

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.

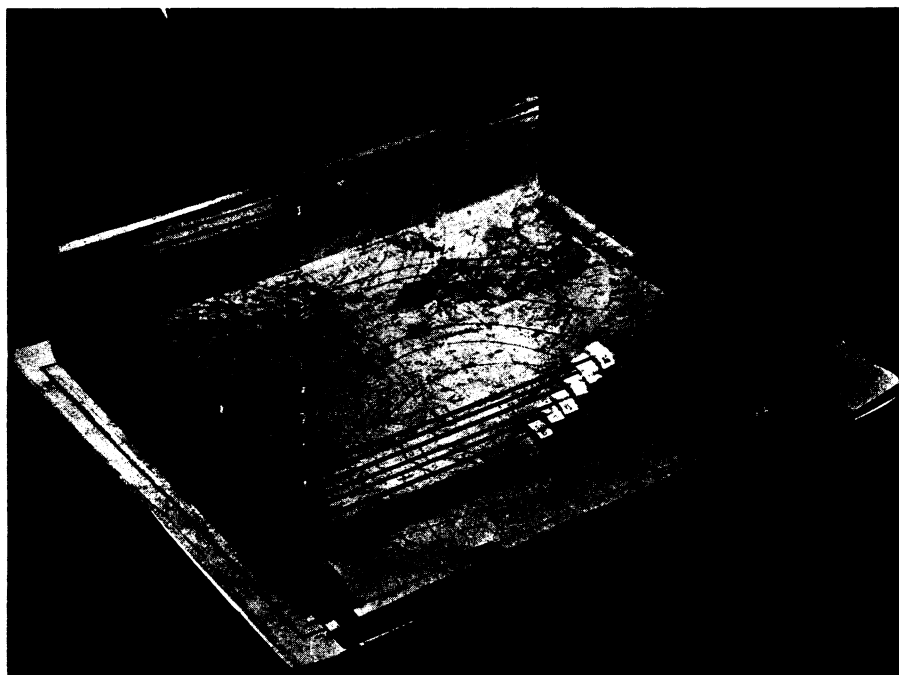
Mr. Zellon's device consists of a small box holding eight glass plates slightly separated. Each plate represents 2,000 feet of height, while the basic ground map below the plates is an outline of continental United States.

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.