

PSYCHIATRY

Cure for Psychosis Seen

The approach of a depressive state may be predicted by rising adrenal hormone output and may some day be prevented by correcting the hormone balance.

► **CURE AND PREVENTION** of mental illness by injection of chemicals to change the chemistry of the body may result from a new research discovery.

Tests so far show a direct relationship between a rise in the quantity of an adrenal hormone output and the approach of a severe depressive state. These levels rose slightly as patients grew more depressed. On the day when all control gave way, the levels shot sky high.

Now that such a link has been established, the big question concerns what can be done to let the mind keep control by making basic changes in the body's chemistry.

Research to this end is being conducted by Dr. William E. Bunney Jr., psychiatrist at the National Institute of Mental Health in Bethesda, Md., and associates. In addition, the group is also attempting to develop a biochemical test to predict suicidal intent.

In a three-year study, Dr. Bunney found that patients suffering from depression sank into "agonizing spells of derangement" on an average of every 13 days.

During these spells, patients evidenced terror of death and dying. One patient thought she saw dead bodies lying in the room. Another had delusions of starving his family. Occasionally, they attempted suicide.

Watching for these crises, researchers kept a record of daily behavior. Urine was collected around the clock and analyzed for the levels of the product of adrenal hormones known as 17-hydroxy-corticosteroids.

With a correlation between hormone rise and depression, researchers conclude that hormone levels may reflect mental distress just as a white blood cell count reflects infection.

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PSYCHOLOGY

Time Halted for 45 Hours

► **TIME WAS STOPPED** for almost two full days recently in North Conway, N. H. (pop. 1,100) to see how well people could do without it. The experience was, to say the least, nerve-racking.

The faces of all the municipal clocks and those in stores and offices were covered with cards showing nothing but a question mark. The local radio station stopped broadcasting the time, and two days before the "black-out" began all the town's residents were asked to turn in their watches "for the duration."

What sounds like a page from George Orwell's 1984 was all part of "Project Time Out," an experiment run by the Bulova Watch Company, which literally took over the time of a whole village. Even the chimes in the church towers were muffled.

How does one get along without knowing the time? The only persons in North Conway who found a way were 240 grade school children who were shown by a teacher how to use the old woodsman's technique of using a hand as a sundial. A person stands with his back to the sun, holding one arm straight forward with the palm vertical and the thumb pointing up.

The system was first shown to a fourth grade class, but the word spread quickly among the other students. One Bulova representative, who was unfamiliar with the "woodsman's timepiece," was astonished on the first day of Project Time Out to find a whole school yard full of children waving their hands in the air. "I thought they'd all lost their minds," he laughed.

The adults, however, had no such system.

One woman was driven from her house by sulfurous fumes when some eggs she was unable to time exploded on the stove.

The children in the village voluntarily agreed not to watch television, because programs originating outside North Conway would of course continue to announce the time. Parents labeled the experiment a blessing for this reason, but a mixed one. With no visible clocks, they could not tell their children that it was "eight o'clock, time for bed." Instead, they had to wait until it was dark, which was much later than bedtime for the younger children.

Although the people generally enjoyed the experiment (the blackout took place on a Wednesday and Thursday), the lack of time reference made many of them uneasy and apprehensive. On the first school morning of the blackout 238 of the 240 school children appeared at school half an hour early in an effort to compensate for errors in guesswork.

A New Hampshire psychiatrist studying the results of the experiment said that people apparently have a "primeval urge to maintain time relationships." One person filling out a questionnaire after the experiment said that he had felt as though he were "floating in mid-ocean without a compass."

Mrs. Esther York, the teacher who introduced the hand-sundial, said, "We had the impression that children had a more precise notion of the time than their parents during the experiment, even those who arrived late for school."

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PHYSIOLOGY

Ticking Speed of Clock Influences Heartbeats

► **BY LISTENING** to the speedy ticking of an alarm clock for half an hour a man can increase his heartbeat rate from a normal 70 beats a minute to 100, the same tempo of the clock, according to a German scientist.

In the same manner, a slow-ticking clock can decrease a man's heartbeat to as few as 55 times a minute, reported Dr. Johannes Kneutgen of the Max-Planck-Institute for Behavior Physiology in Seewiesen, Germany.

The heart of a dog reacts the same way, it is reported in Washington Journal, April 16, 1965, a German publication in Washington, D.C.

Normally a dog's heart beats about 100 to 120 times a minute. By increasing the ticking rhythm of an alarm clock near the dog, scientists can increase the dog's heartbeats to 300.

These experiments are being conducted as preliminary research on the physiological effects of music or rhythm on the body and nervous system of man, Dr. Kneutgen explained.

Squirrels jump or hop about 120 times a minute. When a clock is put in the cage, the animal accelerates or slows down its leaping in accord with the exact rate of the ticking.

For fish, the change of rhythm can be fatal. Normally fish breathe by opening and closing their gills. The lowest rate to which their gill movement can be reduced and still maintain life is 43 "breaths" per minute. If a clock ticks only 40 times per minute, the fish gill movement slows down too much, and the fish strives convulsively to breathe faster but cannot. It swims rapidly to escape the ticking noise, but if it cannot retreat to a quiet area, it expires.

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PHYSIOLOGY

Peruvian Boys and Girls Have Longer Youth

► **THE BOYS AND GIRLS** in Peru's high mountains retain their adolescence about three years longer than their counterparts in the United States.

In mountainous regions 13,000 feet above sea level in Peru, adolescence is reached in later years and lasts longer, reported three Pennsylvania State University anthropologists at the 34th annual meeting of the American Association of Physical Anthropologists at University Park, Pa.

Peruvian Indian girls begin to grow rapidly when they are about 14 years old, and stop when they are about 19 or 20; while American girls grow between the ages of 11 and 15, according to Dr. Paul T. Baker and two of his graduate students, Randall B. Thomas and Andres R. Frisancho, a native of Peru. American boys experience a growth spurt about age 12, while Peruvian boys start growing about three years later and reach their maximum height about age 19 or 20.

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