



HE GREW UP!

The cover illustration of this week's Science News Letter is from a "baby picture" of Bamboo, the gorilla who is the pride of the Philadelphia Zoological Park. Bamboo was a gentle and appealing infant, but as he grew up into a big boy gorilla the nature normal to his species asserted itself and he could no longer be admitted to human society. (Cover photo by Newton H. Hartman.)

MEDICINE

Addison's Disease Patients Improve on Synthetic Hormone

Patients Taking Small Doses of Chemical Can Even Do Without High-Salt Diet; Gland Rules Use of Food

SMALL doses of a synthetic chemical have brought about general improvement and marked weight gains in seven patients suffering from severe Addison's disease, Drs. Kendall Emerson, Jr., George W. Thorn and H. Palmer Howard, of the Johns Hopkins University and Hospital, announced at the meeting of the Association for the Study of Internal Secretions in St. Louis.

In these cases, the chemical was given by injections under the skin, but the Hopkins doctors have previously reported good results when several months' supply of the chemical is made into a pellet like an aspirin tablet and buried in the fat around the shoulder blades. The operations in those cases, by Dr. Warfield M. Firor of the Hopkins surgical

department, were performed under local anesthetic but with strict aseptic technic.

The chemical, desoxy-corticosterone acetate, is apparently the same material as the substance produced by the cortex of the adrenal glands. Without this vital gland product, life cannot go on. Addison's disease patients suffer from failure of the cortex of the adrenal glands, tiny organs near the kidneys, which makes them grow progressively weaker and more anemic and which turns their skins a grayish-brown color.

Extracts from the glands keep them alive, as insulin does diabetics, but the adrenal gland preparations are expensive, and in addition the patients must consume large quantities of salt because one feature of Addison's disease is

dangerous loss of salt from the body.

The new chemical, prepared by a Swiss scientist, Dr. T. Reichstein of Zürich, can apparently take the place of the gland's own product. The patients at Johns Hopkins Hospital not only showed improvement in their general condition but careful tests showed normal conditions in their bodies. They could even get along with a low intake of salt. While the new chemical is now very costly and limited in quantity, there is hope that commercial production will bring the price down to the point where every Addison's disease sufferer can be given all he needs.

Feminized Roosters

SOME of the masculinized hens that have been reported from time to time were probably, on the contrary, feminized roosters. Sex hormone studies indicating this were reported by Dr. L. V. Domm of the University of Chicago.

He injected estrin, the female sex hormone, into single comb brown Leghorn eggs during the second and fourth days of incubation and then let the eggs hatch and the chicks mature.

"The males of this experiment," Dr. Domm reported, "revealed an interesting sexual transformation. Some of the males appeared quite normal at this time while in others feminizing effects were evident in the plumage, but in none of our cases thus far observed has a complete henny plumage appeared during the first year.

"However, following the molt of the second summer many of them developed a henny plumage. A few again developed the plumage prevalent preceding the molt which was either cocky or intermediate. Head furnishings invariably became masculine in character though in some these have become more feminine with the change in plumage following the molt. Some of these birds are known to crow and tread. Others have not been known to display either type of behavior."

Post mortem examination of the sexually mature fowl revealed significant modifications of the sex organs toward the feminine type.

Gland Rules Food Use

THE conversion of sugars, starches and proteins such as meat into fuel for body activity and into new body tissues is under the control of the tiny gland in the head called the pituitary.

Discovery of how this "master" gland controls both protein and carbohydrate