

NUTRITION

Young Infants May Be Fed Vegetables By New Method

A NEW method of preparing vegetables for feeding to babies as young as three months of age has been tested clinically by a New York physician, and it now appears that mothers may soon be having vegetable formulas for infants as well as the old accustomed milk formulas.

The tests with feeding green and yellow vegetables successfully to 70 infants between three months of age and one year were reported before the American Dietetic Association by Dr. George W. Caldwell of New York.

The method tested by Dr. Caldwell consists of homogenizing the vegetables. This process explodes particles of the food during its preparation so as to release nutritive elements and make the food easier to digest.

Babies observed by Dr. Caldwell were fed, not merely one homogenized vegetable, such as spinach or carrots, but a combination of several containing different vitamin and mineral elements.

The new method overcomes disadvantages of feeding vegetables to infants, he concluded from his observations. The babies gained normally in weight and tests of red blood cells and hemoglobin in their blood indicated that the iron and copper in the vegetables were advantageous.

Science News Letter, October 27, 1934

ETHNOLOGY

Ainu Women Wear Belts As Badges of Identity

AN AINU woman in northern Japan wears her badge of identity around her waist, and no man of her people is ever allowed to see it.

This discovery of secret girdles worn by women of the mysterious Ainu tribe is reported by a committee of the British Association for the Advancement of Science. Through his discovery of the secret girdles, Dr. N. G. Munro has obtained positive evidence that the Ainu people have a clan organization.

The Ainu of Yezo and other northern Japanese islands have been particularly elusive folk for scientific study. Their racial identity is obscure, as is their language. Their old culture now clashes with the Japanese culture, and the Ainu ways of living are passing.

An old man, an elder of the Ainu

people, who had never seen one of the women's girdles, was able to tell Dr. Munro that the girdles have magic power, being the gift of a special spirit. In times of epidemic, fire, or tidal wave, the women would wave their girdles to restrain the evil powers.

By his medical treatment of children and urgent cases, Dr. Munro won the confidence of some Ainu women. Two girdles were actually shown him, and exact copies were made for him.

The important feature of the girdles is their length, Dr. Munro reported. Each Ainu woman cherishes the belief that the length of cord is a measure of identity given to a remote ancestress by a particular deity. By these genealogical belts, the Ainu are divided into clans.

Ainu custom forbade marriage between two persons, if the women of both families wore the same kind of secret girdle. The penalty for defying this prohibition was formerly death.

"Now, under Japanese law," Dr. Munro found, "marriages occasionally occur but are disapproved by relatives and members of the village and regarded as bringing ill-luck not only to the parties concerned but perhaps to the community."

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SURGERY

Surgeon Uses Cow's Horn In Treating Broken Bones

COW'S horns, prepared in the same way as the old fashioned powder horns which were used with muzzle loading firearms, are now being used to repair broken bones.

Advantages of this new device are that it is inexpensive and does not require elaborate machinery to apply it as do metal plates, Dr. Edson B. Fowler of Evanston, Ill., said. (*Illinois Medical Journal, September*)

It can be assembled for a few cents almost anywhere at any time and is so strong and flexible that a graft has never been known to break. Another advantage of the cow's horn results from its supply of cysteine, in Dr. Fowler's opinion. Cysteine stimulates growth of cells and so adds materially to the healing and union of fractured parts, he points out. He believes the cysteine in the horn is responsible in a large measure for its success in the healing of the injuries without complications and the short time required for the formation of callus at the joining of the bone.

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IN SCIEN

EUGENICS

Study Three Generations Before Marrying Cousin

EXAMINE carefully the family history on both sides for at least three generations before marrying your cousin, is the advice of present-day geneticists, according to Dr. Charles B. Davenport of the department of genetics, Carnegie Institution of Washington.

Inbreeding is not in itself the cause of defective traits, it appears from statements on the subject made by Dr. Davenport. Through inbreeding, however, existing traits, either good or bad, are strengthened.

Traces of muscular abnormality, dwarfism, epilepsy, feeble-mindedness and insanity are the conditions to be carefully looked for in the three-generation history of both cousins. If persons in either direct or collateral lines within the three generations are found having any of these defects, the marriage between the cousins is hazardous for the offspring, Dr. Davenport pointed out.

Science News Letter, October 27, 1934

PHOTOGRAPHY

Long-Range Camera Uses Mirrors Instead of Lens

A TELEPHOTO camera, adapted for either motion or still photography, using a short reflecting telescope instead of the customary combination of refracting lenses, is described in *Die Umschau*, Sept. 16, by an author who signs himself, merely "Th.M."

In a reflecting telescope a pair of mirrors is used instead of the conventional lenses, for the purpose of focusing the image on the camera film or the observer's eye. At least one of the mirrors must be concave or saucer-shaped, to bend the light rays aside and bring them to a point or focus. In the new German camera both mirrors are concave, increasing the magnifying power for a given length of tube.

A further advantage claimed for the new machine is light weight in proportion to the magnifying power.

