

MEDICINE

Gland Removal Aids Muscle Weakness Disease

Besides Offering More Permanent Relief for Patients, Operation Throws New Light on the Thymus Gland

ENCOURAGING results in treating the muscle weakness disease, myasthenia gravis, by surgical removal of the thymus gland in the chest are reported by Dr. Alfred Blalock, Dr. A. McGehee Harvey, Dr. Frank R. Ford and Dr. Joseph L. Lilienthal, Jr., of the Johns Hopkins Medical School and Hospital (*Journal, American Medical Association*, Nov. 1).

Out of six patients on whom the operation was performed, one died. Dramatic improvement in strength continues in three, operated on in July and August of this year, and these patients are getting along without any medicine. Improvement in the other two patients so far is less striking.

Besides offering hope of more permanent relief than medical treatment for these patients, whose muscle weakness often progresses to the point where they cannot swallow and breathing is a tremendous effort, the results of the operation throw new light on the little understood thymus gland. They suggest that the thymus, which usually shrinks in size as the body grows, is a

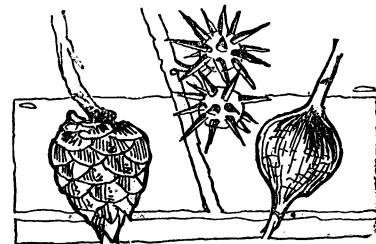
gland producing an internal secretion, as do the thyroid and other endocrine glands of the body, and that it may have a definite function to perform.

Myasthenia gravis, the Hopkins scientists point out, presents in some ways a picture similar to that of curare poisoning. This suggested that some tissue in the body of these patients might be producing a substance similar to curare, the chemical which was once used as an arrow poison by the Indians.

The thymus gland came under suspicion because about half the reports of post mortem examination of myasthenia gravis patients showed tumors, enlargement or persistence of the thymus gland and because in one patient removal of a tumor of the gland was followed by complete recovery of the patient who has remained well for four years.

Science News Letter, November 8, 1941

Cotton-padded tarpaulins for *bee hives* are found effective comforters for cold weather, and durability tests are being made.



Plant Defenses

PLANTS defend themselves against attacks of enemies by a wide variety of devices, some of which are described in a recent symposium book. In many cases what we commonly describe as the disease really consists of the defense mechanisms operated by the plant against the real disease (*Reviewed, SNL, this issue*).

Gray, cork-rimmed holes in leaves of cherry trees are referred to as shot-hole disease. Actually, Dr. F. W. Went of the California Institute of Technology points out, they are signs of the plant's successful defense against the invading fungus. It has walled it off with a layer of cork that has prevented further spread, and permitted the tissue already killed to slough away. The whole performance is to some extent analogous to the encystment of parasites in animals, or the formation of the enveloping limy wall around a knot of tubercle bacilli.

The formation of cork is a very general type of defense in plants. Cork in trunk bark is a natural, normal growth, but the cork that forms around wounds develops only through the action of a hormone, present apparently in all living cells but released for duty only when the cells are destroyed. Again taking a somewhat remote animal analogy, it is a little like the emergency reaction of blood clotting.

Tumor-like swellings and other outgrowths, like witches'-brooms on some kinds of trees, are usually reactions to injury or attack by some outside organism. Sometimes, as in the case of plant galls produced by the thrusting of insects' eggs into the twig tissues, they benefit the parasite by producing an abundant and rich food supply for the larvae. In other cases, as in the bacterial disease known as crown gall, the plant tumors yield no known benefits to the invader.

Clip and mail this handy coupon

To SCIENCE CLUBS OF AMERICA, 1719 N St., N. W., Washington, D. C.

- Send me information on organizing a science club.
 Enroll me as an associate of Science Clubs of America. 25 cents is enclosed.

To SCIENCE NEWS LETTER, 1719 N St., N. W., Washington, D. C.

- Start my subscription to SCIENCE NEWS LETTER for 1 year, \$5
 Renew 2 years, \$7
 (No extra postage to anywhere in the world)

To THINGS of Science, 1719 N St., N. W., Washington, D. C.

- Enter my membership in THINGS for 6 months, \$2
 Renew 1 year, \$4

Name

Street Address

City and State