NUTRITION

From Now On: Food

Fresher tasting foods and synthetic meals can be produced by science in the future. Radiations are used to increase the vitamin content of food.

By WATSON DAVIS

Tenth in a series of glances forward in science.

➤ TWO generations ago the people of the world, even in the most advanced areas, were dependent mostly upon stored grains for their food supply when winter came; meat freshly killed, or smoked, salted and dried; canning, largely at home; a few dried fruits and vegetables; some cold storage, and sugar.

The woman of the house could not open a few cans, break open a few packages from the deep freeze and quickly have dinner ready.

The variety and quality of food is today very nearly the same the year around, thanks to swift transportation for fresh foods, canning, quick frozen foods, cold storage, hermetically sealed packages and standardized fresh bread and milk.

Vitamins are cherished and extolled in food these days, and added where none are natural. There is appreciation of the quality of protein, now that it is known that there is difference in amino acids. There are many other dimensions than taste and calories to food, although modern nutrition bows often to the natural selection of the gourmet. Paprika's brilliance and fire hid a bountiful supply of vitamin A.

Not content with the marvels of the present food industry, scientific research continues the revolution of our eating.

Radiations of various sorts are entering the food factories. Using ultraviolet radiation to increase the vitamin D content of breakfast food, for instance, is standard. Streams of electrons, called cathode rays, are a new method of sterilizing or reducing concentration of bacteria, yeasts and molds in milk and other foods. This is a new equivalent of pasteurization, but without marked heating of the food. X-rays may prove useful in some cases for a similar purpose.

Areas remote from the sea now have fresh fish and seafood almost the equal of wharf-side restaurants, because of frozen supplies and rapid refrigerated deliveries. But the latest technique is to ship lobsters alive in chemically-adjusted miniature replicas of their ocean environments.

There are tricks in tickling the palate that nature does not know. Monosodium glutamate is a taste enhancer that can be used in almost everything from soup to nuts.

To the large company which collects and processes (contrasted with the yesteryear farmer who grew and ate), the major task is processing, preservation and transportation of foods we shall eat tomorrow, next month and next year.

For the future:

A. Methods of preservation, that may escape from the limitations of heat and cold, can be expected to provide fresher-tasting foods that can be kept longer.

B. New sources for protective foods and vitamins may be in the time-honored foods of other lands.

C. Food in major volume will be synthesized from non-food crops and chemicals, such as edible fats from coal and petroleum, when justified economically.

Science News Letter, June 3, 1950

PSYCHIATRY

Night Mental Clinics

➤ NIGHT clinics where people with jobs and moderate incomes could receive treatment for mental and nervous ills are urged as a "prime requisite for the mental health of any community," by three psychiatrists in private practice in Beverly Hills, Calif., and in Seattle, Wash.

Contrary to popular opinion, it is not just the extremely wealthy, idle, old lady with nothing better to do who goes to the psychiatrist for help, it was found from a study of 100 consecutive patients who went to the offices of Dr. Nathan K. Rickles of Beverly Hills and Drs. J. J. Klein and M. E. Bassan of Seattle.

The great majority were from families with earnings under $5,000 a year, these specialists report in the AMERICAN JOURNAL OF PSYCHIATRY (May). Twelve were professional people, eight unskilled laborers and the other 80 pretty well distributed among other occupational groups—business men, office workers, skilled laborers, and housewives.

A little more than half—54%—were men.

Twelve out of the hundred felt that they had to do without treatment even though they had gone to a psychiatrist for advice. They were prevented either because they could not afford it or because they could not leave their jobs during working hours. It is for patients like these that the doctors recommend night clinics.

But all who continued treatment were able to pay and the mental illness was no more of a financial strain than a physical illness such as a kidney, heart, or gastrointestinal disorder, it was found.

The average expenditure for psychiatric care in the office was $240 per person for a year, and this is consistent with the average expense of any sickness in other medical specialties. In cases where hospitalization was necessary, the average stay was 29 days at a total cost of about $400.

"It is not more expensive to be taken to a hospital with an acute psychotic episode for treatment by electroshock or insulin than it is to go to a hospital with pneumonia, coronary thrombosis or for an appendectomy," the doctors state. "Furthermore, we believe that the expense is fully as justified and the results just as favorable."

The most common complaint which took these patients to the office of the psychiatrist was "nervousness." "I'm nervous," the patient would tell the doctor as his first statement. Behind this nervousness was a feeling of basic insecurity and uneasiness in relation to the environment. The patients were self-conscious and felt that they did not "belong." Several feared that they were "going crazy," and some worried for fear they might harm someone.

Science News Letter, June 3, 1950

PHYSICS

Sun and Moon's Effect On Earth Being Measured

➤ USING an extremely sensitive instrument known as a gravimeter, similar to that used in geological explorations, a University of California at Los Angeles physicist is trying to determine the exact gravitational pull on the earth by the sun and moon.

He is John T. Pettit who hopes to establish definite facts about gravitation, most of which are now only in the theoretical stage.

Since Sir Isaac Newton, he declares, little practical investigation of the fundamental properties of gravity has been done. Most of the work has been theoretical—including Einstein's recently-announced unified field theory.

Mr. Pettit points out that not only are the oceans affected by the pull of the sun and moon, thus causing tides; but that the land surface of the globe is distorted as well. This distortion may be as much as four feet.

To measure the gravitational distortion, Mr. Pettit is using a gravimeter, used in geological exploration. So sensitive is this device that it can measure changes with an accuracy of one part in a billion margin of error.

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