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CE FIELDS

NUTRITION

Least Digestible Part Of Bread Is the Crust

CHILDREN who do not like the crusts of bread will rejoice in the finding of University of California scientists that the crust is the least digestible part of the loaf.

The portions of the bread dough most exposed to direct oven temperature are least digestible, Drs. Ethelyn O. Greaves and Agnes Fay Morgan of the department of household science found in an investigation. The most digestible portion of the bread is the "crumb" while the lower crust is less digestible and the top crust least digestible of all.

Parents, however, may still insist on crust-eating on economic grounds, it appears, since the California investigators state that crust is "good for you" in the sense that it is better than no bread at all. But the "crumb" is still better as regards digestibility as well as palatability.

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ASTRONOMY

Palomar Mountain Attains Fame as Telescope Home

AN UNSUNG California mountain top is about to become famous. It is Palomar Mountain, northeastward 45 miles from San Diego, elevation 6,126 feet above sea level.

Upon it will be erected the world's greatest telescope, now building slowly and carefully in Pasadena, Calif., and Corning, N. Y. Its diameter will be 200 inches, quadrupling the area of the present world's largest, the Carnegie Institution's 100-inch telescope on Mt. Wilson overlooking Los Angeles.

Not unlike many flat-topped California hills is Palomar, perch for the world's biggest eye. But for five long years, while other scientists have been designing and making ready to build the great telescope, observers have been making tests by eye and with photoelectric cells, of what the astronomers call "seeing" from the peak of Palomar.

Not merely height, not merely clear atmosphere or transparent air, not even

complete clearness of the sky, but "good seeing" is necessary if the great telescope, costing millions of dollars, is to do its task of probing space with the greatest efficiency.

"Poor seeing" is caused by the bending of light as it passes through the atmosphere. The twinkling of stars when seen with the naked eye is an example. Masses of air of different temperatures or densities pass between observers and star and the star light is reflected by different amounts. An extreme case is heated air on a summer day causing grotesque distortions of distant objects.

The tests show that Palomar has exceptional seeing qualities and that it is free from troublesome city lights which often interfere with "seeing" on Mt. Wilson.

So the California Institute of Technology which will mother the great telescope with the aid of San Diego County is arranging to acquire Palomar Mountain. Soon a cluster of buildings will appear and some years hence the world's greatest spyglass will be directed at the heavens.

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MEDICINE

Infection After Operation Fought By New Method

A NEW way of fighting peritonitis, the often fatal infection which may follow abdominal operations, was demonstrated to surgeons attending the clinical congress of the American College of Surgeons by Dr. Edward L. Young, surgeon-in-chief of Faulkner Hospital and on the surgical staff of Massachusetts General Hospital. By this method death following surgical removal of part of the digestive tract was reduced from 30 per cent. to 2 per cent.

The method was originated by Dr. Herbert L. Johnson of West Roxbury and Boston. It consists of injecting into the abdomen what Dr. Young called a "contracted fraction of bovine amniotic fluid." At first it was used at the time of operation but now is injected four to six hours before. This fluid, now obtained from cows at the time their calves are born, apparently has the power to stimulate healing in the abdomen and resistance to infection. Dr. Johnson first observed its effect in caesarean births and confined its use to these cases, obtaining the fluid from the patient.

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PUBLIC HEALTH

Fight Malaria By Treating People Instead of Insects

BY controlling the human element instead of the mosquito, the number of persons afflicted with malaria has been reduced in several Panama towns from 62 out of a 100 to only 8 out of 100.

This is the accomplishment of the past five years reported to the Gorgas Memorial Institute's board of directors by Dr. Herbert C. Clark, director of the institute's Panama laboratory.

Mosquito control by screening buildings and draining and oiling swamps and other breeding places of the malaria-carrying mosquito is the ideal method of fighting the disease, Dr. Clark emphasized. But it is very expensive and not suited to conditions in labor camps in the tropics.

So he and his associates have worked out an alternative method which consists in giving malaria treatment to all carriers of the disease as well as to persons actually sick with it. By thus eliminating the malaria parasite from the blood of persons living in tropical camps, the scientists can prevent the mosquito from picking it up and carrying it to a healthy person in the camp.

Atabrine is the medicine used in this work not because it is any better than quinine but because it is preferred by the people who have to take it.

Business firms can afford this method.

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PHYSIOLOGY

Ultraviolet Rays Destroy Snake Venom in Test Tube

ULTRAVIOLET rays of light will destroy the toxic poisons of deadly snakes like the cobra, copperhead and rattlesnake in a test tube, it was reported to the meeting of the Optical Society of America.

The long-held hope that a new way of combating the injurious effects of snake poisons on stricken victims of a bite is yet to be realized, however. Dr. David I. Macht, pharmacologist of Baltimore, who reported the research, indicated experiments with animals showed that no antidotal effect could be observed. Only when ultraviolet rays were focused on snake venom in an open wound was a beneficial therapeutic effect obtained.

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