

## MEDICINE

# Learn to Live with Germs

► FOR SUCCESS in our war on germ-caused diseases, we may have to learn how to live with some of our germs, instead of trying to wipe them out, Dr. Howard A. Schneider of the Rockefeller Institute for Medical Research, New York, declared in Washington at the conference on drug resistance under the auspices of the Office of Naval Research and the University of Pennsylvania.

A suitable diet may help us do this, Dr. Schneider said. However, not enough is known yet about all the substances in natural foodstuffs to prescribe such a diet. And the diet may have to be varied for each person, it appears from mouse studies he has been making.

Learning to live with our germs and letting them live peacefully with us, that is, without making us sick, is the "fourth strategy" to be used in man's war on disease.

The other three strategies are:

1. Interception, which is used to protect us from food and water-borne diseases like typhoid fever.

2. Anticipation, by which people are vaccinated or otherwise immunized against certain diseases.

3. Direct assault by medicines, such as sulfa drugs and penicillin and other antibiotics.

These three strategies stop some but not all diseases. Development of germ resistance to antibiotics, which is making the strategy of direct assault a failure in some cases, has left scientists feeling frustrated. Dr. Schneider's answer to the frustration is the fourth strategy.

Disease, he pointed out, is a mistake for the germs as well as for the person who gets sick. Because if the sick person dies, the germs lose their free room and board.

To work out tactics for the fourth strategy in the war on germ diseases, Dr. Schneider said, scientists must work with heterogeneous populations of laboratory animals and of disease germs, instead of with the pure bred strains they have concentrated on.

"Marriages are made in heaven," he pointed out, and doctors and medical scientists therefore cannot work with pure bred strains of humans. Studies with pure bred laboratory animals do not, therefore, always give the right answers.

Science News Letter, April 10, 1954

## PHYSIOLOGY

# Weightless Turtles

► WEIGHTLESS TURTLES snapping erratically at food morsels may have given aero-medical scientists a clue to one of man's reactions to space flight.

Dr. Siegfried J. Gerathewohl of the Air Force School of Aviation Medicine at Randolph Field, Texas, reviewed the unusual experiment at the Aero Medical Association meeting in Washington.

He said that Dr. H. J. A. von Beckh, an Argentine scientist, had performed the experiment with a special species of South American turtle. This turtle is noted for its accuracy at nabbing food passing within range. However, following an accident which damaged part of the turtle's ear system, it seemed "disoriented."

The turtle snapped wildly, often missing the food morsel, until it learned to "aim with its eyes." Previously it had depended upon its "labyrinth," a part of its ear system, to guide its mouth in lightning jabs at food.

Subsequent experiments conducted in a rented fighter plane showed that normal turtles were unable to snare food under no-gravity situations. They snapped wildly while the laboratory turtle caught the food by aiming with its eyes.

"This may mean that man, although confused at first by a no-gravity situation, could adjust quickly to the new condition," Dr. Gerathewohl told SCIENCE SERVICE.

Dr. Gerathewohl disclosed that Scott

Crossfield, 32-year-old test pilot at the Edwards Air Force Base in California, had observed a tendency to overshoot while reaching for the landing gear switch. The pilot had produced zero and sub-gravity states in both upright and inverted flight.

Dr. Gerathewohl said he knew of no serious effects on the body due to a lack of gravity. He said man has been kept in a state of weightlessness for about 40 seconds while flying carefully calculated paths in high-speed airplanes. Animals have been held in the weightless state for a minute or so during rocket tests.

Science News Letter, April 10, 1954

## GENERAL SCIENCE

# Bachelor Degrees Slump, But Ph.D.'s Gain in 1953

► ABOUT 27,000 fewer students were graduated with bachelor of arts or bachelor of sciences degrees in 1953 than in the previous year, the Engineering and Scientific Manpower Commissions have found.

However, tabulations jointly released show that 626 more Doctor of Philosophy degrees were awarded in 1953 than in 1952. Ph.D.'s for 1953 total 8,309. The number of master's degrees dropped 2,564 from the 1952 figure of 63,587.

Science News Letter, April 10, 1954

## • RADIO

Saturday, April 17, 1954, 3:15-3:30 p.m. EST  
"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.  
Prof. C. L. Gemmill, professor of pharmacology, University of Virginia Medical School, will discuss "The Power of the Thyroid."

## AGRICULTURE

# Soil Experts Call for Scientist Conservation

► THE AMERICAN Society of Agronomy has called for conservation of soil scientists should the United States be plunged into another major war.

Speaking on behalf of the society's agronomy manpower resources committee, of which he was chairman, Dr. C. L. W. Swanson declared that scientists who specialize in food production are too scarce to be mishandled in a wartime emergency.

War, he pointed out, is wasteful of food. He said it is impractical to get large new acreages of land into production during a major war. The answer to possible food shortages lies in increasing production on already-cultivated acreages. This is the agronomist's business.

Crop and soil scientists are not asking for special privileges. They just want their training to be used properly in military or civilian status, not wasted "as all too often was the case in World War II," he said.

Dr. Swanson is head of the department of soils of the Connecticut Agricultural Experiment Station in New Haven.

Science News Letter, April 10, 1954

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