

PSYCHIATRY

# The Shock That Cures

## Insulin Treatment Provides First Ray of Hope for "Living Dead" Suffering from Dementia Praecox

By JANE STAFFORD

**S**HOCKING people out of insanity is just as spectacular as it sounds. I watched the procedure as it is carried on at the Harlem Valley State Hospital at Wingdale, N. Y. No novelist, using the device of a severe mental shock to restore the sanity of a character in fiction, ever imagined anything more dramatic or more frightening to watch than this scientific procedure which, although no cure-all, has already rescued hundreds of real persons from the living death of dementia praecox.

In the special wards reserved at the hospital at Wingdale for the newly-discovered insulin shock treatment I saw some 15 patients stretched in death-like coma on their beds. At 7 o'clock that morning each of them had received a huge dose, by hypodermic injection, of insulin, potent diabetes remedy. For nearly five hours after that they lay unconscious, oblivious alike to their actual surroundings and, presumably, to the unreal world of their disordered minds.

Only a short step separated them from death. Doctors went from patient to patient, lifting an eyelid to note how far the pupil had contracted and thus to gauge the depth of the coma. Nurses felt at temples for the faint pulsing of blood through the veins. Attendants shifted a pillow to keep a head from dropping too far back.

### Danger

A sharp-eyed nurse saw the disturbed breathing of one patient that meant danger. Desperately she tugged at the heavy body, rigid in its strange unconsciousness. Without a word spoken, an attendant noticed and came swiftly to her aid. He loosened restraint sheets and helped her throw the patient over. No time for gentleness. Time only to throw him face down and pound his back, so the accumulated mucus would drain out of this throat and not choke him. In the far corner, a doctor worked over another patient in similar state. A tube was inserted in this one's nostril to help drainage and free the air passages.

At noon I saw the patients awakened.

The sweet, life-saving insulin-counteracting solution of sugar and water was poured into the stomach through a rubber tube inserted in a nostril. The waking process was horrible to watch. It showed, if nothing else had, how severe the shock had been, how far gone the patients' consciousness. The patients retched and choked. They uttered terrifying, animal-like sounds. Some vomited the vital sugar. In such cases a doctor and nurse came swiftly with syringe and hypodermic needle. Lightning-fast the tourniquet was tied around the arm, the needle plunged into the vein and more sugar solution injected. Delay of even a minute might mean death.

### Tension

The room grew hot. There was no time to wipe up vomitus, or to change soiled bedding. Attendants moved swiftly, tightening restraint sheets to keep the awakening patients from throwing themselves out of bed as they thrashed about. Arms, rigid as boards, were thrust into

the air, fingers spread stiffly apart. Inhuman grimaces distorted the unconscious faces. And always, the three doctors, six nurses and four attendants watched and worked in swift, silent precision.

Once, when all were quiet momentarily and the tension slackened, I heard a visiting physician say to one of the staff:

### Relief

"You must breathe a sigh of relief each day when they have all come safely out of it."

The answer was only a nod and an eloquent look that said "Yes" more fervently than words.

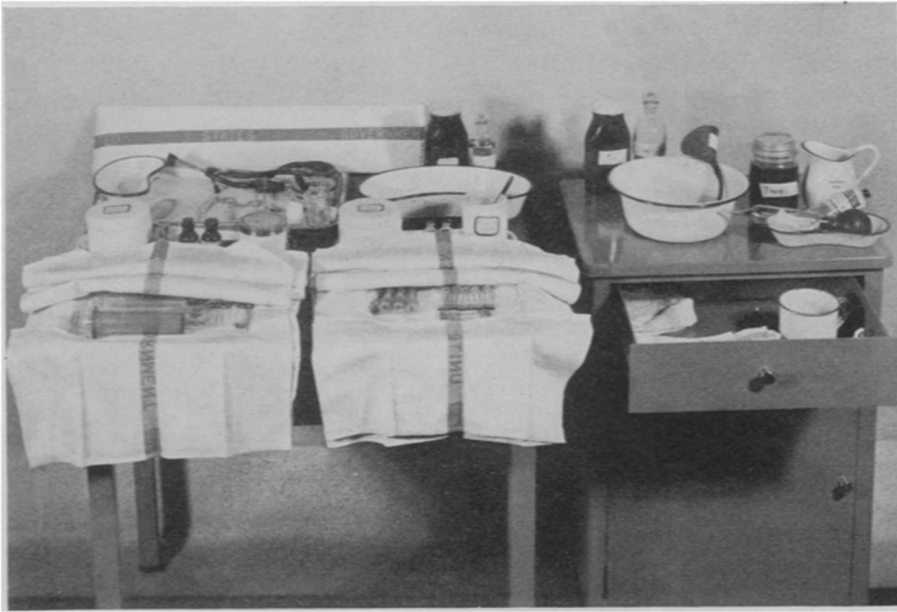
The treatment is given five days a week, Monday through Friday, with Saturday and Sunday for rest. This continues for weeks, until the patient has completely recovered or the physicians think he cannot be helped by further treatment.

