

MEDICINE

Epilepsy Diet Found To Provoke Pellagra

NEW LIGHT has been shed on the epilepsy problem which may lead to discovery of a cure for this baffling disease, or at least to a knowledge of its cause, as a result of a discovery by Dr. N. P. Walker, director of the Mill-edgeville State Hospital, Georgia, and Dr. G. A. Wheeler of the U. S. Public Health Service, Washington.

Dr. Walker observed that sufferers from epilepsy, when fed a high-fat diet, were benefitted as far as the epilepsy was concerned, but developed pellagra, hard-times disease which is believed due to a lack of vitamin G in the diet.

In collaboration with Dr. Wheeler, Dr. Walker studied ten women patients suffering from epilepsy. He found that when they were fed a diet nearly completely lacking in vitamin G but otherwise complete in all respects, the number of epileptic seizures was greatly reduced and the nervous symptoms due to the epilepsy also improved. However, the patients developed pellagra while on this diet. When the pellagra was relieved by feeding yeast, a rich source of the anti-pellagra vitamin, the epilepsy became worse.

No conclusions can be drawn from these observations, and it is not suggested by Drs. Walker and Wheeler that pellagra be used to treat epilepsy, as malaria is used for treating paresis. However, their study points the way for further research on epilepsy which may yield final solution of the problem.

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PHYSIOLOGY

Children Do Not Follow Typical Growth Curves

CHILDREN do their growing as little individuals, and the "average" curves, that are supposed to tell how the young idea shoots toward the ceiling and out of his clothes, really do not mean very much.

So indicated Dr. Charles B. Davenport of the Eugenics Record Office of the Carnegie Institution of Washington, speaking at the meeting of the American Philosophical Society in Philadelphia last week.

Studies on child growth have hitherto been made by selecting a large group of children, measuring them, and averaging up the mass. This makes a beau-

tiful theoretical curve, which is supposed to indicate rate of growth for the young.

However, when Dr. Davenport constructed individual curves for individual children, he found that it was only by chance that their period of growth coincided with the average as indicated by the mass curves. Moreover, instead of being spread out over ten years or so of rather gradual increase in height, these individual measurements showed sudden spurts, with greatest growth taking place in only two years or so. These spurts are individual matters, too, for in some children they come early, in others late.

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ETHNOLOGY

Isolated Community Keeps Old Speech and Customs

AN "ISLAND" of Germans entirely surrounded by Slavs for the past 600 years, keeping the ancient customs and the strange dialect they carried with them when they made their trek into what is now Yugoslavia, little known even to their neighbors and almost wholly unknown to the world at large, was described by John Dyneley Prince, American Minister to Yugoslavia, before the American Philosophical Society, at its annual meeting in Philadelphia last week.

These people, numbering some 15,000, are known as the Gottschee Germans. Their ancestors settled in Slovenia six centuries ago, and the group has stuck to the same spot ever since, with the exception of several thousand who in 1880 emigrated to the United States and Canada because of overcrowding at home.

The people of Gottschee live at peace with their Slavic neighbors, Mr. Prince said, and are left unmolested by the Yugoslavian government. A system of joint government has been worked out which gives the community a large degree of autonomy.

The most interesting thing about the Gottschee people is the archaic type of German they speak. The language is quite unintelligible to other Germans because of the unusual letter-substitutions in most of the words. For example, High German for "What is that?" "Was ist das?" becomes in Gottschee, "Baas ischt dos?"; and "Ich habe gesagt," "I have said," in Gottschee is "I hon geschoait."

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IN SCIEN

ENGINEERING

144 Autos Parked In Space For 12

ONE HUNDRED and forty-four automobiles are parked in the space ordinarily required for 12 in a new automatic parking building which has been in successful operation for several months at the Westinghouse Co. in East Pittsburgh. The present structure is the outgrowth of an experimental machine that parked a smaller number of cars.

Each automobile is run into an individual cage, one of a series that is carried on two endless chains over sprocket wheels at the bottom and top of the parking building in the manner of a conveyor. When a cage is called to the driveway level by means of a key, the machine automatically selects the shortest route and an electric motor moves the cage at 100 feet a minute.

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GEOLOGY

Reefs Formed of Sponges Found on Midwest Prairies

WHEN tropical seas rolled over what are now the midwestern prairies, four or five hundred million years ago, the reefs that built themselves around the shores of what lands there were then were not all coral, as has commonly been supposed. The researches of Prof. and Mrs. Carroll Lane Fenton, of the University of Buffalo, have shown many of the limestone masses in the region south of the Great Lakes to consist of calcified bodies of sponges.

Curiously enough, the sponge varieties responsible for most of the reef formation were not themselves built on limestone skeletons. They were formed over a silica framework, and the lime deposition probably took place after they had died.

The most characteristic form for such a reef is a rounded dome. Modern reefs of the same shape but much higher as a rule, are found off the coast of Brazil.

