



Howard University

CHICKENS EXERCISED—These chickens were fed a fatty diet and then exercised by rotation in a mesh barrel in a study on the causes of heart attacks carried on by Dr. Harry Y. C. Wong, professor of physiology, Howard University School of Medicine, Washington, D.C.

MEDICINE

New Anesthetic Powerful

A new class of anesthetic and pain-killing compounds which taste bitter, then sweet, has proved more powerful than the basic animal anesthetic meperidine.

➤ AN ENTIRELY NEW CLASS of anesthetic and pain-killing compounds, more powerful than the hitherto basic animal anesthetic meperidine, was reported in Washington, D.C.

Research has been done primarily with animals, but two of the three researchers applied the substance to their own scratched skin without harm.

The research was a part of a continuing study of spirane compounds, of which one variety, azaspirane derivatives, showed a variety of biological properties. These compounds were anticancer, tranquilizing and productive of low blood pressure. They also were able to block nerves.

The present research produced the new anesthetic.

Anesthesia of the skin, tongue and other tissues and organs to which the solution may be applied directly is rapidly brought about and lasts several hours.

In dilute solution the substance has a sweet taste when applied to the tongue. If a crystal of the solid hydrochloride is applied to the tongue, the immediate taste is a bitter one, which gradually becomes sweet as the substance dissolves and is dispersed and diluted in the liquid mixture.

In either case rapid anesthesia is produced, lasting up to four or more hours, depending upon the amine used and its concentration. The same sensation of bitterness and sweetness is experienced with saccharine, which possesses no anesthetic properties.

Dr. Leonard M. Rice of Howard University's College of Pharmacy in Washington, D.C., reported in the *Journal of Medicinal Chemistry*, 8:825, 1965.

Dr. Rice is one of the researchers who tried out the new compound on his own flesh. Also testing it was Dr. Edward C. Dobbs of the University of Maryland Dental School, Baltimore. Dr. Charles H. Grogan of the National Cancer Institute, Bethesda, Md., the third researcher, earned a patent Oct. 26, which he assigned to Tri-Kem Corp., Washington, D.C., a corporation of the District of Columbia. The patent was for aminospirocarboalicyclic compounds.

Dr. Charles F. Geschickter of Georgetown University gave support to the investigation in its early stages. Dr. Geschickter is head of cancer pathology at Georgetown.

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PHYSIOLOGY

Chickens That Exercise Lack Clogged Arteries

➤ CHICKENS fed on high cholesterol diets get fat, but if they exercise, they will avoid clogged arteries or atherosclerosis, Dr. Harry Y. C. Wong, professor of physiology, Howard University School of Medicine, Washington, D.C., told SCIENCE SERVICE.

Dr. Wong uses a treadmill, which allows considerably more exercise than chickens usually get in a pen. In this way, they burn up excess fat so that their arteries are kept

clear because of the lower level of cholesterol in the blood.

Dr. Wong is continuing treadmill experiments started in 1953, two years after he came to Howard from Andrews University, Berrien Springs, Mich. His work and that of his associates has the support of the National Heart Institute, Bethesda, Md., as well as that of the Sussex County Heart Association of New Jersey and the Washington Heart Association.

Heart Research News, summer, 1965, credited Dr. Wong with getting Mer-29, or triparanol, taken off the market through reports to the Food and Drug Administration.

Mer-29 had been thought to lower the level of cholesterol in the blood, but through Dr. Wong's experiments with chickens and gerbils, rodents ordinarily resistant to atherosclerosis, it was found that cholesterol was not lowered and furthermore that deposits of calcium formed in the aorta.

The drug's side effects included the formation of cataracts in humans, as well as loss of hair and even loss of the libido, or sex drive.

One researcher found that cataracts formed on the eyes of babies because their mothers had taken the drug while they were pregnant.

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TECHNOLOGY

Adverse Drug Effects Data Available to All

➤ A "COMMON LANGUAGE" of medical terms for computer recording and retrieval of drug reaction data was demonstrated by the U.S. Food and Drug Administration.

An International Business Machines Corporation computer, powered by an Army generator truck, was used to demonstrate how the FDA will use the computer vocabulary developed during the past year. The FDA is offering use of its adverse drug reaction program and its new "dictionary tape" for coding reactions to all interested organizations.

This is the system that former Surgeon General Luther L. Terry offered to the World Health Organization last May in Geneva for the rapid development of an international drug reaction monitoring system.

At a preliminary news conference in Washington, D.C., Dr. Donald Levitt, director of medical information, bureau of medicine, FDA, explained the enormity of the computer work.

For example, it has taken 60 people to assemble information from doctors on 10,000 cases of women using oral contraceptives. Previously, 4,000 reports had been coded for computer use from some 170 major university hospitals with FDA contracts and from individual physicians.

The American Medical Association is cooperating in this program and is turning over to the FDA reports of adverse reactions to drugs from many of the doctors in the AMA membership. Dr. Levitt told SCIENCE SERVICE that it is expected that this program will make possible a much faster labeling system.

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