MEDICINE

Stomach Ulcer Patients Need More Vitamins

VITAMINS, especially vitamin C, should be added to the diets of stomach ulcer patients, Drs. A. B. Rivers and L. A. Carlson of the Mayo Foundation advise. Patients whose ulcers have a tendency to hemorrhage should, in particular, be given extra vitamins.

The usual stomach ulcer diet is apt to lack sufficient vitamins, these physicians pointed out at a recent staff meeting of the Mayo Clinic. Finding this to be the case in a number of their patients, they gave the patients doses of vitamin C in the form of cevitamic acid. In all cases the amount of vitamin C in the blood, which had been low, returned to normal and the general condition of the patients improved markedly.

Vitamin C, found in fresh fruits and vegetables, particularly the citrus fruits, has a tendency to prevent hemorrhage, which makes it valuable in ulcer cases. Lack of this vitamin, recent research has shown, produces a disturbance in body tissues and their cells which may keep them from absorbing all the essential nutrient materials from the food eaten.

If the tissues lining the stomach are in this unhealthy state, as a result of vitamin lack, the nutrition of the body cannot help being disturbed and the stomach lining itself must have less resistance to erosion or ulceration. Giving extra amounts of the vitamin should therefore help the patient.

Science News Letter, July 17, 1937

CHEMISTRY

Modern Alchemy May Reveal Why Some Elements Prevail

THE MODERN alchemy of transmuting the elements from one to another by atomic bombardment is destined to solve one of the riddles of science—why the even numbered elements found on the earth are greatly more abundant than are the odd-numbered ones. More than 75 per cent. of the earth's shell is composed of oxygen and silicon, whose atomic numbers are even; 16 and 14 respectively. Aluminum, totalling 7.85 per cent., comes next and is odd-numbered, 13. But then come iron and calcium, with even numbers, 26 and 20 respectively.

Thus over 90 per cent. of the earth's crust consists of five elements alone; four of which are even in atomic number.

Lord Rutherford's new book, "The Newer Alchemy," (Macmillan) suggests the above role of modern transmutation.

Already studies of methods for changing the elements, one with another, indicates that probably in the sun the various particles are constantly changing and creating elements because of the tremendous heat and pressure. Adds Lord Rutherford:

"From a knowledge of the abundance of the elements in our earth, we are able to form a good idea of the average constitution of the sun at the time 3,000 million years ago when the earth separated from the sun. When our knowledge of transformations is more advanced, we may be able to understand the reason of the relative abundance of different elements in our earth and why, on the average, even-numbered elements are far more abundant than odd-numbered elements. We thus see how the progress of modern alchemy will not only add greatly to our knowledge of the elements, but also of their relative abundance in our universe."

Science News Letter, July 17, 1937

ETHNOLOGY

War Songs of Indians Like Those of Japanese

WAR songs of American Indians offer the latest clues to their lost ancestral homeland, somewhere in the Old World.

Pueblo Indians and Japanese warriors knew the same musical trick of raising the pitch of a war song so that it grew more exciting, Miss Frances Densmore reported to the American Association for the Advancement of Science.

Japanese got the idea from Chinese priests, who brought it from India, in the seventh century. Ancestors of Pueblos may have got the idea from some earlier, common source in the Orient, and preserved it through wanderings which ended in the Southwestern United States.

Disclaiming any intent to theorize on ancient significance of such similarities, Miss Densmore reported other Indian musical customs which she finds similar to those in the Old World.

A vocal drone, suggesting a bagpipe's monotonous holding-on to a note, is found in Indian singing in the Papago tribe near the Mexican border and the Quileute in Washington state and there is a tradition of its use by Menominee Indians in Wisconsin. This droning, Miss Densmore said, is a trait of music in some parts of European Russia and in the eastern Caucasus mountains.

Science News Letter, July 17, 1937

IN SCIENC

ARCHAEOLOGY

Archaeological Treasures To Have Shelter

CCC BOYS are building a laboratory and storehouse for the wealth of archaelogical treasures now being found on historic Jamestown Island, Va., by the projects of the National Park Service.

Case after case of relics—fragments of broken bottles, drinking goblets, plates, buttons, bolts and all the other articles which were left behind at America's first permanent English settlement—are being stored, treated for preservation, and eventual distribution to permanent museums.

The project, started in the summer of 1934, has been so fruitful that it might well last for ten more years, states J. C. Harrington, in charge of the operations.

Fifty separate sites of prior dwelling and habitation have already been found on the island, including the foundation of the first brick statehouse. An early brick kiln and two lime kilns have also been discovered.

Science News Letter, July 17, 1937

GEOLOGY

New Land Being Made By Mangrove Bushes

NEW LAND is being added, slowly but surely, to the map of the United States. The mangrove bushes along the coast of Florida are doing it, declares Prof. John H. Davis of Southwestern University. Professor Davis has been making a special study of this subject, from personal observation, examination of old maps, and comparison of newest air-survey photographs.

The red mangrove, which grows in salt water, has numerous roots which catch and hold silt and clay. As the deposit becomes higher, the red mangrove is supplanted by the white and black varieties which grow better on the higher soil. On decay, the mangrove remains form peat formations which aid further in the land-building process.

