

PUBLIC HEALTH

Steroids Under Inquiry

STEROID HORMONES, currently the principal subjects in Senator Estes Kefauver's (D.-Tenn.) latest hearings, began trickling onto the market nine years ago.

The first was cortisone, introduced by Merck and Company, Rahway, N. J., in 1950, followed by hydrocortisone two years later. Cortisone is marketed as Cortone, Cortogen and Cortisone. Hydrocortisone is sold as Hydrocortone, Cortef and Cortril.

Steroid hormones are used for many purposes including the treatment of allergic disorders such as bronchial asthma and the reactions to other drugs; inflammatory diseases of the eye; skin diseases; blood diseases such as pernicious anemia; kidney diseases, and pulmonary fibrosis.

But their most widespread use is in the treatment of rheumatic diseases. It is estimated that roughly 10,000,000 Americans are afflicted with rheumatic disorders, about one person in every 16 of the population. More than 1,000,000 are permanently disabled. Rheumatoid disease has become known as the number one crippler, striking more people than cancer, heart disease, and tuberculosis combined.

Steroids do not cure arthritis. They do, however, relieve patients from severe pain for periods of time.

Other steroid hormones now on the market include prednisone and prednisolone, introduced in 1955 by Schering Corporation, Bloomfield, N. J. These two are sold as Meticorten & Meticortelone, Deltra & Hydeltre, and Deltasone & Delta-Cortef. Sterane is still another trade name for prednisolone.

In 1957 Upjohn Company of Kalamazoo, Mich., introduced methyl-prednisolone which they shortened to Medrol, while Squibb & Sons, New York City, and Lederle Laboratories of Pearl River, N. Y., presented triamcinolone, labelled Aristocort and Kenacort.

By 1958, Merck was back to introduce still another, dexamethasone. It is marketed under the names Decadron, Deronil and Gammacorten.

Other drug firms now engaged in manufacturing these hormones include Chas. Pfizer & Co. Inc., Brooklyn, N. Y., and Ciba Pharmaceutical Products, Inc., Summit, N. J.

In 1959, the sales from these drugs alone at the manufacturers' level are estimated at \$120,000,000. Individual pills cost approximately 30 cents.

Science News Letter, December 19, 1959

ASTRONAUTICS

Monkey Is Space Hero

AMERICA'S space hero is a little cinnamon colored Rhesus monkey named Sam.

The animal had seat number one in the National Aeronautics and Space Administration's "Little Joe" shot from Wallops Island, Va., Dec. 3.

The primary purpose of the shot was to test the pilot escape mechanism, including safe recovery, in preparation for a manned space flight. The primary purpose of putting a monkey aboard was to record and compare its heartbeats in space with its heartbeats recorded under normal conditions.

Companions on the 80-mile-high trip included barley, rat nerve cells, neurospora (a common mold), cultures of bacteria and cell tissues, and flour beetle eggs. Scientists want to study what, if any, effect radiation has on these biological specimens.

This monkey had been conditioned to pull a lever during the 13-minute ride through space. Thus scientists were able to determine whether or not the animal was capable of thinking and performing physical motions during periods of weightlessness and extreme gravity forces.

The Rhesus rested on its back, from which position it was able to see a blinking red light overhead. Failure to pull the lever while the light blinked resulted in a slight electronic reminder. Cameras mounted inside the biological package were continuously taking pictures of the animal's

reactions. Special equipment recorded the animal's eye movements which would, if it suffered motion sickness, snap back and forth.

When examined after recovery from the Atlantic Ocean, where the capsule landed, Sam was said to be in "fine shape." However, extensive medical tests will be made to determine more about the effects of space flight on the animal.

Science News Letter, December 19, 1959

EVOLUTION

Claim Weeping Aided Survival of Early Man

HIS TEARS may have saved early man from a lot of disease and discomfort.

In fact, it appears that weeping was extremely important in early man's development and survival, a noted anthropologist reports in *Science* (130, 1572, Dec. 4, 1959).

The long period during which a human child is dependent, when crying is his one way of communicating needs, was probably an important influence in the evolution of weeping, Dr. Ashley Montagu of Princeton, N. J., points out.

In man, "the only creature who weeps," tears have acted as a force in natural selection. Those infants and children that did cry tears, as opposed to dry crying, were better able to survive bacterial and viral attacks, Dr. Montagu says. As early as

1922, researchers have known that the enzyme lysozyme, found in nasal secretions, has important bacteria-destroying powers.

As long as the mucous membrane of the nose remains moist it is an efficient bacteria killer. However, the drying that occurs in tearless crying inactivates the mucous membrane quickly. Tears also contain the same potent enzyme, lysozyme, which has now been found effective against several virus infections.

Thus, "early in the development of man those individuals were naturally selected in the struggle for existence who were able to produce an abundant flow of tears as they cried," Dr. Montagu suggests.

The perpetuation of species was increasingly left to those who could weep.

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