



**POLLUTION-CAUSED TUMOR**—The tumorous growth on the mouse shown above was induced from a benzene extract of condensed gasoline engine exhaust in a study of injurious air pollutants carried out by biologists at Armour Research Foundation of Illinois Institute of Technology, Chicago. The extract was painted on the same area twice a week for eight months.

#### MEDICINE

## Find Artery Disease Signs

► EARLY SIGNS of the most serious form of artery disease, atherosclerosis, have been found in all deceased persons more than three years old examined in seven widely separated parts of the world, Dr. Russell L. Holman of Louisiana State University, New Orleans, reported at the meeting of the Association of Life Insurance Medical Directors of America in New Orleans.

The aorta, big artery through which blood first leaves the heart for its trip around the body, is the first area involved, Dr. Holman found.

His findings came from examination of blood vessels of persons aged one to 40 years dying either from accident or natural causes in New Orleans, England, Spain, Puerto Rico, Costa Rica, South Africa and Guatemala.

The most striking increase in amount of atherosclerosis in the aorta came between the ages of eight and 18 and suggested a relationship of the beginning of this disease to the hormonal and glandular changes of puberty.

The usual sequence of events in atherosclerosis, he explained, is the fatty streak in the walls of the artery, followed by a fibrous plaque and then complications and disease. The early fatty streaks he found were followed by fibrous plaques about 20 years later. Only one out of five fatty streaks had become a pearly plaque by age 40.

A similar sequence of events, 20% of fatty streaks converted to fibrous plaques in 20 years, occurred in the coronary arteries, but about a decade later than in the aorta.

Of all population groups studied so far, the greatest difference in degree of atherosclerosis in the aorta was between the white and Negro races in the 11-to-15-year age group in the New Orleans area.

At age 13 there was roughly five times as much early disease sign in the aorta in the Negro race as in the white race. Dr. Holman and associates could find no environmental differences in the two races that could explain this.

His findings do not, he said, support the current idea that atherosclerosis begins as a passive filtration of fatty substances from the blood into the artery walls. Instead the findings point to active body metabolic processes under the control of local and general bodily factors as a more probable mechanism for the start of atherosclerosis.

Science News Letter, November 3, 1956

Scientists have found no effect on dark adaptation of eyes due to the ultraviolet light produced by fluorescent lamps.

Deep-frozen *shrimps* from India may soon be making an appearance on dining tables in the United States.

#### TECHNOLOGY

## Radioactive Machinery Buried Underground

### See Front Cover

► THE WORLD'S STRANGEST burial vault is an underground, 500-foot tunnel in which are entombed railroad cars loaded with discarded radioactively "hot" machinery from the Hanford (Wash.) plutonium plant, where much of America's atomic bomb material is manufactured.

Most contaminated radioactive equipment is taken out in the nearby desert and buried, but for the apparatus too heavy to handle easily, the new concrete tunnel was built as a long-time storage place by General Electric Company, which operates Hanford for the Atomic Energy Commission.

A large water-filled concrete door, shown open in the photograph on the cover of this week's SCIENCE NEWS LETTER, clangs shut after the dangerous atomic cargo is stowed away by workers in full protective clothing.

Science News Letter, November 3, 1956

#### PSYCHOLOGY

## Infertility May Be Due to Emotional Disturbance

► INFERTILITY IN WOMEN often may be the result of a relatively serious emotional disturbance, a study by Dr. Betty Grover Eisner, University of California at Los Angeles psychologist, has suggested.

Twenty infertility patients with no discernible physiological cause for their infertility were selected, along with 20 women of comparable age and socio-economic status who had three or more children and had experienced no difficulty in becoming pregnant.

The male factor was presumably excluded by the use of donors where necessary.

All the women were administered Rorschach (ink blot) tests, a standard psychological technique for detecting emotional disturbances. A panel of experienced Rorschach judges then rated responses of the women.

There was a unanimous agreement among the judges that the infertile women were significantly more disturbed than the women with children. There was some disagreement over the quality of the disturbances, but twice as many infertility patients were adjudged to have schizophrenic-like or hysterical responses than fertile women.

Dr. Eisner said the study did not answer the question of whether the emotional disturbance was the cause of infertility or caused by infertility.

There was a strong suggestion, however, that emotional disturbances contributed to infertility. Further study is needed to verify this, she said.

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