

BIOLOGY

Use Mice to Study How Emotions Affect Cancer

► WHETHER A WOMAN'S EMOTIONS, such as frustration over being denied motherhood, can play a part in causing cancer is being studied by a new method devised by Dr. Freddy Homburger of the Tufts University School of Medicine, Boston, in collaboration with A. Tregier of Tufts and H. S. Grosman, now of Washington University, St. Louis. The method was announced by the American Cancer Society.

Cancer of the breast frequently attacks spinsters and married women without children, the Society explains. Women with cancer of the uterine cervix, that is, the neck of the womb, often have a history of sex relations and child bearing at an early age and marital difficulties marked by divorces and separations.

Scientists have speculated whether emotions aroused by such situations and possible hormone changes are involved in the development of the cancers.

To try to answer this question, Dr. Homburger and associates use the womb of the mouse. The neck of the womb is tied off, so that hormones and other chemicals collecting in it can be analyzed periodically. When the womb is untied, the mouse is perfectly able to bear normal offspring.

Estrogen, ovarian hormone that makes uterine tissues grow, steps up the growth rate of transplanted cancers, the scientists have found. Progesterone, the hormone which prepares the uterus to hold the fertilized egg, slows the growth rate of transplanted cancers.

Uterine secretions make cancer transplants to the mouse uterus take in 100% of cases, instead of the usual 70%, but the cancers grew very slowly.

Besides studying the effects of hormones, the scientists are studying the effect on development of transplanted cancers in mice and on mouse uterine secretions of regular mating, unsatisfied sexual excitement and sexual isolation.

Science News Letter, February 25, 1956

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By Joseph Degrazia, Ph.D.

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