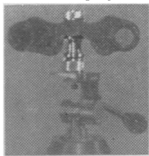
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## GENETICS

# Mutations From X-Rays

► **EVEN THE SMALLEST** doses of X-rays produce mutations, studies involving more than a million fruit flies have shown.

Dr. Bentley Glass and Rebecca K. Ritterhoff of Johns Hopkins University, Baltimore, Md., reported to the National Academy of Sciences spring meeting in Washington, D. C., that a five-roentgen dose of X-rays causes an increase in mutations in the fruit fly. This is the lowest radiation dose ever studied in any animal with respect to mutations, the previous record being 25 roentgens for fruit flies and 37 and one-half for mice.

To show the mutagenic effect of the five-roentgen dose, Dr. Glass said, 41 experiments were completed. All the tests were blind, meaning that the persons who examined the 1,172,145 fruit flies did not know which had been X-rayed and which had not.

Among the X-rayed flies, 328 mutations appeared, while only 289 appeared in controls. This difference, he said, is slightly greater than predicted from damage done by higher radiation doses, and the chances

that the increased rate among X-rayed flies occurred by chance are between four and eight in 100.

There was also a small but significant drop in the number of offspring produced by the irradiated parents, Dr. Glass reported. This amounted to a 1.4% reduction.

Five roentgens is the radiation dose a human would get in about 10 chest X-ray exposures. Most of this, however, would be received by the chest area and only one or two ten-thousandths roentgens per exposure would be received by the reproductive tissues.

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## MEDICINE

## High Blood Pressure Risk Greatest in Young Men

► **RISK OF DEATH** from high blood pressure is greater among men patients 15 to 39 years old than among those 40 to 69.

Dr. Richard S. Gubner of the Equitable Life Assurance Society of the United States told a symposium on recent advances in hypertension in Philadelphia that hypertension most commonly begins relatively early in adult life.

By the time such patients apply for life insurance, Dr. Gubner said, it is assumed that they have had high blood pressure for many years.

"They may be considered to represent the relatively hardy survivors in whom cardiovascular complications have been and continue to be less apt to develop."

Dr. Gubner said this idea is illustrated in the fact that malignant hypertension is typically seen in the early adult decades rather than in later life.

"Presumably if the constitutional predisposition to hypertension is high," he said, "the more severe complications will become manifest sooner rather than later if these are apt to appear."

He also said that young overweight persons have a higher death rate than older persons who are obese.

Dr. Gubner based his report mainly on material in the 1959 Build and Blood Pressure Study of the Society of Actuaries, which contains the pooled experience of 26 American and Canadian insurance companies, involving 3,900,000 lives and 102,000 deaths.

Hahnemann Medical College and Hospital, Philadelphia, sponsored the symposium.

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