MEDICINE

Idiosyncrasy to Food May Cause Facial Deformity

SERIOUS deformities of the face and teeth may result from idiosyncrasy or sensitivity to certain foods, Dr. Ralph Bowen of Oklahoma City has found. He described the case of a child who was sensitive or allergic, as physicians call it, to milk. Because of his idiosyncrasy to milk he was troubled with persistent itching of his nose and as a result he developed a habit of rubbing the end of his nose. Years of this nose-rubbing changed the shape of his nose so that it turned up sharply. The shape in the picture Dr. Bowen showed was like a pug nose so exaggerated as to be a deformity.

Depressions at the side of the nose and changes in the shape of the palate are other deformities brought about by the condition of nasal allergy. Dr Bowen found dental deformities five times oftener in children suffering from nasal allergy than in non-allergic children of the large group he studied. He explained that many children suffer from chronic nasal allergy during the whole period when their sinuses are developing. The facial deformities are evidence of lack of development of the sinuses. X-ray pictures confirm this condition.

Science News Letter, November 25, 1933

VETERINARY MEDICINE

Vaccination May Protect Turkeys From Blackhead

VACCINATION to make turkeys safe against the disease known as blackhead, their worst scourge at present, was held out as a possibility of the future by Dr. Ernest Edward Tyzzer of the Harvard Medical School, who spoke before the autumn meeting of the National Academy of Sciences. Dr. Tyzzer warned against too sanguine hopes for immediate results, saying that "there are at the present time practical difficulties that prevent the adoption of the procedure for commercial purposes."

Dr. Tyzzer has made a study of blackhead disease for many years. Lately he has been propagating the one-celled animal organisms that cause it outside the bodies of turkeys, on artificial culture media. Grown for long periods in this way, the protozoön gradually loses virulence, he said. It remains infective for young turkeys and other birds but no longer produces serious disease. Young turkeys infected through inoculated strains are protected against virulent strains of the protozoön which are almost 100 per cent. fatal to unprotected birds. The attenuated strains amount, in effect, to a vaccine analogous to the smallpox vaccine used on human beings.

Blackhead was tracked to its causal organism in 1895 by Dr. Theobald Smith, now of the Rockefeller Institute for Medical Research, with headquarters at Princeton, N. J., but at that time a member of the U. S. Department of Agriculture. The protozoön bears the name *Histomonas meleagridis*.

The disease afflicts quail, prairie chickens and ruffed grouse as well as turkeys. It also attacked the now extinct heath hen. Common chickens have it, but since it has very little effect on them they merely serve as carriers, and are probably the main channel for its fatal dissemination among turkeys.

Science News Letter, November 25, 1933

MEDICINE

Blood From Sleeping Sickness Victims Tested

UNCLE SAM'S fighters against sleeping sickness are about to seek blood samples from victims of the disease in various large cities in the hope that they can discover just how immune a recovered person is to the malady.

Dr. W. G. Workman, U. S. Public Health Service assistant surgeon, is about to visit Pittsburgh with the cooperation of the local health department. He will study the location and clinical records of the encephalitis cases that occurred there at about the time that the encephalitis epidemic raged in and around St. Louis, where it has been intensively studied by a corps of government experts under the direction of Dr. J. P. Leake. Where there are not many encephalitis cases, blood will be taken from a few of those who have recovered from other acute diseases.

Mice have recently been discovered to be susceptible to sleeping sickness, and the blood serum collected will be used to determine whether or not the individual yielding the blood was or was not immune to the St. Louis type of encephalitis. The Public Health Service surgeons hope to obtain in this way some idea of the general distribution of immunity to this disease.

Science News Letter, November 25, 1933

IN SCIEN

GENERAL SCIENCE

Wartime Protection Urged For Scientific Treasures

SAFEGUARDING the world's scientific treasures against destruction in wartime was urged by Dr. Ales Hrdlicka of the Smithsonian Institution, in an address before the Third International Convention of the Roerich Pact and Banner of Peace.

Hundreds of scientific institutions containing highly important collections are scattered throughout the civilized world, the eminent anthropologist declared. Many specimens are of the greatest value to science, and could not be replaced.

"These collections are not merely the property of a local institution or the property of the people of one country," Dr. Hrdlicka said. "They are the evidence that all mankind depends upon, to show what has happened on the earth, and what has been achieved by human culture.

Paintings by the old masters, valuable to human culture as they are, have not the intrinsic importance to human progress that the collections amassed by science have, the speaker declared.

The need for the nations to safeguard the world's scientific treasures against war has become acute only in recent times. Fine scientific museums are comparatively new in civilization.

"During the World War, we found out what war can now do to cripple science," he said. "Freiburg, Germany, just over the Rhine, had a valuable collection of embryological material in its university. During one of the allies' bomb raids on a dark night, a bomb happened to fall on a building close enough to set fire to the building housing the collection. The material gathered there for scientific study represented years of research."

Dr. Hrdlicka proposed that a special committee be created, under auspices of the League of Nations, to catalogue the principal scientific collections and to draft regulations for mapping and marking places and objects to be respected in wartime.

