

Eighty per cent of the infantile paralysis victims had probably been visited by a prior victim who at the time of the visit was about to become sick.

While the paralysis germ was found in the bodies of flies trapped in the neighborhood, Dr. Casey concludes from the spread of the cases that the flies were not guilty.

(There has been considerable evidence

reported that insects may be a factor in spreading infantile paralysis.)

Dr. Casey concluded that a child within three days before or three days after the first symptoms was the effective means of spreading the disease in the cases he observed.

How the disease was spread from one person to another was not learned.

Science News Letter, April 18, 1942

PHYSIOLOGY—PSYCHOLOGY

Island of Tissue In Brain Controls the Water Balance

Tiny Isolated Blob of Tissue Able To Maintain Life Even When 95% of Brain Is Missing, Scientist Finds

DISCOVERY of a life-saving island of tissue that will allow life to continue even when 95% of the brain is missing, is stirring scientists to expect important new medical discoveries leading to conquest of diseases now baffling medical skill.

Just a tiny isolated blob of tissue, located in the brain and consisting of pituitary gland and hypothalamus, has been found by Drs. Martin B. Macht and Philip Bard of the Johns Hopkins University Medical School, to be responsible for maintaining the water and sugar

balance in the body. Diabetes, and possibly epilepsy, are among the ills that may be found due partly to improper functioning of these structures.

New knowledge that may aid in treating war-damaged heads, and patients with brain tumors, was the first practical result of this discovery of the body's island defense.

Walking, climbing, swallowing, shivering and even responding to a whistle, which scientists have thought were controlled by various parts of the brain, can go on without the aid of those brain areas, Drs. Macht and Bard have found.

The reason a cat can right herself and land on her feet is not because of what we usually think of as her brain, but because of part of the "brain stem"—a much more primitive part of the nervous system at the base of the brain. She can turn over in response to a whistle even when she cannot "hear" it through the higher centers of the brain.

An almost completely brainless cat, with 95% of her brain missing, can walk although her gait is not all that might be desired in grace. She can climb and hop and claw, although she seems to do the latter aimlessly and without effectiveness. She can't bite.

She loses the ability to maintain a normal body temperature regardless of surrounding heat or cold. When she is cold, she shivers, but the shivering is fragmentary as compared with that of a normal cat. The shivering is not "useful" as physiologists have contended it might be—her loss of warmth is not stopped by it or even slowed.

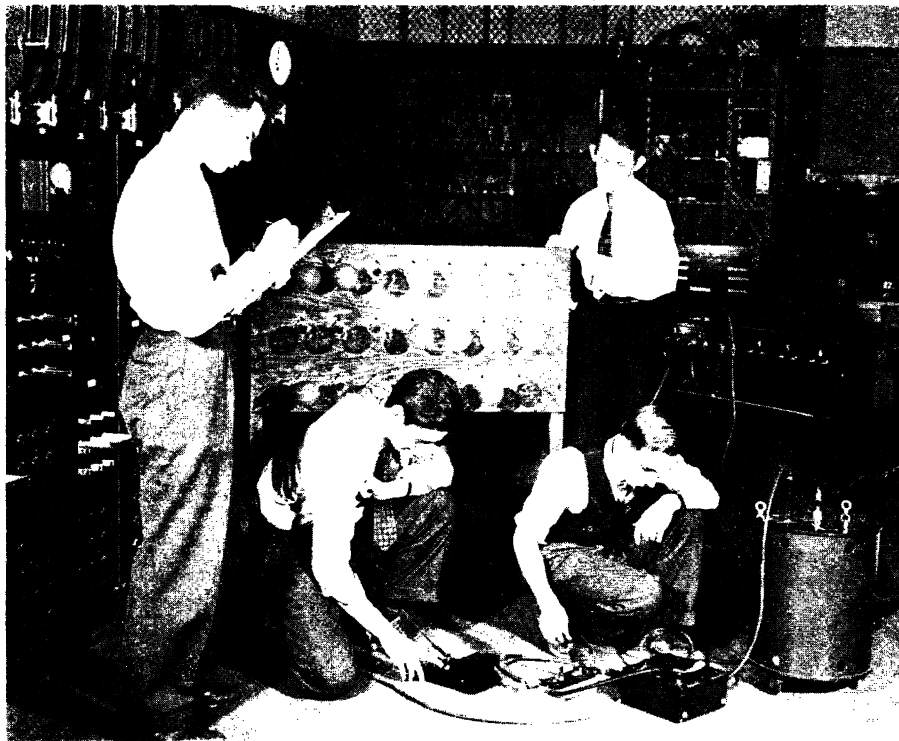
When choice bits of liver are put into her mouth, she will gulp them down almost without any chewing, but she licks her chops—a reflex which in this case presumably does not indicate enjoyment. She swallows water, too. But left to herself she would never eat and she does not reject food when her stomach is full.

Animals with just a few hundredths of an inch more of the brain stem left intact, do know when they have had enough. They can bite. They can walk more normally.

Importance of preserving even such tiny amounts of brain tissue is one of the implications of significance to brain surgeons.

Perhaps the most important thing to scientists in this research is the development of a technique by which the localization and analysis of certain nervous system functions can be accomplished.

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WAR TRAINING

At a Binghamton, N. Y., high school in a laboratory designed by the General Electric Company, students are learning technical electricity. This group is using portable capacitor and electrical indicating instruments to study effects of resistance, inductance and capacitance in a series circuit.