Experimental plantings of mangroves have been made along the Florida coast so that further study of their role in land-building may be investigated.

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E FIELDS

GEOLOGY

Meteorite On Ice Served To Smithsonian Institution

A STONE from the sky, found on the ice near Great Bear Lake in northern Canada, has been added to the Smithsonian Institution collection of meteorites. An Indian picked it up, wondering at its peculiar form and the fact that it was lying on top of the ice, and brought it to the nearest mission.

The meteorite is about the size of a walnut, and aside from the peculiar circumstances of its discovery is not remarkable. It is thought to be a fragment of a much larger celestial projectile now probably at the bottom of the water. Search for the parent body will be made next summer.

A second meteorite recently received by the Smithsonian Institution is the only one of its kind known to exist. It consists of the mineral known as chladnite, in a form different from that recorded for any previously known meteorite.

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METEOROLOGY

Upper Air Hurricane Study To Be Renewed By M. I. T.

TWO Massachusetts Institute of Technology meteorologists have started south to resume the pioneer hurricane research program started in Cuba last summer.

They are Delbar P. Keily and Douglass S. Mackiernan, Jr., both of whom were in the tropics last year for preliminary studies of violent meteorological conditions. An unusual scarcity of storms in the Caribbean prevented the desired observations but the hurricane hunters hope for better luck this year.

The major portion of the research will be conducted with latest type radio meteorographs, flying balloon radio stations which broadcast pressure, temperature and humidity data from the upper atmosphere. Science has but scant information on these conditions.

When a hurricane is approaching, such information is needed quickly for weather forecasting.

Keily and Mackiernan will operate from Havana but Technology is also equipping another station in Raleigh, N. C., under the direction of Christian Harmantas to obtain correlated data. Weather experts of the Cuban and United States governments are cooperating.

The balloons are expected to reach altitudes of from ten to fifteen miles before they burst and drop the shockproofed instruments to earth. Each will carry an identification tag offering a reward for return to Technology, a system proved very successful in previous studies in other parts of the country.

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ANTHROPOLOGY

Tallest Blond Communities Studied in North Germany

TALLEST blond communities in the world, is the distinction claimed for three isolated villages in a marshland district near Bremen. Nevertheless, they are not classified as pure Nordics by Dr. Christian von Krogh of the Munich Anthropological Museum, who has just completed a special study of them. He calls them "Nordic-Falians"—by analogy perhaps with the tall, medium-blond, but rather round-headed Westphalians.

This group of people are landholding peasants, and they have held the same land for centuries. Two of the villages, Arsten and Habenhausen, have been in existence since prehistoric times; the third is comparatively new, having been founded in the eleventh century on land that had just been drained. Its name, Neuenland, Englishes as "Newland."

The farmer families marry only among themselves, keeping the landless workingmen of the towns excluded from their family circles. A considerable degree of inbreeding has naturally resulted. Tracing family trees back four generations, Dr. von Krogh found only 69.4 per cent. as many ancestors as there would have been had no intermarrying occurred.

That inbreeding to this degree has not harmed the stock physically is evidenced by the condition of the people today. The average body height is five feet nine inches; it is the greatest group height known in Europe. The people have big heads—high, long, and wide—with large faces to match.

Gentlemen of the community just about have to prefer blondes, unless they prefer to remain bachelors. Prevailing hair color is dusky blond, and over four-fifths of the population have blue eyes.

Science News Letter, July 17, 1937

PHYSICS

New Principle of Nature About to be Discovered?

EITHER astronomers are soon to discover some new, hitherto unrecognized principle of nature or else telescopes like the 100-inch diameter instrument of Mt. Wilson Observatory are now looking about to the limits of the universe.

This is the choice which Dr. Edwin Hubble, Mt. Wilson Observatory's noted astronomer, extends to his fellow scientists. As soon as the new 200-inch telescope being erected on Mt. Palomar, California, is in operation and studies on the light from the most distant nebulae are made with it, astronomy may have the answer to its present quandary.

The trouble is with the present theory of the expanding universe which accounts nicely for the shifting of the light from distant nebulae toward the red end of the spectrum. The expanding universe theory, one recalls, pictures some tremendous explosion in ages past which sent out matter that is still expanding. Just as the whistle of a train goes to a lower pitch as it rushes away from the observer so too, in the optical case, does the light from a nebula rushing away from the observer go to a lower "pitch," which, in the case of light means a shift toward the red end of the spectrum. The trouble with this interpretation of the "red-shift" is that it leaves one with a universe that is small, closed and dense; a universe whose outer limit is but little more than the present seeing limits of existing telescopes.

Frankly astronomers admit that they have yet no alternative theory which fits the observed facts so satisfactorily but many of them cannot help feeling that they are not now looking to the limits of space or anywhere near it and that the present region they observe is probably only a small part of a far vaster space.

Alternative solution is to avoid calling the "red-shift" evidence of an expanding universe and to visualize one that is static and far vaster in both age and volume. But before that can be done some scientist will have to discover, recognize and interpret the new principle of nature. Like a careful mountain climber, scientists do not jump off a time-tried, safe ledge of knowledge until they have a better one.

Science News Letter, July 17, 1937