

PUBLIC HEALTH

Need New Health Rules

► **NEW HEALTH** problems now face Americans and the old rules still followed by public health scientists need to be revised, Frank M. Stead of the California State Department of Public Health told the American Public Health Association meeting in Cleveland.

Today's public health programs are based on the problems of communicable disease that existed 50 years ago. Then, everything was geared to stamping out communicable diseases, and programs were designed to do this even if meant the financial ruin of one segment of the community.

But that is not possible today. Illness and death from the old diseases have been dramatically reduced, and in their place have come such public health problems as atomic energy, deadly insecticides and smog.

These are mixed evils, since modern society depends on them and at the same time is threatened by them, healthwise.

These problems cannot be solved by being stamped out, they have to be lived with.

Users of atomic energy can be required

to keep radioactive waste from being dispersed, but no one can recapture fallout from atomic weapons. Insecticides are now becoming so powerful that a few ounces can kill all the insects in an acre of land and, although they are needed for modern farming, most of them are just as toxic to man and are contaminating food supplies more and more.

Another public health problem is air pollution. Most of this can be traced directly to the use of petroleum as a basic fuel, but at the same time the economy of the southwestern United States is based upon oil.

"Public health can no longer confine itself to restricting and prohibiting that which carries a public health risk," Mr. Stead said.

From now on the role of public health will be to plan, more than protect, and to spell out the necessary precautions to enable communities to safely cope with these new health problems, he concluded.

Science News Letter, November 23, 1957

causes blood vessels in the arms and legs to expand, resulting in "blood pooling." When this happens, the head does not get the amount of blood it needs and early black-out follows.

Dr. Silverman, who directs Duke's psychophysiological laboratory, believes that other such "in-flight" stresses should be studied to understand their relationships.

If a series of psychophysiological relationships can be established, he said, then it is conceivable that measures could be developed to specifically measure stress tolerance and stress responsiveness.

Co-author of the report was Dr. Sanford I. Cohen, associate director of the laboratory, which is concerned with study of the stresses of living.

Science News Letter, November 23, 1957

SCIENCE NEWS LETTER

VOL. 72 NOVEMBER 23, 1957 NO. 21

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. 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 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.



SCIENCE SERVICE

Member Audit Bureau of Circulation. Advertising Manager: Fred A. Moulton, 1719 N St., N. W., Washington 6, D. C., ME. 8-2562.

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: Karl 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, Garrison, 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: Wallace R. Brode; 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

Malaria Can Be Wiped Out

► **MALARIA** can be completely wiped out in the world by modern medicine but it is still with us because of "administrative" problems in governments.

This was reported by Dr. Louis L. Williams Jr., U. S. Public Health Service, retired, to the American Society of Tropical Medicine and Hygiene meeting in Philadelphia.

In a special lecture, Dr. Williams said that by the end of 1943, DDT plus other older methods made malaria eradication possible, but the real problem then came to be applying what was known on a world-wide basis.

Total eradication has been slowed by the use of mere "control" methods instead of elimination ones.

In addition to DDT, there are now several powerful drugs that can attack the disease directly in the human body, the best being the compound, pyrimethamine. Dr. Williams called for the use of table salt containing pyrimethamine in areas where malaria is difficult to control.

The dramatic effectiveness of the anti-malaria salts was reported by Dr. G. Robert Coatney and associates at the National Institutes of Health, Bethesda, Md. Volunteers at the Federal prison in Atlanta, Ga., were given special table salt that had been treated with either pyrimethamine or chloroquine, another anti-malaria drug, and then subjected to the repeated bites of infected mosquitoes.

The volunteers showed no signs of malaria until 28 to 40 days after the medicated salt was withdrawn from use.

Use of the treated salt is now being considered by the Army, Dr. Coatney said.

It would have its greatest use in tropical areas where houses usually consist of roofs only. DDT spraying is not too effective in these regions, he said.

Also some peoples consider all animal life sacred, and do not want mosquitoes killed.

Associated with Dr. Coatney at NIH were Drs. Olaf Mickelson, Martin D. Young, Robert W. Burgess and Carl I. Pirkle.

Science News Letter, November 23, 1957

PHYSIOLOGY

Jet Pilots Should Get Mad to Stop Blackouts

► **HOT-TEMPERED** airplane pilots do not blackout from high speed maneuvers as quickly as do anxious ones.

This relationship between a pilot's emotions and his "g" tolerance was reported by Dr. Albert J. Silverman, a psychiatrist at Duke University, Durham, N.C., to the European Congress of Aviation Medicine meeting in Stockholm, Sweden.

"G" tolerance is the pilot's resistance to blackout when subjected to greater gravitational pulls than he gets on the ground. These pulls are caused by high speed aircraft making sudden changes in acceleration or direction.

Experimental subjects who blacked out at low levels of acceleration stress showed a high degree of anxiety and high levels of adrenaline in their body. Feelings of aggression and anger, however, were found to go along with increased "g" tolerance.

The adrenaline released by the body