

## MEDICINE

# Feeling Brain Holds Secrets of Nervousness

**A Vacation Unwisely Planned May Lead to Breakdown, Physician Warns; Lapses From Routine the Only Antidote**

SCIENCE must search the feeling brain for the secrets of nervousness or nervous exhaustion, Dr. Louis J. Karnosh, assistant professor of nervous diseases at Western Reserve University, reported to the Health Education Foundation of the Academy of Medicine at Cleveland, Ohio.

"Nervousness, or neurosis, next to the ordinary cold, is the most common affliction of man," he declared. "Nervousness is on the increase. It is just as frequent in the unschooled as in the educated, less frequent in children and among savage peoples, and very rare in the animal world.

"Nervousness increases as surroundings become more complicated, as living takes on a livelier tempo and competition among human beings becomes more specialized, but less strenuous."

Dr. Karnosh described the small brain center at the base of the cerebrum, known as the diencephalon, which he called the feeling tone brain, or organ brain, because it consists merely of a gathering together of nerves from all the vital organs of the body to form one diffuse sensation center.

"In the mazes of the nervous system which connects heart to lungs, to intestines, to glands, to liver and in turn to this little diencephalic center forming the feeling tone brain, lie the secrets of nervousness and nervous exhaustion," Dr. Karnosh said.

He pointed out the need for further study of this brain.

"Only a few investigators have concerned themselves with what is actually gone wrong in nervous exhaustion," he said. "Where there are hundreds of ready advisors as to cause and treatment, there are a handful who have a faint idea of what is going on in the nervous constitution.

"Life's impacts, it seems, are hard on the brain of feeling tone. The things we do with greatest satisfaction are the things we feel like doing. The pursuit of pleasure and happiness is an end in itself; man's higher brain merely shows

us how more cleverly we can attain that end."

The cause of nervous breakdowns in middle life lies in our technic of living which either fails to exercise the vital-brain adequately or drains it by a distorted use of its forces, Dr. Karnosh said. He blamed the monotony and specialization of the machine age living for the American neurosis.

"Play and a vacation, to do each day something that is not dictated by a rational and methodical world, to lapse into a purposeless meandering and a

## BIOLOGY

# Certain Chemicals Will Put Yeast Into Sleeping Stage

NEW facts on the chemical control of the life processes of the yeast cell were reported to the meeting last week of the Royal Society of Canada by Dr. Helen Stantial and Dr. W. Lash Miller, of the chemistry department of the University of Toronto. They have found that acetate of soda and certain sugars will send yeast into a spore or sleeping stage.

It was Dr. Miller who two years ago surprised biological investigators by announcing at a meeting of the Royal Society the chemical formula for a substance, similar to but not identical with the vitamins, which is necessary for the growth of yeast.

Dr. Miller chose yeast cells because each microscopic yeast plant is composed of only one cell. This simplifies the investigation. Yeast cells, less than a thousandth of an inch in diameter, can be brought up in large families all alike, and they can be watched at work under the microscope. Their activity shows itself by certain chemical changes which can be found by analysis. In addition to being easy to work with as material for biological experiments, the yeast

cell goes through the same changes as the cells of larger living things.

Dr. Stantial and Dr. Miller can now do some of the things by means of lifeless compounds for which elusive vitamins, extracts of glands, or blood serum preparations were thought necessary.

These chemists have discovered that yeast grown with grapefruit juice would readily form spores, or go to sleep. This spore-forming behavior is sometimes resorted to by yeasts dried up or deprived of food material. Analysis of the grapefruit juice revealed the constituents which serve as a sleeping powder. They are now inquiring whether yeasts which have sporulated can remember processes they have been taught. This experiment is of interest in the science of heredity.

Inosite, an alcohol, the magic compound previously announced as one of the essentials for growth, may be the agent which makes the cells break in two. On a diet containing insufficient inosite, giant yeast cells, or clusters stuck together, can be produced.

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It has been estimated that 8,000,000 automobiles on the roads of the United States are worth not more than \$25 each.

Elevators in the new Empire State Building in New York City can shoot up to the eightieth floor in less than a minute.