

MEDICINE

Artery Hardening Probed

Fatty substances in blood, as cholesterol, and artery hardening may be linked. Cause may be upset balance of cholesterol and phospholipids.

➤ A DIFFERENT approach to the possible link between fatty substances in the blood, such as cholesterol, and arteriosclerosis, popularly called artery hardening, was reported at the meeting of the American Heart Association in Atlantic City, N. J.

According to one recent and widely popularized theory, the dangerous artery condition is related to an over-abundance of giant molecules of fatty substance in the blood and the consequent means of prevention and cure is claimed to be through a diet very low in cholesterol.

An upset balance between cholesterol and another class of fatty substances in blood, the phospholipids, may, instead, be the cause of the artery hardening condition. This theory was presented by Drs. Alfred Steiner, Forest E. Kendall and James A. L. Mathers, a research team connected with Goldwater Memorial Hospital and the College of Physicians and Surgeons, Columbia University, New York.

Dr. Steiner and his associates studied the fatty substances in the blood of 82 patients who had suffered coronary thrombosis (closure of a coronary artery), and compared them with 123 healthy adults. It was found that the two principal fatty

components of the blood, cholesterol and phospholipids, both increased in the diseased patients, but the cholesterol rose at a more rapid rate than the phospholipids. This the scientists consider especially significant since it is believed that the phospholipids are responsible for keeping the cholesterol dissolved in the blood so that it cannot form a fatty lining that would narrow an artery.

When the increase in cholesterol gets ahead of the increase in the controlling phospholipids, it is believed that the freed cholesterol may cling to the artery wall, thus narrowing the vessel and reducing the blood flow to such vital areas as the heart or brain. A sudden block in the blood supply to the heart, caused by formation of a clot in a narrowed artery, is known as a coronary thrombosis. When blood to the brain is cut off, a "stroke" results.

"As more information becomes available, it has become increasingly apparent that coronary arteriosclerosis is associated with widespread abnormalities in the pattern of fatty substances in the blood," the scientists pointed out. "It is not possible as yet to determine which fatty constituents of the serum are most important in the production of arteriosclerosis. However, it can be stated

that when one fatty component is abnormal it is more than likely that there will be other abnormalities."

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INVENTION

Now You Can Buy Lighted Cigarettes from Machine

➤ A NEW invention will permit people to buy lighted cigarettes, one at a time, from a vending machine. Patent 2,555,618 went to George E. Thomas, Long Beach, Calif., for this invention. The lighting element is connected with an electrical circuit only when a cigarette is being vended.

Science News Letter, June 16, 1951

GENERAL SCIENCE

Corona Laboratories Established by NBS

➤ THE NATIONAL Bureau of Standards is establishing a laboratory center at Corona, Calif., to be devoted to various phases of electronic research, development and engineering. To be known as the Corona Laboratories, National Bureau of Standards, the research center will be primarily concerned with technical problems for the Department of Defense.

The site was transferred to NBS by the Navy because of the Bureau's urgent need for new facilities. About 22 buildings are being renovated to accommodate NBS research and development activities being transferred there from Washington.

Dr. R. D. Huntoon, formerly chief of the atomic and radiation physics division, has been named associate director to head the new laboratories.

The most important activity at the Corona laboratories will be the development of guided missiles. Every phase of missile development will be covered from theoretical and applied research to construction of experimental parts and units.

An analog computer is being set up in the laboratories to be used in flight simulation problems where trajectories of guided missiles must be computed mathematically. The computer, occupying about 1000 square feet of floor space, can solve problems in minutes that would take trained mathematicians weeks to solve.

Some of the existing buildings are now being remodeled to house electronic laboratories, the large computer, machine shops, a wind tunnel, cells for testing jet-engines, altitude chambers, a missile assembly section, and a technical library.

Over 200 members of the missile development division of the Bureau will move their families to Corona during the next few months. Building materials and credit restrictions have been eased to permit family housing construction.

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CORONA LABORATORIES—Air view of the site of the Bureau of Standards California research center for development of guided missiles.