

## MEDICINE

# Pituitary Gland in Cancer

When pure growth hormone is given to rats, they not only double their normal size, but they get cancers. The reason for this effect is not known.

► A NEW idea of how cancer starts is developing from studies reported by University of California medical researchers at the meeting of the American Medical Association in San Francisco.

The pituitary gland, tiny but powerful organ at the base of the brain, is involved. This gland is known to produce half a dozen or more hormone chemicals, among them ACTH, currently famous for the dramatic relief it has brought in arthritis and other conditions.

ACTH acts on the cortex, or outer part, of the adrenal gland. But it is the growth hormone of the pituitary gland that is arousing scientific interest in connection with cancer.

When this hormone in pure form is given to normal rats, the animals grow twice the normal size. But they also get cancer. Some of the animals got cancers in the lungs. Others got them in the ovaries. In one instance, four different tumors, or cancers, developed on one ovary. And some animals got a very rare form of adrenal gland cancer. Almost all of the rats got cancers of the breast tissues.

These results occurred when the animals were given the pure growth hormone over a long period, about half the animal's nor-

mal life span.

Just why the pituitary gland growth hormone has this effect is not known. Cancer, of course, is a form of abnormal growth, but pituitary growth hormone ordinarily is a stimulator of normal growth. When given to animals that have had their own pituitary glands removed, the pure growth

## ANTHROPOLOGY

# Hunger Regulates Lives

► WHEN a people live in a state of semi-starvation, hunger dominates their lives. Hunger becomes such a motivating factor that they will kill useless persons, regulate their love life by the state of their food supply and dream at night about food.

This was discovered in a year's study of a nomadic Indian tribe of Bolivia, so dominated by the need for food that other skills, the arts and religion had either been lost or were never learned.

The study was made by Dr. Allan R. Holmberg, anthropologist, and was issued by the Smithsonian Institution in Washington.

Dr. Holmberg found that this tribe—the

hormone stimulates growth without producing cancers.

Next experiment the California researchers want to try is injection of a known cancer-causing chemical, such as methylcholanthrene, in rats without pituitary glands, to see whether the cancers develop in the absence of growth hormone.

The experiments may shed some light on why sex hormones bring temporary relief in some forms of cancer, and they give some rational basis for the often-suggested idea of irradiating the pituitary gland in the hope of controlling cancer.

The studies reported at the meeting were by Drs. Henry D. Moon, Miriam E. Simpson, Choh Hao Li and Herbert M. Evans.

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Siriono Indians—even wore no clothes, although a scorching sun and hordes of insects would seem to make clothing imperative.

The Siriono were selected for study because they are almost constantly hungry, depending almost entirely on wild game and fish, berries, nuts and other wild food from the forest to keep them from starvation. Following up studies made at Yale's Institute of Human Relations, Dr. Holmberg wanted to find out what effect the anxiety and frustration caused by continuous food shortage would have on the people suffering them.

Among a people who are always hungry, food becomes the greatest interest in life, Dr. Holmberg found. People do not marry for love among the Siriono. Wives and also "other women" outside the home are wooed by promises of food. Young girls fall for the man who is the best hunter. And wives quarrel with their husbands not because of infidelity but because he gives food to another woman.

Even sexual activity is governed by the food supply. When the food deprivation is relieved temporarily by an abundance of food, as when a hunter returns with a good bag of game, everybody eats to excess. The periods of deprivation, Dr. Holmberg observed, are accompanied by sexual abstinence; periods of gluttony are followed by sexual excesses.

The backwardness of the Siriono people is blamed, at least in part, by Dr. Holmberg on their preoccupation with the food problem. Technology is mostly absent, art non-existent, social and political organization relatively simple.

The hunter must walk as far as 20 miles in a day searching for game, but roads are unknown and trails not cleared. Although waterways are abundant, canoes or boats are unknown.

The Siriono is aggressive. He fights for his share of food. He eats principally alone



**FLAMINGO'S NEST**—Despite their captivity in the San Antonio zoo, the two flamingos in the center do not allow that to interfere with their plans for a family, as they constantly continue to set on the one egg. This is one of the rare instances of flamingos nesting in actual captivity.