

PHYSIOLOGY

Old Age Might be Postponed 15 Years by a Proper Diet

More Calcium, Protein, and Vitamins A and G Would Prolong the Prime of Life, Rat Experiments Show

OLD AGE can be postponed from 10 to 15 years by eating a diet containing larger amounts of calcium, protein, vitamin A and vitamin G, Dr. Henry C. Sherman, professor of chemistry, Columbia University, stated in a report made at the Carnegie Institution of Washington.

The studies were conducted on rats because the chemistry of rat nutrition is so much like that of human nutrition that the data obtained with rats do not need to be discounted when applied to humans.

The rats were divided into two groups. One group was fed a diet containing enough vitamins and other necessary food substances for the animals to grow, remain healthy and bear young. The second group of animals was given what Dr. Sherman calls an optimum diet, differing from the first

by having more milk in it. The extra milk supplied more calcium or lime, more protein and more of vitamins A and G. The animals on this optimum diet lived much longer than the first group of animals, and in addition had more vitality.

Interpreted in terms of human life, Dr. Sherman said that the gain the rats made was equivalent to extending the span of human life from 70 years to 77 years. The period known as "the prime of life" was extended even more in proportion. Signs of senility that would appear in normal individuals on an adequate diet at 65 years of age would be postponed by the optimum diet to 75 or 80 years.

Dr. Sherman's studies on diet's effect on length of life were made with the cooperative assistance of the Carnegie Corporation of New York and

the Carnegie Institution of Washington.

Dr. Sherman pointed out that among the rats on both diets, as would be the case in human experience, a considerable proportion die natural deaths before the attainment of these ages.

According to present knowledge, Dr. Sherman believes life and vitality could be extended by a moderate increase in the calcium of the diet, by eating not more than twice the minimum amount of protein and by taking about four times the amount of vitamins A and G needed for normal nutrition.

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METEOROLOGY

Air Mass Analysis Demands New Weather Map

A NEW type weather map showing meteorological conditions in three dimensions to an altitude of 16,000 feet has been developed by I. I. Zellon, U. S. Weather Bureau, Pittsburgh.

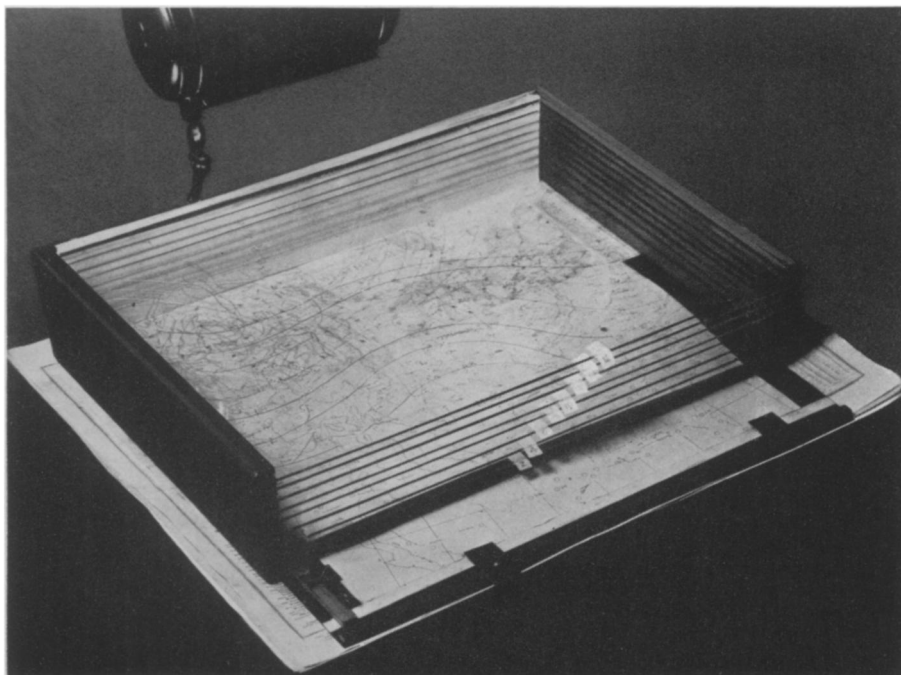
Mr. Zellon's device consists of a small box holding eight glass plates slightly separated. Each plate represents 2,000 feet of height, while the basic ground map below the plates is an outline of continental United States.

The new development is helpful in the plotting of upper air weather information obtained by pilot balloons, army airplane flights and the weather data supplied by airline pilots. This new system of taking weather information is known as air mass analysis because not only are ground data taken but also the nature of a cross-section of the upper air determined.

