

MEDICINE

Hormone Banks Ward Off Premature Change of Life

HORMONE banks are coming to the rescue of women facing premature change of life when tumors or other conditions make necessary the surgical removal of both ovaries, it appears from a report by Dr. Udall J. Salmon, Dr. Samuel H. Geist and Dr. Robert I. Walter, of Mount Sinai Hospital, New York City, at the meeting in Atlantic City of the Association for the Study of Internal Secretions.

Pellets of female sex hormone crystals were buried under the skin of 35 women at the time of removal of the ovaries. The hormone pellets or crystals became a bank on which the body could draw for supplies of the sex hormone which would normally be supplied by the ovaries.

The change of life symptoms that follow removal of the ovaries can be delayed in some patients for longer than 22 months and greatly reduced in severity when they do occur as a result of the hormone banks, the New York physicians reported.

Overactivity of the pituitary gland, which may follow removal of the ovaries, can be delayed for three or four months, they stated, and other signs of deficiency of sex hormones can be prevented for upwards of 22 months.

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BOTANY

Africa, Not America, Native Land of Watermelon

AFRICA, not America, is the native land of the watermelon, in the judgment of Dr. Orland E. White of the University of Virginia. Speaking before the Virginia Academy of Science in Richmond, he told of recent researches at the Blandy Experimental Farm, which throws new light on the ancestry of this favorite summer fruit.

Watermelons were known at neither the Epicurean feasts of ancient Greece nor the Lucullan banquets of Rome, Dr. White stated. Not until the great age of exploration in the sixteenth century do they appear in the world picture. Dr. White is of the opinion that the Portuguese, pushing southward along the coast of Africa, became acquainted with the ancestors of modern watermelons growing wild in South Africa. They soon transferred them to their colony of Brazil, where the Indians, knowing a good thing when they saw it, promptly

adopted them and added them to their own array of crops. Thus the myth of an American origin of watermelons came into being.

Dr. White has obtained seeds of several strains of these small wild South African melons, which have little enough resemblance to the monsters of the modern melon-patch. He also has under cultivation stocks of a bitter variety of melon, known as the colocynth, known to the ancient Egyptians and other Mediterranean peoples but used by them only as medicine. He had made many crossings between them and modern cultivated watermelons, some of which may eventually prove commercially valuable. At present, however, he is more interested in the bearing of his genetic experiments on the question of the watermelon's origins.

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MEDICINE

Supply of Physicians May Not Keep Up With Demand

NATIONAL defense demands for physicians may exceed the available supply, according to figures announced by the American Medical Association.

New doctors are being graduated from medical schools in the United States at the rate, on the average, of 5,173 each year. The number has remained fairly constant for the past six years. Physicians licensed to practice medicine for the first time average 6,049 each year. The difference between the two figures is accounted for by licenses to graduates of foreign medical schools.

The defense program demands, in connection with training an army of 1,400,000 men, from 7,000 to 8,000 reserve medical officers for each of the next three or four years.

"Assuming, as it does, that 50 per cent of the reserve medical officers would remain on active duty at the end of each year, there would be in 1944 some 3,000 fewer available than the army would require unless additional recruits are secured for the Medical Officers Reserve Corps," the Journal editor points out.

Whether the supply can keep up with the demand for physicians for civilian and military needs is uncertain, the editor continues. Any lessening of the supply, such as would occur if medical students are taken out of medical school and sent to army training camps, would result in a serious shortage of doctors "with consequent impairment of the health both of the military forces and of the civilian population."

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IN SCIENCE

PHYSIOLOGY

Salt Is Preventive Of Gland Deterioration

ORDINARY table salt has been found to be an effective preventive of deterioration of the pituitary, one of the most important of the body's ductless glands, in experiments performed at the University of California by Dr. Alexei Koneff, R. O. Holmes and Dr. J. D. Reese.

Ordinarily, the pituitary undergoes deterioration if the adrenal glands become diseased or are surgically removed. The consequences may be exceedingly serious, for the pituitary influences growth, blood pressure, the normal functioning of the sex glands and of so many other organs that it is sometimes referred to as the "master gland."

The three researchers reported that rats whose adrenals had been removed survived indefinitely in apparently good health and with normal glandular functions if they were given plenty of salt.

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MEDICINE

Epilepsy Remedy Causes Decrease in Blood Proteins

DILANTIN, new and successful epilepsy remedy, causes weight loss and decrease in blood proteins in adult patients, Dr. Felix Frisch and Dr. Albert W. Pigett, of Skillman, N. J., have discovered. They announced their findings at the meeting of the American Psychiatric Association in Richmond.

The number of seizures, or fits, was reduced from an average of 13 a month to one a month when the patients were treated with dilantin, they reported. At the same time there was a reduction in body weight from an average of 174 pounds to 153 pounds.

The decrease in proteins in the blood corresponded to the effectiveness of the remedy in reducing the number of epileptic seizures. This loss of blood proteins, it was pointed out, is a "rather unfavorable and by no means indifferent effect which has to be considered and supervised during treatment."

