

MEDICINE

Cancer Linked to Trauma

► **PSYCHOLOGICAL TRAUMA** experienced early in life seems to set the stage for the development of cancer in later years, a researcher reported in *The Sciences*, 5:22, 1965.

This basic pattern of past problems appeared in 72% of 450 cancer patients but in only 10% of the non-cancerous controls of similar age and socioeconomic levels, in a study conducted by Dr. Lawrence LeShan of the Union Theological Seminary in New York.

Early in life the children who eventually developed cancer suffered a psychic trauma. They interpreted this experience to mean that "emotional relationships brought pain and desertion." The children responded with feelings of guilt and self-condemnation, showing little or no aggression in the conduct of their social relations, and tending to blame themselves for their failure.

In adolescence or early adulthood this pattern of living underwent a dramatic change. Opportunity for meaningful relationships appeared and much energy was directed toward developing them. Sometimes this was a role in a job or relations with a parent or spouse.

Then, after a period of from one to 40 years, this intermittent period was ended,

perhaps because of retirement or the death of the spouse, and feelings of inadequacy returned.

From "six months to eight years after the crucial cathexis, concentration of desire upon some object or idea, was lost, the first symptoms of cancer appeared."

Dr. LeShan also discovered that the literature concerning cancer case studies indicates that death of a sibling early in life and birth of a sibling during the second year of life are more frequent among cancer patients than among controls.

Dr. William A. Greene of the University of Rochester, N.Y., has found that leukemia or lymphoma has often followed a separation or threat of separation.

Dr. David M. Kissen of the University of Glasgow, Scotland, found that lung cancer patients were characterized by a "poor outlet for emotional discharge" in comparison to a group of controls.

He pointed out that recognition and confirmation of the role of these factors in cancer development may eventually aid preventive and diagnostic measures.

These three reports were presented to a New York Academy of Sciences Conference on Psychophysiological Aspects of Cancer.

• *Science News Letter*, 88:22 July 10, 1965

GERIATRICS

Elderly Keep Brain Power

► **ALTHOUGH A MAN** loses physical power as he grows old, he does not necessarily lose brain power also, reports the director of the Center for the Study of Aging, Duke University Medical Center, Durham, N.C.

Contrary to the popular belief that the elderly have lost their intellectual capacity, Dr. Ewalt W. Busse told a science writer's seminar at the National Institutes of Health in Bethesda, Md. that upperclass oldsters maintain their IQ's, even at age 70.

However, the group that is lowest on the economic scale and can least afford to lose its intellectual capacity often registers large drops on IQ tests.

Dr. Busse, in discussing the problems of aging, noted that there is a group of chronic-complaining elderly people who are perfectly healthy and know it. However, because these people are usually being criticized at the time by their friends or family, and because they are often economically unstable or lonely, they use their imaginary illnesses as a social crutch.

On the other hand, the physician pointed out, a group of older people who really are sick will often deny it. These are usually the highly successful men who convince themselves that they cannot afford to be sick. Once these men are forced to face their disability, however, they become quite depressed.

In many ways, our society has become a gerontocracy, a society of the elderly, Prof.

Bernice L. Neugarten of the division of social studies at the University of Chicago told the Seminar on Research, Progress and Trends in Aging, which was sponsored by the National Institute of Child Health and Human Development, a part of NIH. More oldsters are in powerful positions today than ever before, she said.

• *Science News Letter*, 88:22 July 10, 1965

PHYSIOLOGY

Dreaming Causes Ulcer Patients to Secrete Acid

► **RESEARCH** at the University of California at Los Angeles Medical School has shown that ulcer patients secrete large amounts of stomach acid when they dream.

The study was carried out by Ralph Armstrong, Allan Jacobson, Donald Burnap, Sylvester Ward and Drs. Anthony Kales and Joshua Golden. Mr. Armstrong received an award from the Student American Medical Association for his paper on the research.

It was known that ulcer patients secrete 3 to 20 times as much stomach acid as normal subjects during sleep. Secretion rate in normals may increase or decrease slightly from waking levels.

Object of the investigation was to determine the relationship dreaming might have to increased gastric secretion rate. Contin-

uous samples of acid secretion were taken from a group of duodenal ulcer patients while they slept. These were compared to samples from a group of normal subjects taken under similar conditions.

Subjects were monitored by electroencephalographs for sleep and dream patterns. Particular patterns of brain waves are associated with the type of sleep in which dreams occur.

It was found that ulcer patients produced large amounts of stomach acid during dream periods. Normal subjects showed little or no change in acid secretion while dreaming.

Next objective of the investigation is to see if increased acid secretion may be related to dream content.

• *Science News Letter*, 88:22 July 10, 1965

PSYCHOLOGY

Aptitude Tests Separate Smart From Smarter

► **ALTHOUGH** critics complain that aptitude tests cannot separate a smart student from an even smarter one, research seems to indicate that tests do not lie.

Dr. Henry Chauncey, president of the Educational Testing Service, Princeton, N.J., reported that aptitude tests can "accurately separate the able, the abler, and the ablest from each other." The tests can also validly predict how these individuals will perform.

After examining the findings from numerous studies relating success in school or research to aptitude test scores, Dr. Chauncey and a colleague, Dr. Thomas L. Hilton, research psychologist at Educational Testing Service, have concluded that these tests are as indicative of high-level performance as any other single measure.

They caution, however, that these tests are not the only indicators. Studies have shown that such things as persistence, need for achievement, originality, intellectuality and ego involvement can be crucial to an individual's performance. Some critics complain that objective tests, generally achievement tests, do not separate superior students because these students all receive the top score.

In answer, Drs. Chauncey and Hilton point out in *Science*, 148:1297, 1965, that "the ceilings of the tests can be sufficiently high to provide room for all to demonstrate their ability." They also note that the ceiling has no limit. It can be raised above the level of everyone who takes the test.

To effectively use the exam results, the researchers caution, each specific test used must apply to the particular academic or research performance in question. Therefore, "a measure of verbal aptitude may not be an appropriate predictor of the quality of work in science of students high in mathematical aptitude."

Research studies do indicate that students of high ability perform with increasing quality as their test scores rise, even at very high levels, Drs. Chauncey and Hilton said.

Significant predictions of later careers have been made on the basis of aptitude tests given early in the lives of different high-ability groups.

• *Science News Letter*, 88:22 July 10, 1965