

## MEDICINE

# Mental Deficiency in Twins

A CHILD born as a twin has a greater than usual chance of being mentally defective, a study reported in London indicates.

Drs. J. M. Berg and Brian H. Kirman, Fountain Hospital, London, found that among 1,390 mental defectives receiving care in the home or in institutions in the London area, about 6.4% were members of twin pairs. Twins make up only about 2.1% of the general population.

The study also showed:

The twin born last is more often mentally defective; 61% of the mentally defective twins were second-born. The second born are also more frequently the victims of stillbirth.

Whether twins or singletons, mentally defective babies usually had a lower-than-usual birth weight. Two-thirds of these defectives studied had additional physical abnormalities. These ranged from a small head to heart defects and deformed feet.

In one way, twins are the luckier group.

Mongolism, a deformity usually accompanied by idiocy, is six times more common among singletons.

The reason for the higher incidence of mental deficiencies among twins, ranging from idiocy to subnormal learning ability, is unknown. In autopsies on nine twins who died during the study, there were no gross brain malformations indicating that something had gone wrong in embryonic life. The brains did show pathological changes that appeared to be the result of damage late in pregnancy, at birth or shortly after birth.

The doctors, reporting in the British Medical Journal, June 25, 1960, pointed out that the greater risk in multiple births is indicated in a stillbirth-rate comparison. For all births there are 23 stillbirths per 1,000 births. In twins the rate is 53 per 1,000.

Science News Letter, July 9, 1960

## MEDICINE

# Guiding Heart Patients

ELECTRONIC COMPUTING and measuring equipment is providing new guides to the amount of work a heart patient may safely perform, Dr. William G. Kudicek, director of research at the University of Minnesota Medical School's department of physical medicine and rehabilitation, reported.

A pioneer in medical electronics, Dr. Kudicek said, "The machines provide for the first time an easy-to-read recording of the complicated interrelationship of physiological functions as they relate to the heart. With them we can examine a heart patient in light exercise, for example, and see at almost a glance just when the danger point of exertion has been reached."

Thanks to electronics, he said, it may be possible to return heart patients to useful work under accurately determined limits.

"With electronic aids, a heart patient can be thoroughly examined in a matter of hours, while, at the same time, the measurements of the physiological responses that relate to the functioning of the heart are mechanically recorded and averaged."

A trained technician needs two to three days to average the same measurements.

The machine that provides the simultaneous computations is called an analog-to-digital converter. It assesses measurements of the patient's oxygen consumption, pulse rate, blood pressure, respiratory volume, energy output, and other responses as they are taken and records the results on a tape for quick, easy analysis.

The analog-to-digital converter is an innovation being used medically for the first time by Dr. Kudicek and his staff. Their research is sponsored by the Office of Vocational Rehabilitation of the National Institutes of Health.

The project is aimed at providing new guide lines for physicians to assess the working abilities of patients with heart disease. Dr. Kudicek was interviewed in Washington, D. C., before a meeting with Sen. Hubert H. Humphrey (D-Minn.), chairman of the Senate Subcommittee on Reorganization and International Organization, concerned with medical research and assistance and related studies.

One of the Senator's pet projects is medical electronics; he has been active in promoting this development as an aid both to medical research and practice.

Science News Letter, July 9, 1960

## ASTRONOMY

## Two Comets, Supernova Now Roaming the Skies

THE COMET FINLAY, expected to brighten enough this summer to be observed with moderate size telescopes, has just been rediscovered for the first time since its disappearance in 1954.

This comet was rediscovered by Robert Burnham of Prescott, Ariz. The Finley comet appears only every seven years.

It was originally discovered in 1886. Since then it has been observed in 1893, 1906, 1919, 1926 and 1953-54. It was not seen in 1933, 1940 and 1947.

The comet is now in the constellation of Aquarius in the morning sky. However, it is of 17th magnitude and only a photographic object.

It is expected to brighten to tenth magnitude by August. By that time it will be in the constellation Taurus and should be bright enough to be seen with a moderate-sized, amateur telescope.

Discoveries of a new comet and a supernova have also been reported by Dr. M. L. Humason of Mt. Wilson and Mt. Palomar Observatories. The comet is of 17th magnitude. It is not known if it will brighten. It is located in the constellation of Hercules.

The supernova was of 14th magnitude when discovered. A nova is a star that suddenly increases in brightness and then dims down again. A supernova is about 100 times as bright as a nova.

News of the comet Finlay, discovered at 5:02 a.m. (EDT) June 21, and the comet and supernova, discovered respectively on June 18th and 17th, was reported by Harvard College Observatory, clearing house for astronomical information in the Western Hemisphere.

Science News Letter, July 9, 1960

## BOTANY

## Botany Department to Set Up Fungus Center

THE DARTMOUTH COLLEGE botany department will establish a national center for supplying fungi for teaching and research. Between 1,000 and 2,000 genetic strains of the fungi *Neurospora* and *Aspergillus* will be collected and maintained. They will be supplied free of charge to scientists and teachers. The center will be financed by a \$32,300 grant from the National Science Foundation.

Science News Letter, July 9, 1960

## AGRICULTURE

## New Soft-Rot Found on Corn

A NEW SOFT-ROT, discovered on a farm near the Wisconsin River and in other localities in Wisconsin, Maryland and the Carolinas, is now under study.

The soft-rot kills corn plants by attacking the stems, so that they eventually break and the plants fall to the ground. Losses due to the disease on the farm where it was discovered amounted to about 10% of the crop.

Research scientists at the University of Wisconsin, Madison, Wis., have discovered that the cause of the disease is a bacterium of the coliform group, which appears to be introduced in overhead spray irrigation. The soft-rot occurs only when river or stream water is sprayed on the plants from above and not when the same water is used in furrow irrigation. No traces of the disease have been reported where artesian water is used in irrigation.

Science News Letter, July 9, 1960

## AGRICULTURE

## New Hampshire First Brucellosis-Free State

NEW HAMPSHIRE has been declared the first brucellosis-free state in the Union by the U. S. Department of Agriculture. Freedom from brucellosis, or undulant fever, was proved by testing all cattle herds. The state also showed that there were no reports of brucellosis in domestic animals.

Science News Letter, July 9, 1960