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CE FIELDS

AERONAUTICS

400-Mile Winds Test Plane Models at Wright Field

See Front Cover

READY to create gales as fast as 400 miles an hour to test models of Uncle Sam's war planes, the giant 40,000 horsepower motor depicted on the cover of this week's SCIENCE NEWS LETTER, is now receiving its final tests in the East Pittsburgh plant of the Westinghouse Electric and Manufacturing Company, where it was built. It will go into service at Wright Field, Dayton, Ohio, where a new wind tunnel is being erected for the Army.

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PHYSIOLOGY

Endocrine Gland Chemicals Control Body Development

THE near-magic that chemistry has lately wrought in curing a large group of dangerous germ diseases has distracted the attention of many of us from the equally exciting chemistry by which the glands of internal secretion develop the various parts of our bodies and keep them working in harmony.

The chemicals that do this are called hormones. Their name comes from a Greek word meaning "excite," although since their christening, scientists have discovered that the hormones may repress as well as excite activity. The fascinating story of these almost unbelievably powerful chemicals and the glands that make them is told in a new book, *Endocrinology*, by a scientist who has pioneered in the study of the glands and their functions, Dr. R. G. Hoskins, Harvard Medical School. (Reviewed, *SNL*, this issue.)

"Though secreted in almost infinitesimal amounts," he points out, "the hormones wield a mighty influence. A baby born without thyroid tissue is a misshapen drooling object with protruding tongue and abdomen who never, of his own resources, becomes more than a stunted, bandy-legged imbecile.

"Lack of another hormone from the pituitary gland prevents growth so that

the individual remains a diminutive dwarf. An oversupply of the same hormone in childhood leads to gigantism. If the overgrowth begins after puberty, when well-rounded development is no longer possible, excessive tissue formation takes place in such parts of the body as are still able to respond, the result being a gross, misshapen individual who seems to have reverted to a gorilla type.

"An excess of one of the adrenal hormones causes a marked accentuation of the masculine sex traits. In the male this results in an exaggeration of virility. In the female it produces a masculinized caricature, the deep-voiced, coarse-featured bearded lady of the circus side show. In different varieties of dogs similar bodily deviations have become hereditary. The Pekingese is a dwarf, the Great Dane a giant, and the bulldog an acromegalic."

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ETHNOLOGY

Remove Rattlers' Fangs Before Hopi Dance

RATTLESNAKES handled with crowd-astonishing familiarity in the famous Hopi Indian snake dance are first rendered harmless by removing their fangs, declares Dr. Charles M. Bogert of the American Museum of Natural History. (*Natural History*, May.)

On a recent trip into the Southwest, Dr. Bogert and a companion witnessed the Hopi ceremonial. When the snakes were released at its conclusion, the two zoologists captured one of them, a thirty-inch rattlesnake. They had to be very careful to avoid the observation of the Indians, who would have been offended at this interference with their religious observance.

Dr. Bogert wrapped the snake in a sack and concealed it in the crown of his hat. At his first opportunity, he examined its jaws, and found that not only the functional fangs, but also the embryo fangs held in reserve to replace them when they are shed, had been skillfully cut away. The poison glands remained, but without the fangs these were harmless.

Dr. Bogert is inclined to believe that the snake-charmers and fakirs of India also remove the fangs of the cobras which they use in their performances. In certain other parts of the world, snakes used in ceremonials are rendered innocuous by either removing the poison glands or having the snake's mouth sewed up so that it cannot strike.

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CHEMISTRY

Roman Candles Were First Form of Chemical Warfare

ROMAN candles are not Roman. They are really Chinese, and they were the first form of chemical warfare, Prof. Leonidas R. Littleton of Emory and Henry College told the Virginia Academy of Science meeting in Richmond. They probably had little material effect, but may have had some "scare value." The same was probably true of the later invention of Greek fire, Prof. Littleton suggested, for "there is nothing man fears more than fire, either here or hereafter."

For many centuries, about the only contribution of chemistry to war was the invention of black powder and the improvement of the metal used in firearms. Only since first World War days has the chemist begun to contribute the fearsome armamentarium of blistering and poisonous gases and sprays, unquenchable fires of incendiary bombs, and artificial fogs of concealing smoke.

Despite the importance of chemists' contributions to modern warfare, however, their greatest responsibility will come in the readjustment period after the war, when their skill and knowledge will be needed in the conversion of the great chemical plants and the immense stocks of materials from military to civil purposes. For this reason, Prof. Littleton warned against drafting too many chemists from their normal pursuits.

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GENERAL SCIENCE

New Organization to Promote Science in South

TO PROMOTE the interests of science in the South, a new Southern Association for the Advancement of Science has been organized. Dr. George D. Palmer of the University of Alabama, who served as president during the organizing period, is now secretary-treasurer. Dr. G. H. Boyd of the University of Georgia is president-elect.

In addition to the encouragement of scientific research in general and its application to problems of the South in particular, the declared objectives of the new Association include the setting up of a roster of Southern research talent available not only for specific Southern problems but for national defense.

Announcement of organization is made in *Science* (April 18) by the organizing secretary, Rev. A. J. Westland, S.J., of Spring Hill College, Mobile, Ala.

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