

PHYSIOLOGY

Childbirth Organ Produces Sex-Stimulating Hormone

THE PLACENTA, organ involved in child-bearing, can substitute for the pituitary, master gland of the body, in at least one respect, that of producing a sex-stimulating hormone.

This appears from a report by Drs. George O. Gey, G. Emory Seegar and Louis M. Hellman, of Johns Hopkins Hospital and University, Baltimore, and the Carnegie Embryological Laboratory (*Science* Sept. 30).

Scientists have long suspected the placenta could produce such a sex-stimulating hormone, and now the Baltimore investigators have what appears to be proof for the idea.

Cells from placentas and from a hydatidiform mole, kept alive by tissue culture outside the body, produced a substance similar to the sex-stimulating substance excreted by pregnant women. Original discovery of this substance in kidney excretions of pregnant women led to the belief that, although it acted like the sex-stimulating hormone of the pituitary, it was a separate hormone formed in the placenta and not the pituitary.

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GENERAL SCIENCE

World Inquiry into Social Effects of Modern Science

A WORLD inquiry into the part that science plays in modern society is underway and will come to fruition, the international situation willing, probably in 1940. It is the work of the Committee on Science and its Social Relations (C.S.S.R.) instituted by that closest approach to a world super-government for science, the International Council of Scientific Unions, in May, 1937.

Using elaborate questionnaires as a mechanism, a fact-finding campaign is being conducted through the agencies of nationally representative scientific organizations of the various countries. In America, this would be the National Academy of Sciences; in Britain, it would be the Royal Society of London.

There will also be special inquiries along specialized lines, with questionnaires for mathematics, astronomy, mechanics, physics, chemistry, biology, geophysical sciences, geography. Because some fields are not represented by the unions that compose the International Council, the medical and engineering sciences, agriculture, sociology and eco-

nomics are not being included in the first inquiries.

The organization of the international inquiry is in the hands of Prof. J. M. Burgers of Delft, Holland, secretary of the C.S.S.R. In addition to the official questioning and compiling contemplated, there is a place in the plans for assistance from individual scientific investigators. Such points as these, it is felt, might be answered more effectively by individual than by official organizations:

1. The part played by scientific thought in the outlook of various social groups.

2. The forms in which scientific workers and their work are involved in the various struggles and conflicts of human society.

3. The forms in which the consciousness of a social responsibility of science and of scientific workers is taking shape.

These are matters of extreme importance in the large vistas of the world. If they seem less important than fast-marching current affairs, it is largely a matter of perspective. The fear is that the forces of violence will throttle the opportunity of such deliberate assaying of the science that has made civilization.

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MEDICINE

Efficiency Ratings For Cancer Treatments

X-RAYS, radium and surgery are to be given efficiency ratings as cancer treatments in a new U. S. Public Health Service research. Responding to "tremendously increased public interest in the cancer problem," the federal inquiry will weigh the efficiency of the different treatments as applied to numerous forms of cancer.

Dr. Thomas Parran, surgeon general of the U. S. Public Health Service, announced the special study coincidentally with ceremonies beginning construction of the \$600,000 Cancer Institute building at Bethesda, Md.

Critical appraisal of cancer control programs is necessary, Dr. Ludvig Hektoen told the National Advisory Cancer Council, of which he is executive director. Cancer therapy is one element in such programs that receives emphasis from the standpoint of public education and expenditures.

A long and useful life for the $9\frac{1}{2}$ grams of radium purchased with \$200,000 of federal funds was predicted. Even after 1,700 years half of this radium will still be effective.

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IN SCIENCE

OCEANOGRAPHY

Undertow, Bathers' Dread, Is Shown To Be Real

UNDERTOW, the subsurface current running straight away from the shore that beach bathers dread, has been shown to have real existence in studies by Prof. O. F. Evans, University of Oklahoma geologist (*Science*, Sept. 23). Earlier observations by other scientists had cast some doubts on the reality of the undertow.

Prof. Evans made his studies on freshwater lakes in the Midwest. At first he worked on a very small pond, where the phenomena to be studied were on the scale of inches. He traced the currents by releasing drops of ink under water with a medicine dropper. Later, on the shores of Lake Michigan, he worked on a larger scale, still using colored solution to detect direction and rate of current.

In general, he found that when a wind is blowing directly toward the shore the surface layer of water moves with it, while at varying distances beneath the surface there is a return current, or undertow, that moves against the wind.

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PSYCHOLOGY

Unborn Babies Can Learn And Can Forget

A LITTLE unborn infant can learn and can forget, the American Psychological Association learned from the report of Dr. David K. Spelt, of the University of North Carolina.

Learning of the simple type known to psychologists as the conditioned reflex has been established in babies two months before their birth date. Forgetting and un-learning also took place.

The eyes of the X-ray watched the unborn babies during the experiment and tambours recorded the movements of tiny limbs and head.

The experiment was conducted at Watts Hospital, Durham, N. C., with the cooperation of Dr. R. A. Ross, chief of the obstetrical service and Miss Madge Jarvis, nurse.