Science News Letter, November 25, 1933

CE FIELDS

PHYSIOLOGY

Freaks' Body Processes Slower Than In Normal Men

CIRCUS freaks, at least certain types of them, lead slower lives than do normal persons. This is the general conclusion indicated by studies of Dr. Allan Winter Rowe of Evans Memorial, Boston, reported in Cambridge, Mass., before the meeting of the National Academy of Sciences.

Dr. Rowe had an opportunity to study the metabolism, or rate of utilization of fuel-foods, of a group of dwarfs, an acromegalic giant, a "fat lady" and several other members of a freak troupe. He found that as a rule their basal rate of bodily processes was depressed. Abnormal function of the pituitary gland was a feature of the majority of the group.

Science News Letter, November 25, 1933

PHYSICS

Effects of Radio Waves Greatest on Dilute Solutions

HIGH-FREQUENCY radio waves, used in the treatment of paresis by inducing artificial fever, have the greatest heating effect on dilute solutions.

This is the conclusion reached by Joseph L. Donnelly, working at the University of Cincinnati.

He does not accept the statement that such waves have a heating effect only on living substances, and his work confirms that of Helen Hosmer and J. C. McLennan who also disagreed with this belief. He tried the effects of such waves on a number of non-living substances and found that solutions capable of conducting an electric current, such as acids and salts, can be heated by the high-frequency waves. The more resistant such a solution is toward the passage of an electric current, the more easily is it heated by the short radio waves: thus acetic acid heats more rapidly than sulfuric acid at the same dilution in water.

Solutions of non-electrolytes, substances incapable of carrying an electric current, cannot be heated by the short radio waves. Mr. Donnelly tried such substances as dextrose and phenol, with negative results.

He is of the opinion that the phenomena he observed in his solutions may have some bearing on the physiological effects of high-frequency waves on cancer. Such malignant tissues grow in a more "watery" medium than the normal tissues around them, hence the waves will have a greater heating and killing effect on them than they have on the "drier" normal tissues.

These experiments are reported in *Science*.

Science News Letter, November 25, 1933

VETERINARY MEDICINE

Hormone Injections Replace Rejuvenation Operation

PROF. EUGEN STEINACH has replaced his famous surgical operation for rejuvenation by injections of a highly concentrated form of the sex hormone, progynon, in combating sterility among cattle in Switzerland. The condition is of comparatively frequent occurrence in highly bred Swiss cattle.

The reports of Prof. Steinach's latest work recall that Gertrude Atherton wrote a novel about rejuvenation of women and called it Black Oxen. She probably did not anticipate the curious twist which scientists have now given her book and its title by performing rejuvenation operations to cure sterility in Swiss cows which, if not black oxen, are at least their near relatives.

Working with Prof. Frei of the Zürich University and the Swiss veterinary surgeons, Drs. Stäheli and Grüter, Prof. Steinach at first devised a method of treating sterility in cows by implanting ovarian tissues and in steers by grafts of male sex organs. The results were reported to be very satisfactory but the high cost of the treatment and the necessary training of the operators prevented it from becoming of practical value.

Further investigations showed that a single injection of progynonbenzoate under the skin of the animal's neck would cure sterility if it were of glandular origin. Out of 46 cases 44 were successfully treated, the results becoming apparent within 24 to 48 hours, it is claimed. Some of the animals were 9 or 10 years old and had been sterile for one or two years. The results were said to be due to reactivation of the ovaries.

Science News Letter, November 25, 1933

GENETICS

Evolutionary Changes Speeded By Aging Seeds

MUTATIONS, or sudden evolutionary changes in plants, can be speeded up notably by keeping their seeds until they are old, and then planting them. Demonstration of success with this method was offered before the meeting of the National Academy of Sciences by Prof. J. L. Cartledge of the University of Pittsburgh and Dr. A. F. Blakeslee of the Carnegie Institution of Washington's station for experimental evolution at Cold Spring Harbor, N. Y.

The two investigators planted seed of a specially bred strain of the common Jimson weed which they had kept up to ten years. Flowers from the resulting plants were examined for certain changes in the pollen, indicative of mutational changes. Plants from seeds less than one year old yielded mutations at a rate of only 0.6 per cent., while plants from seeds three to four years old yielded 3.7 per cent. of mutations, and plants from seeds seven to eight years old gave a "high" of 9.7 per cent. Ten-year old seeds produced plants yielding mutations at the somewhat lower rate of 7 per cent.

Science News Letter, November 25, 1933

PUBLIC HEALTH

Tuberculosis May Increase If Depression Continues

HEALTH officials foresee an increase in tuberculosis if the depression continues, according to a statement made by Dr. Henry F. Vaughan, Commissioner of Health of Detroit, to the National Tuberculosis Association.

"It will be a long time before tuberculosis, unquestionably wholly preventable, will be wholly conquered," Dr. Vaughan said.

"There is a feeling among public health administrators, with whom I am in accord, that if the depression continues, there will result an increase in the incidence of tuberculosis.

"The outcome will depend upon the success with which health organizations are able to maintain such services as diagnostic clinics, field nursing, preventoria, and hospitals, and especially the machinery for early case finding and the isolation of open cases of tuberculosis."

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