

MEDICINE

Hormone Aids Muscle Ill

Injections of adrenocorticotrophic hormone, which is produced by the pituitary gland in the head, were found to help patients with a muscle weakness disease.

➤ ONE of the hormones just reported as helpful in arthritis now turns out to be also involved in a muscle weakness disease, myasthenia gravis.

The hormone is one produced by the pituitary gland in the head and is known as ACTH, short for adrenocorticotrophic hormone. The long name shows that it is a hormone which stimulates the outer part, or cortex, of the adrenal glands. Compound E, now known as cortisone, primarily hailed for its effect in arthritis, is a synthetic adrenal cortex hormone.

Improvement in three myasthenia gravis patients after injections of ACTH was reported by Drs. Clara Torda and Harold G. Wolff of New York at the meeting of the American Neurological Association in Atlantic City.

The "incomplete remission," as they label the improvement, has persisted, though the doctors do not know how long it will last.

"Marked improvement of muscle function" is one of the signs of the remissions. This improvement occurred while the patients were taking much less than their usual dose of neostigmine, synthetic chemical now used in treatment of the disease.

The amount of work performed in muscle tests became similar to that of healthy persons, although before the ACTH these patients' work on the tests averaged only 30% of normal.

Chemical tests and blood counts also showed signs of improvement.

The New York doctors do not call ACTH a cure for the disorder, but said that the results in the three patients support the view that it is involved in the mechanism of the disease.

The immediate cause of the symptoms of this muscle weakness disease, they explained, is a decrease of synthesis in the body of a chemical, acetylcholine, which is believed to play a part in the transmission of nerve impulses to muscle cells. Increasing the ACTH in the body causes more acetylcholine to be produced. This and other findings showing a possible connection between the hormone and the muscle weakness disease led to trial of the hormone in the three patients.

When babies are born with muscle weakness or defects, it may be due to congenital myasthenia gravis, Dr. Paul M. Levin of Dallas suggested. He reported two cases in a brother and sister. These babies did not kick and move as much before birth as most babies do, and both showed symptoms

of muscle weakness after they were born.

The weakness was quite severe and widespread in the boy. The sister had it almost exclusively in the muscles around the eyes. In both cases doses of neostigmine by mouth and by hypodermic injection caused striking changes in facial expression and ability to use the muscles. Two of the mother's first cousins had been born with drooping eyelids, suggesting a congenital, or hereditary basis. The mother, however, did not develop muscle weakness when given a full dose of quinine sulfate as a test for potential myasthenia gravis.

Some patients with myasthenia gravis have recovered after having the thymus gland in the chest removed. To appraise the value of this operation, since patients sometimes have periods of freedom from symptoms without treatment, Dr. L. M. Eaton of Rochester, Minn., compared 73 patients operated on before Jan. 1, 1948, with 186 who did not have the operation but were given other treatment during the same period.

A higher percentage of remissions, that is, freedom from symptoms, occurred in

the group that had the operation. But, Dr. Eaton pointed out, the better results may have been due to the selection of the patients, rather than to the operation itself.

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WILDLIFE

Monkeys Half as Big as Rats Shown in American Zoo

➤ A PAIR of miniature monkeys, half as big as rats and ten times as active, are on exhibition at the National Zoological Park in Washington, thanks to a Panagra pilot, Capt. John H. Miller, who got them in Ecuador and sent them to Dr. William Mann, director.

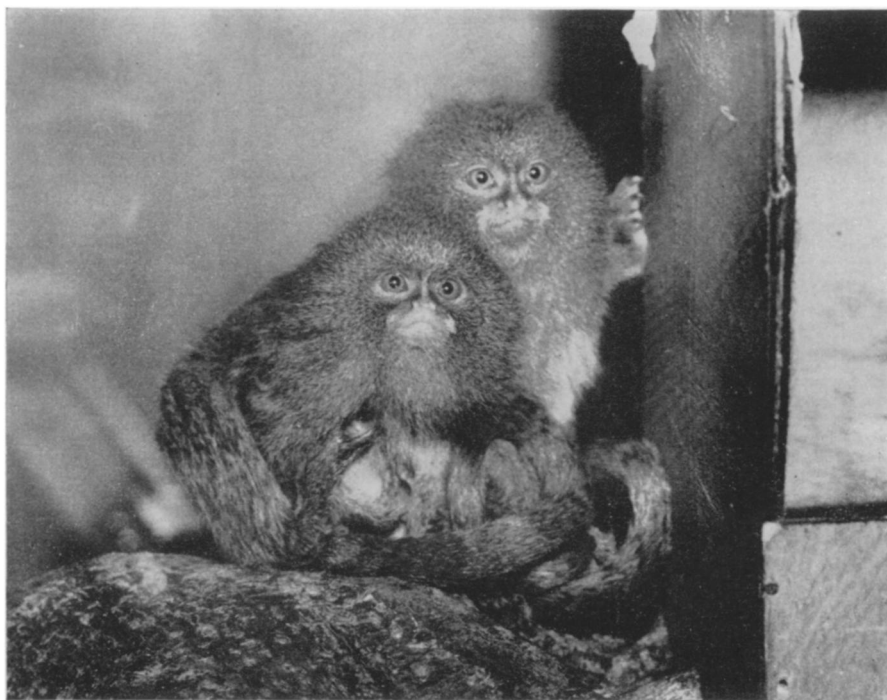
These pigmy marmosets are widely distributed in South America, particularly along the Amazon. They have sparkling eyes that make them appear to have an intelligence that they don't possess.