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E FIELDS

PUBLIC HEALTH

Feeding World Adequately Is Problem For Geneva

HOW to feed the world more adequately will be discussed by experts at Geneva, Oct. 24. This conference may be made even more important by current European uncertainties.

Part of the League of Nations drive toward better nutrition, this meeting of national nutrition committees is expected to consider at least indirectly the effect of partially empty stomachs upon the world situation.

Miss Sybil Smith, U. S. Department of Agriculture nutritionist, will be the American representative.

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PUBLIC HEALTH

Three Requirements for Keeping House Warm

EFFECTIVE and uniform heating, ventilation and economy are three requirements that must be considered in plans for heating the home in winter.

Ventilation usually takes care of itself in winter, according to Charles E. Couchman, industrial hygiene inspector of the Baltimore City Health Department. Heating units are generally so arranged that natural currents of heated air cause a sufficient amount of air motion. The cracks and crevices found even around closed doors and windows normally allow enough fresh air to enter the house. This applies to the daytime. At night, of course, windows must be opened in sleeping rooms.

Any standard heating unit, such as a furnace or stove, will effectively heat a dwelling, Mr. Couchman said, if there is good air circulation. This is particularly true if the dwelling is uniformly heated and drafts are excluded.

The temperature of the house should be kept at or about 72 degrees Fahrenheit. Moist, warm air of this temperature is comfortable, healthful and economical.

On the economy side, Mr. Couchman emphasized the fact that a slow fire is more effective than a more quickly burning one in that it heats a greater quantity of air and allows less heat to go to waste by escaping up the chimney.

Coal gas, produced when you add fuel to your fire, is dangerous as well as unpleasant. The danger is due to the presence in coal gas of deadly, invisible and non-smelling carbon monoxide. Because of this situation, Mr. Couchman advises checking to see that flue pipe and chimney are airtight, so that none of the dangerous gas can enter the house. In order to get rid of this unburned coal gas and poisonous carbon monoxide, always keep the damper of the flue pipe at least partly open. Avoid too much draft, however, or when fuel is added to the fire the heat that results may be enormous enough to set the whole house on fire.

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ASTRONOMY

Giant Double Star Reported To Astronomers

ATREMENDOUS double star whose two components periodically eclipse each other was added to man's catalog of the wonders of the heavens by Dr. Sergei Gaposchkin, of the Harvard Observatory, in a report to the American Astronomical Society.

The star, located in the constellation Scorpio, has, of course, been known before, and while astronomers suspected its great size, it had not been proved, nor was it known to be a double star until Dr. Gaposchkin detected this fact through intensive spectrographic studies.

The star is very hot, with a temperature somewhere between 15,000 and 20,000 degrees Centigrade. It has an average brightness magnitude of about 6.5. This varies by about a half a magnitude as the two parts rotate about each other during the star's 12-day period. Dr. Gaposchkin has made no estimate of its size beyond the fact that it is very massive, and is probably among the largest stars of its type yet found.

Investigation, which is still in progress, has centered about the study of more than 150 photographs of the star, going back as far as 1910. The star has also been studied by Mt. Wilson observers, who were among the first to suspect its size and importance.

Dr. Gaposchkin's wife, Dr. Cecelia Payne Gaposchkin, reported to the conference on the progress of an intensive study she has been conducting of bright variable stars. The investigation covering stars as faint as the 10th magnitude, during the past half century, is expected to be very important for statistical purposes.

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PUBLIC HEALTH

Tick Paralysis Reported From South Carolina

THE FIRST case of tick paralysis reported in the eastern United States, so far as is known, is described by Dr. J. Heyward Gibbes of Columbia, S. C. (*Journal, American Medical Association*, Sept. 10.)

Tick paralysis is not to be confused with Rocky Mountain spotted fever, although both ailments may end fatally, both follow tick bites and both were first found in a small area in the Northwest. Tick paralysis is an ascending type of paralysis, attacking the lower part of the body first and moving upward. It sometimes results in death from involvement of nervous tissue at the base of the brain. The condition promptly disappears when the feeding tick is found and removed, reports of cases from Washington, Wyoming, Montana and British Columbia have previously shown.

The case Dr. Gibbes reported to the medical journal was that of a Columbia woman who was on the way to complete paralysis and death after she went one day to inspect some prize pigs. Four days later her legs felt weak and would not hold her up. Next she lost the use of her arms. Finally her speech became thick.

In the hospital where she was taken the nurse, while combing her hair, discovered a "tumor on the scalp."

When Dr. Gibbes examined the "tumor," he found it was a well filled wood tick. Off came the tick. Next day the patient "felt better all over." The second day she was well.

Dr. Gibbes calls the attention of physicians to the case because of the importance of recognizing this condition as a possibility in the eastern part of the United States.

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PHYSIOLOGY

Insulin Speeds Up Burning Of Alcohol in Body

INSULIN, diabetes remedy, will probably never become a popular sobering-up medicine because of its cost and other practical considerations. It has at least theoretical possibilities along that line, however, since it speeds up the burning of alcohol in the body. Studies showing this effect of insulin on alcohol burning are reported by Drs. Byron B. Clark, R. W. Morrissey and J. F. Fazekas of Albany Medical College (*Science*, Sept. 23).

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