

## MEDICINE

# Drug Allergies Revealed

Six out of every 100 Americans may be allergic to penicillin and streptomycin because they have had athlete's foot or ringworm of the scalp.

➤ SIX out of every 100 Americans will be barred from the life-saving benefits of penicillin if they get pneumonia or other serious disease because they have previously had athlete's foot, ringworm of the scalp or some other fungus infection. These same six per 100 may also be unable to take streptomycin treatment.

This unfortunate result of fungus infections, bad enough in themselves, was reported by Dr. Samuel M. Peck of Mount Sinai Hospital, New York, at a fungus disease conference at the New York Academy of Sciences. The conference is the first on the subject of medical mycology ever held in the United States.

The explanation is that the fungus infections set up an allergic state so that a patient infected with any one of the common fungi may develop an allergic skin eruption to reinfection with any other fungus capable of producing the same sensitizing, or allergy-inducing, chemical.

Many of the disease-causing fungi can also produce a substance similar to penicillin. As a result, a person who never has had penicillin may be sensitive to it. When it is given as treatment, he gets an allergic reaction that may be severe enough to require stopping the penicillin.

Penicillin comes from a mold which is one of the lower fungi, and streptomycin comes from an actinomycete which is a still lower fungus. Streptomycin as now available for treatment contains factors which show cross sensitization to penicillin and to trichophylin, the sensitizing, or allergy-inducing, chemical in ringworm and athlete's foot fungi.

Recent statistics on large groups of patients show that 30% to 50% of adults show signs of having acquired sensitization to fungi and their products, Dr. Peck reported. About 75% to 90% of the general population above the age of 12 is said to have been affected at one time or another with fungus disease. There may be even more in this state in the future because of the nation-wide epidemic of ringworm

of the scalp which attacks children under the age of 12. Thousands of such cases have been recorded and presumably the youngsters are becoming sensitized to other fungus chemicals including penicillin and streptomycin.

Saving feature of the situation is that not everyone who has a fungus infection necessarily gets a very high degree of sensitization.

The sensitization from fungus infection is suspected by some scientists of causing another kind of trouble. It may play a part in causing diseases of the tiny blood vessels near the surface of the body, in the fingers and toes, for example. Some of these diseases are excruciatingly painful and disabling and because they interfere with circulation may lead to gangrene.

Fungus infections complicate the tuberculosis problem, other speakers at the conference pointed out.

One such infection, called histoplasmosis, is now believed to cause calcified areas in the chest which show on X-ray pictures. In the past, such calcified areas were always taken as signs of healed tuberculosis. But tuberculin tests of thousands of persons showing these calcified areas revealed they had not been infected with TB. And a similar test with a chemical from the histoplasmosis fungus showed that many with calcified areas in the chest had had the fungus infection. As Dr. Amos Christie of Vanderbilt University pointed out, the studies show the need for revising present-day ideas about primary complex or first infection tuberculosis in relation to pulmonary calcification.

*Science News Letter, November 15, 1947*

## MEDICINE

## Family Study Launched To Observe Disease Impact

➤ JUNIOR'S mumps are going to become more significant as a result of a unique research program which will involve between 50 and 100 Cleveland families.

The study is launched in the hope that further knowledge will be gained about the spread of common infections, the

behavior of disease in the family group, and basis for the different responses of various members of the family to disease in early life which is believed to influence future health and development.

The program will be conducted by the Elisabeth Severance Prentiss Department of Preventive Medicine in the Western Reserve School of Medicine under the direction of Dr. John H. Dingle, its head. It is to be supported by funds of the department, and grants from the Brush Foundation, the Cleveland Foundation, the Commission on Acute Respiratory Disease, Army Epidemiological Board, Department of the Army, and possibly from the S. P. Fenn Trust.

*Science News Letter, November 15, 1947*

## SCIENCE NEWS LETTER

Vol. 52 NOVEMBER 15, 1947 No. 20

The weekly summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C., North 2255. Edited by WATSON DAVIS.

Subscriptions—\$5.00 a year; two years, \$8.00; 15 cents a copy. Back numbers more than six months old, if still available, 25 cents.

Copyright, 1947, by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service.

Entered as second class matter at the post office at Washington, D. C., under the Act of March 3, 1879. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to Periodical Literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N.Y.C., Pennsylvania 6-5566, and 360 N. Michigan Ave., Chicago, State 4439.

## 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: Edwin G. Conklin, American Philosophical Society. Nominated by the National Academy of Sciences: Harlow Shapley, Harvard College Observatory; Warren H. Lewis, Wistar Institute; R. A. Millikan, California Institute of Technology. Nominated by the National Research Council: Hugh S. Taylor, Princeton University; Ross G. Harrison, Yale University; Alexander Wetmore, Secretary, Smithsonian Institution. Nominated by the Journalistic Profession: A. H. Kirchofer, Buffalo Evening News; Neil H. Swanson, Executive Editor, Sun Papers; O. W. Riegel, Washington and Lee School of Journalism. Nominated by the E. W. Scripps Estate: Max B. Cook, Scripps Howard Newspapers; H. L. Smithton, Executive Agent of E. W. Scripps Trust; Frank R. Ford, Evansville Press.

**Officers**—President: Harlow Shapley, Vice President and Chairman of Executive Committee: Alexander Wetmore. Treasurer: O. W. Riegel. Secretary: Watson Davis.

**Staff**—Director: Watson Davis. Writers: Frank Thone, Jane Stafford, A. C. Monahan, Marjorie Van de Water, Martha G. Morrow, Ron Ross, Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Sales and Advertising: Hallie Jenkins. Production: Priscilla Howe.