They can't be let out of their glass cage for fear they will escape. They have to be fed through a small door that is closed by the keeper's hand while the food is put in the cage.

A pair of big-eared foxes from Cape Colony, Africa, and three kangaroos from Australia are also new exhibits.

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The British Royal Air Force is making an aerial photographic survey of some 150,000 square miles of Africa, much of it unexplored, to secure information for African development.



MINIATURE MONKEYS—These pigmy marmosets are half the size of a rat. They inhabit the region along the Amazon in South America.

MEDICINE

Conquest of Large Germs

Amebic dysentery, shingles and pemphigus are being checked by aureomycin. No antibiotic had previously been found effective against large germs like amebae.

► AUREOMYCIN, the golden yellow antibiotic drug, is now being used successfully to treat amebic dysentery, shingles and pemphigus.

These new triumphs for the drug have only been achieved within the last few weeks. There has not been time for all the reports to be published in scientific journals or to get them on the program of the American Medical Association meeting. But doctors attending the meeting heard the news from each other.

Considered very significant are the good results in amebic dysentery which Drs. L. V. McVay, R. L. Laird and D. H. Sprunt of the University of Tennessee and the John Gaston Hospital, Memphis, report in the journal, *SCIENCE* (June 10). The drug gets big germs of this widespread disease out of the patient's body usually within three days.

The importance of this finding lies in the fact that this is the first inkling anyone has had that any antibiotic drug would be effective against large germs like amebae, which belong to the class of protozoa. There is hope, now, that other diseases caused by protozoa may also be conquered

by aureomycin. Included in Dr. Sprunt's cases is one patient who recovered even after an amebic ulcer had perforated the intestine.

The excruciating nerve pain of shingles, often requiring narcotics to stop it, is relieved within 12 hours after aureomycin treatment has been started. The skin eruption begins to dry up within 48 hours. Doctors in New York and Boston are getting these results in this long-lasting virus-caused disease, known medically as herpes zoster. They find, however, that the drug must be used early in the disease. If started after two months, it is not so effective.

Pemphigus is a little-known disease that starts with a skin eruption like that of shingles. In one form, the skin sores ulcerate and the germs, believed to be a virus, get into the blood. Patients are sometimes covered with the ulcerating skin sores. They become invalids for life, if they do not die of the disease, as in many cases they do. Skin specialists at Presbyterian Hospital in New York are now sending patients with this disease home, "to all intents and purposes cured" by aureomycin.

Still another disease over which aureomycin is triumphing is the kind of meningitis caused by hemophilus influenza. This is not the germ that causes influenza, but the meningitis it causes was 100% fatal. Serum and sulfa drugs helped bring down the death toll. Dr. Theodore E. Woodward of Baltimore stated that he had cured five babies under a year old of this disease with aureomycin alone.

Good news about aureomycin comes, too, from scientists of Lederle Laboratories who make the drug. The nausea and vomiting that has been a disturbing side effect will not trouble patients getting the drug in the future. This happy result is expected from a change in the production method.

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WILDLIFE

Migration Routes of Yellowstone Elk Studied

► ELK HERDS migrate, just as flocks of ducks and geese do, only they do not go so far and they naturally move more slowly. But they do follow regular travel-ways by thousands, stated Victor H. Cahalane, chief of the biology branch of the National Park Service, before the meeting of the American Society of Mammalogists in Washington.

The largest elk herd remaining in the United States spends its summers in the mountains near the southern boundary of Yellowstone National Park, and when the first heavy snows fall in late October or early November the animals start to move toward their winter range in the lower part of Jackson Hole. (See *SNL*, May 14, p. 311). The herd moves southward on a front about 30 miles wide.

Kind of weather has considerable effect on the rate at which the elk move, Mr. Cahalane declared. If the snowfall is light they go at a leisurely pace, taking as much as two weeks to reach their winter quarters. But if a heavy blizzard strikes, they hurry up, making the trek in half that time.

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PALEONTOLOGY

Flesh Remains of Ancient Animals Dug up in Alaska

► RUSSIAN scientists did do it first, but their monopoly has been broken.

Officials of the American Museum of Natural History in New York announced that the actual flesh remains of prehistoric animals discovered in Alaska are on display. Included is the body of a young muskox which died some 15,000 years ago and was preserved in a natural deep freeze in Alaska.

These specimens are among the first ever found on the North American continent, though Russian scientists have been digging up this sort of thing in Siberia for years.

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LARGE-EARED FOXES—This pair of foxes from Cape Colony, Africa, are on exhibit at the National Zoological Park in Washington.