

NUTRITION

Meatless Diet Adequate

Both vegetarian and carnivorous types of diet adequate to feed mankind. Milk and other foods of animal origin are not necessary for nourishment.

► "BOTH THE vegetarian type and the carnivorous type of diet can adequately feed mankind," Dr. Robert S. Harris of Massachusetts Institute of Technology, Cambridge, Mass., declared at the International Conference on Vitamins held in Havana, Cuba.

"The realization of this fact by those who struggle with the food problems of the world is of terrible importance," he stressed.

There is not enough land in the world to feed all mankind on a meat and milk type of diet. But people can be well nourished on a diet that is rich in cereals, such as wheat, corn and rice, and in legumes, or beans, and other vegetables and fruits.

Dr. Harris urged a realistic approach to the world food problem by finding the foods native to a region that are nourishing and building diets around them. He fears that "considerable harm" has been done by shipping an excellent food, such as milk, into undeveloped areas for use in school lunch programs and telling children and their parents that milk and

other foods of animal origin are necessary for their nourishment.

"There is no indispensable food and it is now obvious that there are many ways to compound a good diet," Dr. Harris stated.

"It does not matter," he said, "whether the calcium comes from milk or tortilla, whether the iron comes from meat or tampla, whether the niacin comes from liver or peanuts, whether the tryptophane comes from the eggs or soybeans, or whether the calories come from wheat or rice, so long as these nutrients are available.

"Excellent evidence on this point is offered by the study of the diet of the Otomis living in the Mesquital Valley desert of Mexico. The diet intake of families in four villages was studied and the nutrient content of these diets was calculated from our food analysis data. Though they ate mainly maize, beans, weeds, pulque, and minute quantities of milk, meat and eggs, their diets were quite satisfactory, and the people showed little clinical evidence of malnutrition."

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PHYSIOLOGY

Detect False Deafness

► FALSE DEAFNESS, whether due to malingering or to emotional and nervous disorder, can be detected by the technique of delayed speech feedback, Drs. William R. Tiffany and C. N. Hanley of the speech clinic at the State University of Iowa have discovered.

The person being tested by this method reads aloud at his normal rate of reading. This is tape recorded. While he is reading, the record is played back to him through earphones at a reduced intensity of sound.

The words the person is reading come back to him about a quarter of a second after he has read them aloud. Hearing words in his own voice slightly after he has said each word instead of in the normal, simultaneous manner makes the person slow down in his reading without realizing it.

This change of pace shows the examiner that the person being tested can hear. It can even show him what sound intensities are heard.

Shortly after tests with speech students showed the possibilities of this method, the scientists had a chance to use it in the case

of an 11-year-old girl. She had been brought to the State University of Iowa Hospitals complaining of a severe hearing loss. Audiometer tests were not consistent with her response to speech. And her history showed she had suffered an emotional shock. So the doctors suspected false deafness.

In the delayed speech feedback test she was asked to read aloud from a picture story-book for a recording so that the hospital staff could see how her deafness had affected her speech. After establishing a normal reading pattern, a feedback of about 50 decibel intensity was used. The audiometer test had showed hearing loss for sound of the higher intensity of 75 to 85 decibels. As soon as the recording of her reading began playing back to her, the pattern of the little girl's speech changed so abruptly and radically that no close measure was necessary to realize she was responding to the feedback. Further test showed that she had normal hearing for speech.

Details of the studies are reported in the journal, SCIENCE (Jan. 18).

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● RADIO

Saturday, Feb. 9, 1952, 3:15-3:30 p.m. EST
"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Louis N. Katz, president of the American Heart Association, discusses "Ills of the Heart."

CHEMISTRY

Sulfuric Acid Treatment Reclaims Alkaline Soil

► SOILS TOO high in alkali for plant growth can be reclaimed with sulfuric acid. Prof. Roy Overstreet, soil chemist at the University of California at Los Angeles, reports that in one experiment, soils are still highly productive after treatment three years ago.

"Sulfuric acid is more expensive than other reclamation chemicals commonly used," said Prof. Overstreet. "However, in its speed and effectiveness, sulfuric acid seems economically profitable. Soils planted shortly after sulfuric acid treatment produced good yields the first season."

In ordinary alkali soils, the trouble-makers are sodium salts which are responsible for lowered yields. Sodium makes the soil sticky and keeps water from percolating through.

Sulfuric acid produces sodium compounds in the soil which dissolve in water. These sodium compounds can then be leached out. Most alkali soils are highly productive after they are reclaimed.

At the present time gypsum or sulfur are commonly used to reclaim alkali soils. In the soil studied gypsum showed up well at first but was not lasting in results. Sulfur took about three years to begin improving the soil. After this time its effects were almost as good as those of the sulfuric acid.

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INVENTION

Improved Alloy Contains Titanium and Manganese

► AN ALUMINUM-MAGNESIUM casting alloy with stabilized physical properties brought about by the addition of very small quantities of titanium and manganese has been issued a patent. Wider use of aluminum-magnesium alloys is possible with this alloy which has consistent physical properties and greater tensile strength.

Physical properties of ordinary aluminum-magnesium casting alloys vary greatly and their physical properties are not improved by heat treatment methods now known. The new alloy contains from 3% to 8% manganese, less than one half percent of titanium and manganese together, the rest being aluminum.

This invention brought Hugh S. Cooper, Cleveland Heights, Ohio, patent 2,583,473. Rights have been assigned to Acme Aluminum Alloys, Inc., Dayton, Ohio.

Science News Letter, February 2, 1952