

## BIOCHEMISTRY

# Body Builds Fat in Aging

A theory that a switch in body chemistry takes place in the aging process which changes food utilization places emphasis on a diet in maturity to avoid diseases.

➤ AGING is characterized by a shift in body chemistry toward building up of fat, rather than protein, from food.

This new theory, with implications for the problems of cancer, degenerative diseases and diet in maturity, is proposed by Dr. Jean Mayer, research fellow at George Washington University School of Medicine in Washington and Nutrition Officer of the United Nations Food and Agriculture Organization.

In a very young animal, he found, an increase by five grams (approximately one-fifth of an ounce) represents about one part by weight of protein and four parts of water and minerals, or an energy content of roughly five calories. But an increase of five grams in an older animal may represent all fat (five grams), or 45 to 50 calories.

Growth and weight increase, therefore, are not exactly equivalent. A given weight increase may mean something quite different in a child and in a grown-up. In the progressive slowing and stopping of growth and beginning of the aging process, there is a change from one type of food utilization to another, but not a sudden decrease in the efficiency of food utilization.

Dr. Mayer sees in his theory a warning on diet for grown persons. In a report to the journal, *GROWTH* (June), he states:

"A diet promoting good, economical growth in youth tends to promote fat deposition in adulthood, and possibly the development of degenerative diseases and malignancies (cancer).

"The assumption that diets judged adequate in growth studies (that is, for growing children or animals) are good maintenance diets (for grown-ups) appears particularly dangerous in this light."

In cancer cells he thinks there may be a sudden or a progressive reversal from the adult characteristic of fat synthesis to the youthful characteristic of protein building. In this the cancer cells are like the "potentially immortal" cells or tissues that are kept growing for years in artificial cultures outside the body. The "potentially immortal" tissues show that if certain glandular influences are withheld, the cells or groups of cells continue in the pattern of protein building and are not submitted to the process of aging.

The glandular influence fits into Dr. Mayer's theory because the change in the pattern of food utilization corresponds to the glandular shifts that come at the beginning of the teen age. On the glandular side there is at this age a shift from a pre-

ponderance of growth hormone to a preponderance of the fatlike steroid hormones, such as the sex hormones.

Science News Letter, July 23, 1949

## PSYCHOLOGY

## Racial, Religious Hatreds May Stem from Self Hate

➤ IF A man hates or despises Negroes, Jews, foreigners, and so on, it may be because he hates and despises himself.

This is the implication of a study made at the University of Chicago by Dr. Elizabeth T. Sheerer, now of Iowa State College. Intensive study of therapeutic interviews with 10 persons revealed a "definite and substantial" relation between the individual's regard for himself and that of his feeling toward others.

It was also found to be possible to improve acceptance of and respect for the self by the psychological treatment. There was also found to be an even closer relation between regard for self and regard for others after the finish of the treatment period.

When the individual's statements about himself were rated on a five-point scale, the average for the first interview was 2.2. The statements about other people rated 2.6. In the last interview the statement on self rated 3.9 while those reflecting on others had gone up to 3.8.

Dr. Sheerer foresees applications of her findings toward the solution of social problems.

"It might mean," she says, "that increased acceptance of minority groups, foreigners, and the like, could best be achieved by some type of group therapy which would tend to alter the individual's acceptance of and respect for himself.

"It might mean that in situations of industrial tension, or professional friction, the most effective means of approach would be through dealing with the attitudes of the person toward himself, rather than devoting our energies to the expressions of, and descriptions of, the external 'causes' of the tension."

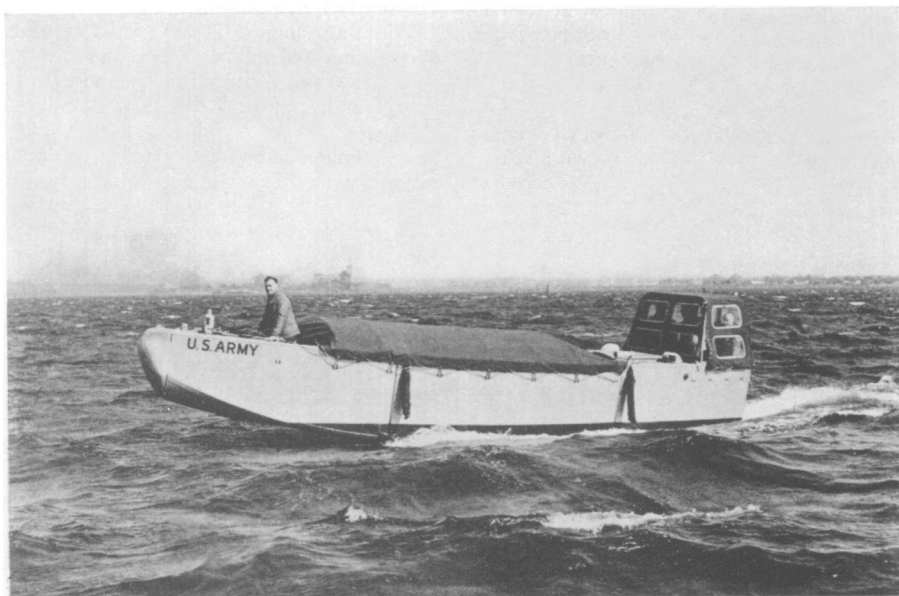
Details of Dr. Sheerer's study are reported in the *JOURNAL OF CONSULTING PSYCHOLOGY* (June).

Science News Letter, July 23, 1949

## PSYCHOLOGY

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