

PHYSIOLOGY

One Step in Aging Process May Be Reversed by Hormones

New Studies are Part of Fundamental Attack on Diseases of Age—Cancer, Heart, Hardened Arteries

SCIENTISTS seem one step closer toward turning back the clock of time and stalling off old age as a result of studies by Dr. Leo Loeb and associates at Washington University School of Medicine, St. Louis. (*Science*, Nov. 4)

Reversal of at least one step in the aging process may be possible through the influence of glandular products or hormones, Drs. Loeb and R. M. Simpson report. Drs. E. L. Burns and V. Suntzeff were associated with Dr. Loeb in part of the studies leading to this conclusion.

Elderly persons cannot expect, as a result of these studies, to be restored to youth by getting a "shot" of some gland extract. Gland extracts or hormones injected into mice and guinea pigs, however, had the effect of either speeding up or retarding certain characteristic old age changes. The result depends on the amount of hormone. Large amounts over long periods very much intensified

and accelerated some of the old age changes in certain organs.

Ponce de Leon's long sought Fountain of Perpetual Youth may be as far away as ever, but the studies of the Washington University scientists are a fundamental step in the attack on the degenerative diseases—cancer, heart disease, hardening of the arteries and the like—which constitute the biggest unsolved medical problem today.

Dr. Loeb and associates studied the aging process of certain organs and tissues—breast, thyroid gland, uterus—in mice and guinea pigs, both under the influence of glandular products and as it occurs naturally. They conclude that one characteristic change of old age "begins very early in life and progresses steadily from then on, and that hormones may counteract this effect" in three different ways.

"These observations suggest," the scientists state in their technical report,

"that the fibrosis and hyalinization of the stroma which occurs with advancing age may perhaps be reversible under the influence of hormones, at least in certain instances."

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MEDICINE

Spain a Proving Ground For New Pellagra Cure

SPAIN, the proving ground for one of medicine's most spectacular advances in recent years, the development of "blood banks" for blood transfusion purposes, will be the large-scale test laboratory of what may be yet another major step forward—the nicotinic acid treatment for pellagra, a widespread dietary deficiency disease from which large numbers of people suffer.

Forty thousand Madrilenos, among those in Spain's capital city now beginning their third year under siege by Generalissimo Francisco Franco's rebel armies, will be treated with 26 pounds of the precious stuff, the gift of 39 well-known American scientists. It will be the first large-scale use of the remedy.

Permanent relief from the disease is not expected from the nicotinic acid, as a critical food shortage in Madrid may be expected to continue to cause new cases of pellagra. Only a marked improvement in the food situation can alter this condition.

Nicotinic acid as a remedy for pellagra was discussed by Drs. David T. Smith and Susan Gower Smith of Duke University only a short time ago at the fall meeting of the National Academy of Sciences. These two scientists are among the scientists who contributed \$425 to purchase the supply of the drug; others are Drs. R. R. Williams of the Bell Telephone Laboratories and C. A. Elvehjem of the University of Wisconsin, both of whom were early workers in the nicotinic acid field.

Nobelists Donate

The list of donors includes three Nobel Laureates, Dr. Albert Einstein, Dr. William Parry Murphy, one of the discoverers of the liver cure for anemia, and Dr. Harold C. Urey, Columbia University heavy hydrogen finder.

Results in Madrid will be closely watched by American scientists, particularly because there are a number of them who still maintain some degree of skepticism with regard to the remedy, since it has not yet been tested on a large scale.

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DUNKING ON A BIG SCALE

But these "doughnuts" are really airplane tubes being treated for leaks by submerging in the tank at the Goodyear factory.