

NUTRITION

Fats Wrongly Condemned

► **FAT CANNOT** be "unconditionally" singled out as the cause of heart disease, Dr. Philip L. White, secretary of the council on foods and nutrition of the American Medical Association, reported to the National Live Stock and Meat Board meeting in Chicago.

Coronary and cerebral artery diseases have many causes and are probably not the result of any single factor like animal fats, he stressed.

"Fats are a perfectly normal constituent of the body and are a perfectly normal constituent of the diet," he said, and added that quite a bit more study concerning them will have to be done before the average American's eating habits are to be drastically altered.

Fats are able to dissolve in the blood stream and be carried by it only after they have had a coating of protein put on them by the liver. The resultant large molecule is called a lipoprotein and can be likened to a baseball, where the center is made of cholesterol and other fats while the horsehide is a thin layer of protein.

When these large molecules enter the coronary arteries, they diffuse out into the walls of the vessels and are sometimes pre-

vented from returning. Then they start to accumulate and soon a deposit that is rich in cholesterol begins to build up. As this happens, the bulge grows and the tunnel of the artery is narrowed. This restricts the flow of blood and if severe enough will cause a heart attack.

Although cholesterol level in the blood is used as an indication of this condition, it has not been absolutely proved elevated cholesterol levels or altered lipoprotein patterns are the cause of the trouble. At the moment they are the best chemical tests available.

Careful studies of the effect of different fats have been carried out in man under strict dietary conditions. They have shown that the animal fats increase cholesterol and that plant fats lower it, but these results have not always been found in patients on regular diets.

Therefore it is extremely hazardous to make a direct translation from such clinical studies to the free living man. Unfortunately this has been done, and because of it, animal fats such as butter fat, beef and pork fat may have been unnecessarily condemned, Dr. White said.

Science News Letter, July 6, 1957

effective against the common house fly as DDT.

The scientists named their discovery flavensomycin and found it while investigating the activity of *Streptomyces*, the soil bacteria from which the antibiotic streptomycin is obtained. The substance was isolated from a strain of the *S. tanaschiensis* type, they said.

When purified, flavensomycin consists of pale yellow tubular crystals which are odorless and can be dissolved in water as well as many other chemical solvents. Dilute solutions of it are active against both yeast and penicillin fungi.

In addition to the house fly, migrating locusts were also knocked out by the antibiotic.

Science News Letter, July 6, 1957

SCIENCE NEWS LETTER

VOL. 72 JULY 6, 1957 NO. 1

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., North 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright © 1957 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 syndicated services issued by Science Service. Science Service also publishes CHEMISTRY (monthly) and THINGS of Science (monthly).

Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283) authorized February 28, 1950. 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 Audit Bureau of Circulation. Advertising Manager: Fred A. Moulton, 1719 N St., N. W., Washington 6, D. C., ME. 8-2562.

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: Carl Lark-Horowitz, Purdue University; William W. Rubey, U. S. Geological Survey; Wallace R. Brode, National Bureau of Standards. Nominated by the National Academy of Sciences: George W. Corner, Rockefeller Institute for Medical Research; Edward U. Condon, Washington University; Harlow Shapley, Harvard College Observatory. Nominated by the National Research Council: Jerome C. Hunsaker, Massachusetts Institute of Technology; I. I. Rabi, Columbia University; Leonard Carmichael, Smithsonian Institution. Nominated by the Journalistic Profession: Neil H. Swanson, Ruxton, Md.; O. W. Riegel, Washington and Lee University; Michael A. Gorman, Flint Journal. Nominated by the Scripps Estate: Charles E. Scripps, Cincinnati, Ohio; Edward J. Meeman, Memphis Press-Scimitar; Frank Ford, Washington, D. C.

Officers—President: Leonard Carmichael; Vice President and Chairman of Executive Committee: Charles E. Scripps; Treasurer: O. W. Riegel; Secretary: Watson Davis.

Staff—Director: Watson Davis. Writers: Marjorie Van de Water, Ann Ewing, Howard Simons, Dorothy Schriver, John W. Robinson. Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Production: Priscilla Howe, Marcia Nelson. Sales: Hallie Jenkins. Interlingua Division in New York: Alexander Gode, 80 E. 11th St., GRamercy 3-5410.

MEDICINE

Arthritis Hits Perfectionist

► **A NEED** to live by the Golden Rule and always do the right thing indicates a personality type that goes hand in hand with arthritis, Drs. Norman O. Rothermich, Columbus Medical Center, Columbus, Ohio, and Sanford Gifford, Harvard Medical School, Boston, Mass., reported to the Ninth International Congress on Rheumatic Diseases meeting in Toronto, Canada.

Rheumatoid arthritics have a personality pattern all their own which includes strong feelings of inadequacy, perfectionism and a high degree of social consciousness.

"There is a prevailing tendency toward guilt, self punishing attitudes and self-accusatory phantasies as explanations for the disease. Patient after patient will express the idea, 'I brought it on myself,' and imply at the same time, 'What did I do to deserve this?'" Dr. Gifford reported.

Attitudes of devotion to serving others, stern self-righteousness and great concern with cleanliness and high moral principle are also prominent among these persons with rheumatoid arthritis.

But simply because you might have these personality peculiarities, you are not an inevitable victim, Dr. Rothermich emphasized.

The point is that rheumatoid arthritis occurs almost exclusively in these people and this fact may have an important bearing on what causes the disease.

Even if arthritics are straight-laced in their personality, they appear to be pretty safe from the possibility of going to a

mental hospital.

More than 20,000 patients at two of the state mental hospitals in Ohio were examined for any evidence of rheumatoid arthritis and only 24 definite cases plus six probables were discovered.

In a general population of that size, you would expect to find 540 instead of only 30, Dr. Rothermich reported.

Why this difference exists is not entirely clear. One possibility is that arthritics do not develop mental illness. Also, it is possible that the development of mental illness in such an individual would cause a complete change in the abnormal body functions causing arthritis and would result in a temporary cure as long as the mental illness remained.

Rheumatoid arthritis is not just a disease of the joints, but rather one of the entire individual, the scientists concluded.

Science News Letter, July 6, 1957

ENTOMOLOGY

Antibiotic Ten Times As Effective As DDT

► **AN ANTIBIOTIC** that kills both fungi and insects has been found by Drs. R. Craveri and G. Giolitti, Montecatini Antibiotic Research Laboratories, Milan, Italy, they report in *Nature* (June 22).

When tested for its activity as an insecticide, the antibiotic proved ten times as