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CE FIELDS

NUTRITION

Codfish Rivalled As Vitamin King

THE POSITION of the cod as the vitamin A king of fishes has been attacked. According to Prof. E. Poulsen of the State Vitamin Institute in Norway, not only do the 70 to 80 members of the cod family contain just as much of that valuable vitamin as the cod itself, but many other fish actually excel the cod in this respect.

The shark family in particular produces liver oil containing weight for weight several times more vitamin A than the cod family. The liver oil of the most common European shark has eight times as much vitamin A content as does cod liver oil, and that of the dogfish twice as much. However, the codfish can still boast superiority to the shark in the vitamin D content of his liver oil, for it is about ten times that of the shark's.

Moreover, thanks to the cod's obliging habits of timing his arrival in certain places at certain seasons with meticulous precision, he is likely to retain his position as vitamin A king. Other fish may produce more vitamins but they cannot be counted on for the regular and sufficient supply yielded by the codfish.

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ARCHAEOLOGY

Holder of Priestly Office Carved About 2400 B. C.

See Front Cover

GOOD sculptors, those Sumerians who lived in the land around about Ur of the Chaldees 4,000 years ago!

This week's cover picture shows the upper portion of a broken life-sized statue found at the city of Lagash, north of Ur. The features, finely cut, portray a man of dignity and reserve. The proportions of the body are skilfully handled. The arm muscles almost ripple beneath the stone, and the drapery over the left arm is softly folded.

The statue, which is now being ex-

hibited in London by Sydney Burney, is pronounced to date from the time of Gudea, a city governor of Lagash, who lived between 2400 and 2300 B. C. That the statue may represent Gudea himself is the possibility suggested by an expert of the British Museum. The features closely resemble those in some of the statues marked with Gudea's name.

The shaven head indicates that the man held priestly offices and the attitude of the folded hands shows that the portrait represents him as he appeared before the city's god.

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SEISMOLOGY

One Kind of Earthquake Wave Keeps to Same Speed

EARTHQUAKE waves of compressional type all travel at about the same speed, concludes Dr. H. Henrietta Sommer of the University of California, Berkeley, after a detailed study of fifty records of the Alaskan earthquake of October 24, 1927.

For many years there has been a difference in opinion among seismologists as to whether a compressional wave of long period travels faster than a wave of shorter period. Miss Sommer investigated only the first group of preliminary waves, which is longitudinal in nature, and analogous to sound waves. They are the swiftest of the earth waves, attaining a speed of over six miles a second at great depths.

Due to its high intensity the Alaskan earthquake was admirably suited for a study of the travel time of the longitudinal waves. The 1927 quake severed military cables in two widely separated regions, between Wrangell and Ketchikan in the south, and between Juneau, Haines and Skagway in the north.

The closest station recording the earthquake was at Kodiak. On the seismogram traced by the tremor as it passed Kodiak, Miss Sommer found that longitudinal waves of very different periods, one of two seconds and one of 25 seconds, arrived at the same instant. A similar phenomenon was noted on seismograms of stations at a greater distance from the epicenter.

Travel time curves compiled by Dr. Perry Byerly, seismologist of the University of California, were used in identifying the various types of waves. Earth waves travel in curves and not in straight lines, due to irregularities in the earth's composition.

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CHEMISTRY—GEOLOGY

Potash Center May Shift To Italy

FOR generations the Stassfurt, Germany, beds of potash salts were the only large scale sources of supply for the world.

The trouble is not that potash does not occur elsewhere, but that it is found in combinations and concentrations that make its extraction a costly matter in competition with the German article.

For instance, the volcanic rocks of central Italy contain hundreds of thousands of tons of leucite, a mineral containing a silicate of aluminum and potash, but the extraction by the usual processes is not an economic proposition.

However, Baron Gian Alberto Blanc, professor of geochemistry in the University of Rome, has just informed the British Institution of Chemical Engineers that his twelve years' study of this problem has borne fruit, and a large plant to treat 100 metric tons of leucite a day is nearly completed at Aurelia, near Rome.

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BOTANY

Hardy Wild Flowers Defied Ancient Ice

THE POSSIBILITY that plants of the temperate zone may have defied the oncoming ice of the Glacial Age a hundred thousand years ago, and clung to their hillsides within a few miles of the mountains of frozen water, is suggested by Prof. Edgar T. Wherry of the University of Pennsylvania. This view, which runs counter to the commonly accepted opinion that the glaciers were always fringed with a wide area where nothing but Arctic plants grew, comes as the result of his study of geographic varieties of the common moss phlox.

He found that the geographic distribution of these phlox varieties makes it appear probable that the slow migration of the plants took place not from south to north but from east to west, parallel with the ice front and within a few miles of it. This suggests rather strongly that living conditions for temperate zone plants were not altogether impossible even at the very boundary of the invading glacial fields.

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