

PHYSIOLOGY

Study Brain's Operation

► WHY THE brain operates as it does and why it gets sick is being learned by linking up its remoter parts in unique kinds of electrical hookups.

The connections have been devised by medical scientists of the University of California at Los Angeles and Long Beach Veterans Hospital and used on experimental monkeys and rabbits.

Tiny electrodes are implanted permanently in the animals' brain centers. The electrodes can be wired to sensitive instruments which record "brain waves." Interpretation of the waves furnishes clues to what goes on in various parts of the brain.

One such study involves the hippocampus, a brain center whose function long has been a mystery to scientists. Studies

with rabbits indicate it receives messages from the senses and alerts the body for necessary action.

The smell of a carrot, the sight of a rabbit of the opposite sex, a sudden noise or touch of the body all cause radical changes in wave patterns of the rabbit hippocampus.

In other phases of the research, lesions are placed in the brain to block these responses. Reactions induced in this manner are somewhat similar to those resulting from maladies caused by brain injuries. Thus a new insight into such maladies may be gained through the work.

The research is under the direction of Dr. J. D. Green, associate professor of anatomy at the U.C.L.A. Medical School.

Science News Letter, August 29, 1953

MEDICINE

Celiac Disease Babies

► BABIES WITH celiac disease made headlines during the banana shortage of World War II. Today the news about them is that wheat gluten, which is the protein part of wheat, is bad for them.

This discovery, by Drs. J. H. van de Kamer and H. A. Weijers of Utrecht, Holland, is relayed to American physicians by the Nutrition Foundation in New York.

Whenever the diet of celiac disease babies or children contained wheat, even in very small quantities, the patients became pale, lost their appetite, lost weight, got diarrhea and had fatty stools. As soon as the wheat flour was left out of the diet, the unfavorable symptoms became less marked or disappeared entirely. The general condition of the child also improved.

This improvement took place even if wheat starch was left in the diet.

These "dramatic findings" have been confirmed by scientists in England.

The Dutch scientists have continued their studies and now believe it is the gliadin in the wheat gluten that is responsible. The good effects of the banana diet and the fruit-vegetable diet, used when bananas were unavailable, may be explained by the lack of wheat in these diets. Relapses when children were on these diets probably came because wheat and wheat products were not rigorously excluded.

Olive oil, soybean oil and other unsaturated oils, the Dutch scientists also find, are better for celiac disease patients than butter, beef fat and coconut oil.

Celiac disease usually shows itself between the first and fifth year of life. It starts gradually. When fully developed, its signs are extreme emaciation of the trunk, arms and legs, swollen belly, a dandruff-like scalp condition and mental changes. The stools are voluminous and fatty.

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VETERINARY MEDICINE

Investigate Pet Deaths

► DETECTION OF the cause of criminal or accidental violent deaths is standard operating procedure at the Connecticut Agricultural Experiment Station, reports Dr. Harry J. Fisher of the Station's analytical chemistry department.

The victims are animals—a large number of pet dogs and, less frequently, farm animals or other pets that mysteriously sicken and die. The supposition is that the animals are poisoned; the job is to find out if they were poisoned, what kind of poison was used and how the unfortunate animals got it.

During 1952, Dr. Fisher said, the station laboratory examined 182 animals that died under mysterious circumstances. Poisons were found in 78 cases.

The most common poison found was lead, with 32 cases. Zinc followed in frequency, with 25 deaths. Other poisons uncovered included mercury, cadmium, DDT, nitrophenide, arsenic, antimony, cyanide and strychnine.

The only way of knowing for sure that an animal has been poisoned is to discover the poison in its body—usually after complicated chemical tests. Often accusations

of malicious poisoning can be disproved as a result of laboratory tests.

During a recent epidemic of dog deaths in a Connecticut county, the citizens were convinced that the dogs were being deliberately poisoned. Parents feared that their children might pick up some of the poison and be killed. One woman snatched a suspicious material from the mouth of her dog, and this, with some organs of dead animals, was sent to the laboratory for analysis.

All tests for poisons turned out negative. The "mysterious material" was a harmless cosmetic.

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