Fast-drying opaque inks of different colors are used for plotting the various aerological data; wind velocity may be red, pressure blue and so on.

Says the government weather scientist:

"The meteorologist will find that he can rather quickly plot on these panes the data from the pilot balloon and airplane stations, adding the analysis of fronts and air masses, for each 2000 foot level. By looking down through the series of plots a graphic picture of the synoptic situation in three dimensions can be gained. Although this gives a somewhat cruder representation of the upper air, in some respects, than a carefully drawn cross-section, it has the advantage of giving three dimensions rather than two, and of being more legible and intelligible to one not a technician in modern aerological an-



THREE-DIMENSIONAL WEATHER MAP

This new type weather map in three dimensions is one on which forecasters plot weather data obtained for different altitudes above the earth, in addition to the usual ground data. Each glass plate represents 2,000 feet of elevation.

alysis. Airplane pilots in particular can learn to read more readily from the mapping frame than from the ordinary surface map or cross-section the information they wish to know; it should

be better in this regard than a series of upper air maps laid side by side, if the glass frames be large enough, well drawn and properly illuminated."

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PUBLIC HEALTH

New Surgeon General Plans Vigorous Health Program

Wiping Out Tuberculosis and Syphilis Heads List Of His Goals; National Health Insurance Not Approved

HEALTH insurance for the nation as a whole does not meet with the approval of the newly-appointed Surgeon General of the U. S. Public Health Service, Dr. Thomas Parran, Jr.

"I am convinced," he said recently, "that an integrated plan of public health, public medical service and private practice is preferable to health insurance."

This statement was made on methods of securing health for the people of New York State while Dr. Parran was Health Commissioner of that state. Under his direction a system was built up for securing adequate medical treatment for all the people without recourse to health insurance. Here is how it works in the case of pneumonia, for example:

The practicing physician sees his patients and takes care of them himself. For those patients who have only a little money to spend on medical care, the state health department makes free tests of the patient's serum to determine the type of pneumonia he has. A new, better, concentrated serum, costing at retail from \$20 to \$100 per patient, is supplied without charge by the state department of health to any physician requesting it. In addition, the state health department, either through its own nursing service or through other nursing agencies, supplies nursing service free of charge to all patients who are being treated in their own homes instead of in hospitals.

Post-Graduate Training

Another feature of the New York plan is that the State medical society volunteers to give its own members up-to-date, post-graduate training in the treatment of pneumonia. Deaths from pneumonia will, according to conservative estimates, be cut down by at least

one-fourth within the course of a few years of this concerted effort on the part of public health and private medical agencies.

Dr. Parran believes this system should be extended to other kinds of illness and to other states. It is not state medicine, for the private physician takes care of his own patients. The states merely extend their health service to include laboratory tests, treatment materials and nursing service for those private patients who cannot bear the cost of these in addition to the doctor's fees.

"Under such a combination, the doctor would retain everything now satisfactory to himself and his patient," Dr. Parran points out. "He would be aided by public accessories to practice and by compensation for the present unbearable load of free service; there would be no disruption in the physician-patient relationship for the large sector of medical practice in the home and in the doctor's office.

"For those above the job insurance level there would be no change in present methods.

Evolutionary Process

"This plan would represent an evolutionary process based upon considerable experience. It would provide care freely for the catastrophic and expensive illness of the low-wage group now poorly served or served at the expense of the physician. It would remove the major economic hazards of illness. It would reduce present high disease and death rates from important preventable causes and advance the public health tremendously."

The American people may as well get ready to take syphilis out of the category of unmentionable, darkly whispered words and put it into everyday speech along with gallbladders,

cancer and infantile paralysis. For they are likely to hear a lot about syphilis from the newly-appointed Surgeon General.

Syphilis is a disease which Dr. Parran considers one of the greatest enemies to public health. (*See SNL, Mar. 21.*) In this several thousand other health and medical authorities agree with him. For years Dr. Parran has been active in the fight against this health menace.

When you meet Dr. Parran, he will impress you as a forceful person, keen of thought, independent, a fearless fighter against all diseases and conditions that are unfavorable to health.

Dr. Parran is a young man to shoulder the responsibilities of his new position—he was born in Leonardtown, Md., in 1892—but he has had extensive experience in administrative public health work. His academic training was received at St. John's College, Annapolis, Md., and he received his medical degree from Georgetown University, Washington, D. C., in 1915. He entered the U. S. Public Health Service in 1917, winning first place in a competitive examination for entrance.

Since entering the federal health service he has served as medical officer in charge of Muscle Shoals Sanitary District and chief medical officer at the government nitrate plant; as state director of rural sanitation in Mis-



DR. THOMAS PARRAN, JR.