

PSYCHOLOGY

Seizures Caused by Diet?

Wild Norway rats caught in alleys do not have fits like epileptic seizures which are produced in laboratory rats by loud and high-pitched noise.

► THE FITS like epileptic seizures that are brought on in some laboratory rats by loud and high-pitched noise do not occur in the same kind of rats that have lived a wild life in the alleys, cellars, factories and granaries of Baltimore.

This surprising difference between wild rats and their domesticated cousins was found by Dr. William J. Griffiths, Jr., of the Psychobiological Laboratory, Phipps Clinic, Johns Hopkins University. (*Science*, Jan. 21) It may be due, he thinks, to the stock laboratory diets, deficient in minerals or vitamins, fed to the laboratory rats, or to the sheltered life they lead.

Seven wild Norway rats selected at random from a large number caught for another purpose were tested with shrill whistles, jingling keys and hissing air blasts.

Not one rat had a fit; not one ran about in wild excitement as do the laboratory rats exposed to such noise. None showed fright by trying to run away from the offending noise. Instead of any display of "jitters," these wild rats tried to attack and bite the noise-maker.

Previous experiments by other investigators had already showed that diet plays an important part in preventing

the noise-caused seizures, Dr. Griffiths pointed out. Domesticated rats never before subject to the fits began to have them when placed on a diet deficient in magnesium, thiamin or pyrodoxine. It is quite possible, Dr. Griffiths said, that many of the stock diets fed domesticated rats are deficient. Some of his studies indicate that Purina dog chow, widely used, is deficient in thiamin.

But there is some evidence, he believes, that lack of experience in meeting new situations may play an important part in producing the seizures in domestic rats. They live sheltered lives in their cages. Wild rats, on the contrary, owe their very existence to their ability to react adequately to constantly changing situations. They become "tough" and develop strong patterns of aggressive behavior.

Dr. Griffiths does not draw any parallel for humans from his experience. The rat, although like humans in many ways particularly as to dietary needs, has a different brain and nervous system. Humans have not been known to have epileptic seizures as a result of noise. But noise combined with the fears and horrors of combat do have an effect on the nervous system of some humans.

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MEDICINE

Brain Waves Show Injury

► WHEN a soldier bumps his head in an obstacle course, or a sailor tumbles out of his hammock, it is not easy for the medical officer to tell whether the man has been hurt or not. Usually the only evidence, outside of a headache or slight temporary dizziness, is that provided by a few trivial scratches or black and blue marks. Yet, occasionally, the man may have a slight concussion and should be relieved from duty and given complete rest.

The brain itself can be made to signal the extent of the injury, it is revealed by three naval officers. (*War Medicine*) By recording the brain waves from all men with minor head injuries at a naval

training station, these officers—Lt. Comdr. Herbert I. Harris, M.C., U.S.N.R., Lt. Comdr. Cecil L. Wittson, M.C., U.S.N.R., and Lt. Comdr. William A. Hunt, H-V (S), U.S.N.R.—found they could pick out those who needed rest or treatment from those who were all right.

Whenever the brain wave record was found to be abnormal, the activity of that man was restricted for one to three weeks after which another brain wave record was made. If the second record was normal, the man then returned to active duty.

In one case it was found that the second brain wave record was not bet-

ter, but much worse. This brain record was from a young apprentice seaman who had tumbled from his hammock. He had been hit by an automobile when he was eight years old and had been unconscious for more than an hour. After this childhood accident he suffered recurring headaches and dizziness for years. Apparently the new head injury, although a minor one, had reawakened the previous trouble. Without the direct signals from the brain itself, this condition might not have had prompt treatment, because the only visible sign of his hurt was a scratch over one eye.

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EDUCATION

Ten Scholarships Offered To Outstanding Seniors

► TEN George Westinghouse Scholarships, valued at \$1,850 each, are to be awarded this year to outstanding seniors in American high and preparatory schools, the Westinghouse Electric & Manufacturing Co., has announced.

The scholarships are designed to provide a full college course in engineering at the Carnegie Institute of Technology. The winners are under no obligation to enter the employ of Westinghouse after graduation.

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OPTICS

Over 1,000,000 Soldiers Get Glasses Through Army

► UNCLE SAM has given eyeglasses to more than 1,000,000 soldiers to improve their eyesight and make them more efficient for military duty, the American Optical Company stated in an Army-approved announcement.

The eyesight improvement program started when the Army decided that too many men were being rejected because of eye defects. Liberalization of Army eyesight requirements and the spectacle service followed. Ophthalmologists and optometrists equipped with the latest instruments examine the soldiers' eyes for defects and Army optical technicians fit the glasses prescribed. The spectacles have a special frame of durable white metal capable of withstanding rough usage. The frame was designed by the American Optical Company at the request of the Surgeon General of the Army.

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