

PSYCHIATRY

Vitamin B₁ Makes Insulin Shock Treatment Safer

Research By Pioneers in Field Show That "Protracted Shock" Can Be Predicted, Prevented or Even Produced

VITAMIN B₁ (thiamin) is now being used to make the insulin shock treatment for mental disease safer and more effective, it is reported by a California investigator and three physicians at Harlem Valley State Hospital, where this dramatic treatment was pioneered several years ago. (*American Journal of Psychiatry*, September)

By far the most dangerous complication which may occur in giving the insulin shock treatment is when the patient goes into a state of "protracted shock," failing to come out of it until damage to the brain has occurred or perhaps even death.

Yet when patients can be brought out of this dangerous state, it is sometimes found that they have been cured of their mental diseases.

Now it has been found possible to predict "protracted shock," prevent it, or even to produce it at will, it is reported by Dr. Jacob P. Frostig, of the University of California Medical School, and Drs. I. Murray Rossman, William

B. Cline, Jr., and Oscar Schwoerer of Harlem Valley State Hospital.

So far no dependable methods have been found for terminating the condition once it has developed, so these physicians have made no use of their knowledge of how to produce it for therapeutic purposes.

Insulin, when given in shock doses, follows a special course in its effects on the central nervous system. First, the cortex of the brain is affected, then the basal ganglia and hypothalamus, then the midbrain and finally the medulla oblongata. Various recognized symptoms accompany the successive involvement of these parts of the nervous system.

Study of cases of protracted shock revealed that this condition occurs only after the medulla oblongata has been involved for some time.

The dangerous protracted shock can be prevented, these physicians conclude, in three ways. The treatment can be terminated as soon as the signs of medullary involvement occur. If the symptoms

should develop too rapidly to be prevented, the patient can be given an injection of glucose into the veins. In the case of patients who show a special tendency to the protracted shock, vitamin B₁ will prevent it if given regularly.

Even after protracted shock has developed, they found, injections of the vitamin in doses of from 3,000 to 10,000 units will shorten the period of unconsciousness.

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AERONAUTICS

Parachutist Makes Record 30,000-Foot Leap

AVETERAN parachutist, Arthur H. Starnes, who has made more than 300 jumps from airplanes during the past 16 years, made the longest leap on record at an airport near Chicago, on Friday, Oct. 24. He dropped from a plane at the stratosphere altitude of more than 30,000 feet, and did not pull the ripcord of his parachute until he was less than 2,000 feet above the earth.

Self-recording instruments strapped to his body wrote their robot stories of his stone-like drop, for scientists to decipher after he came to earth. Mr. Starnes had his own story to tell of his sensations and experiences during his long fall. He says that his senses and mind function more rapidly and keenly than normal at such times; the old notion that a falling man becomes unconscious proves to be pure fable.

Combined instrumental readings and personal narrative will yield data to the scientists from the University of Chicago and Northwestern University who watched the performance from the ground. Some parts of the information are expected to be of importance from the national defense angle.

Within or upon the electrically heated flying suit, with specially constructed oxygen helmet, which Mr. Starnes wore, there were the following instruments:

A recording pneumograph, to tell how often and how deeply he breathed during the fall.

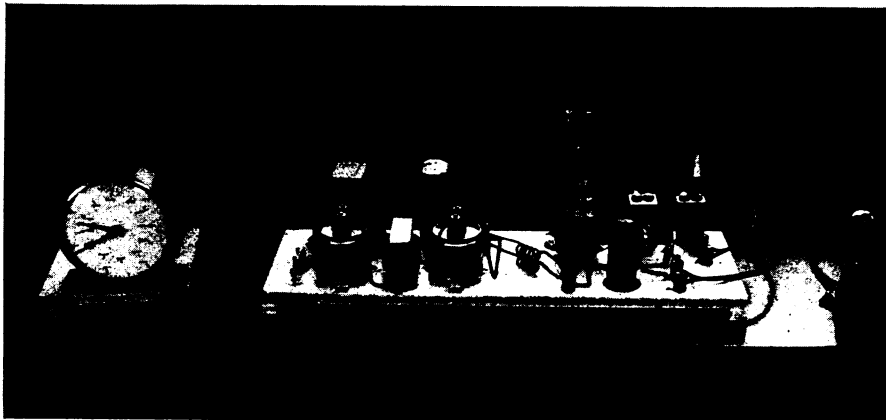
A special radio set that sent a record of his heartbeats to a receiving set at the flying field.

A barograph, which traced the story of his drop in terms of altitudes traversed.

An altimeter strapped to his wrist, to tell when to pull the cord.

An automatically started stopwatch, to time the fall.

A motor-driven motion picture cam-



HOMEMADE SUNSHINE RECORDER

This complicated looking apparatus was made from an 89-cent alarm clock and from parts taken from a secondhand radio that was bought for \$2. Including a few other items, the total cost was less than \$15, plus the ingenuity of Drs. V. G. Sprague and E. M. Williams of Pennsylvania State College, who made it. It is a sunshine recorder. The clock is not used as a time-piece but as a counter. The balance wheel has been removed. The light falls on an electric eye producing a current which gradually charges a condenser. When the condenser is full, it discharges through an electromagnet which moves the escapement one tooth. Thus the clock counts up during the day the amount of sunshine that has been received.