of address: Three weeks notice is required. Please state exactly how magazine is addressed. Include zip code.

Copyright © 1964 by *Science Service, Inc.* Republication of any portion of *SCIENCE NEWS LETTER* is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicated services issued by *Science Service*. *Science Service* also produces and distributes *THINGS of science* (monthly), produces and publishes books, and conducts the *National Science Youth Program*.

Printed in U.S.A. Second class postage paid at Washington, D. C. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in *Reader's Guide to Periodical Literature*, *Abridged Guide*, and the *Engineering Index*. Member of *Audit Bureau of Circulation*.



SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Athelstan F. Spilhaus, University of Minnesota; Wallace R. Brode,*** Washington, D. C.; Bowen C. Dees, National Science Foundation. Nominated by the National Academy of Sciences: Henry Allen Moe, The Clark Foundation; Harlow Shapley, Harvard College Observatory; Detlev W. Bronk, Rockefeller Institute. Nominated by National Research Council: Leonard Carmichael,* National Geographic Society; Benjamin H. Willier, Johns Hopkins University; Eric A. Walker, Pennsylvania State University. Nominated by Journalistic Profession: O. W. Riegel, Washington and Lee University; Gordon B. Fister, Allentown (Pa.) Call-Chronicle; Ralph B. Curry, Flint Journal. Nominated by the Scripps Estate: Edward J. Meeman, Memphis Press-Scimitar; Ludwell Denny, Scripps-Howard Newspapers; Edward W. Scripps II,** Edward W. Scripps Trust. *President; **Vice-President; ***Treasurer.

Staff—Director: Watson Davis. Assistant Director: Dorothy Schriver. Writers: Ann Ewing, William MacLaurin, Faye Marley, William McCann, Barbara Tuft, Judith Viorst, Walter Wingo, Ruby Yoshioka. Science Youth Division: Joseph H. Kraus. Photography: Fremont Davis. Production: Marcia Nelson. Syndicate Sales: Forrest L. Snakenberg. Librarian: Margit Friedrich. Interlingua Division in New York: Alexander Gode, 80 E. 11th St., GRamercy 3-5410. Advertising Manager: Fred A. Moulton, METropolitan 8-2562, Washington, D. C.