The patients themselves have no memory of the horror or the drama of the treatment. The drama comes from the fact that if the counteracting sugar reaches their blood a minute too late,



### AS THOUGH DEAD

*This man's face is carefully covered, for tomorrow he may be recovered and discharged from the mental hospital. His identity is therefore protected. This patient is completely unconscious under the effects of the insulin.*



### THE TOOLS

*Here is spread out the complicated array of tools necessary for administration of the insulin shock treatment for the mental disease schizophrenia, also known as dementia precox.*

they will die. The horror comes from their struggle back from their deeply unconscious state and also from the fact that no matter how improved they may be by the treatment, they usually return for a short time, while they are awakening, to their former mentally disordered state.

Many of them return to new life, unclouded by the experience they have been through or by the shadows of mental disease. I saw them finally reach full consciousness, sit up and drink another cup of sugar and water. I saw them, after a short rest, get up, stretch themselves like any normal sleeper, walk into the next room and hungrily fall to on the piled-up dinner trays that awaited them.

### Talked With Patients

That evening I talked to some of these patients. One of them seems on the way to what the physicians at the institution term "recovery." He no longer sees faces in the sky and no longer thinks that he is being persecuted. Better than that, he realizes that his hallucinations were mere delusions, the product of a disordered mind.

"I just imagined that people were after me," he told me. "I had been working nights, losing sleep and not getting enough to eat. I was all worn out and that made me imagine those things."

Not fully recovered, but "much im-

proved" was another patient. He, too, had seen faces and he believed birds and animals talked to him. He is no longer bothered by these delusions.

"I don't hear them any more, but they really did talk to me," he insisted.

The scene that I witnessed at Harlem Valley Hospital is being repeated daily in many public and private hospitals through the United States and foreign countries. Patiently, heroically, physicians and nurses and attendants are performing over and over again the deft, life-saving ministrations I watched.

### From Vienna

The insulin shock treatment for dementia precox was originated by Dr. Manfred Sakel at the Neurological and Psychological Clinic of the University of Vienna. It was at this famous medical center that Prof. Julius Wagner-Jauregg originated the malaria treatment for another mental disease, paresis, for which he was awarded the Nobel Prize. Dr. Sakel seems also to have in him the stuff of which Nobelists are made. Not that he bears any resemblance to the traditional bearded, absent-minded scientist. He does not even wear spectacles over his keen dark eyes. Young, good-looking, modest almost to the point of shyness, faultlessly tailored, you would expect to see him behind the desk of a business executive's office or at a social function, rather than in a scientific

laboratory or making rounds in the wards of a mental hospital.

His discovery of the value of insulin shock for treating mental disease was made as a result of his studies of drug addiction. Large doses of insulin, he found, alleviated the withdrawal symptoms which are the feature most dreaded by morphine addicts undergoing treatment. At first he used doses of insulin just large enough to pacify the patients who grew excited after the withdrawal of morphine, or to make them sleepy. In many cases, the period of treatment was considerably shortened by this insulin treatment.

### Symptoms Similar

The excited state of morphine addicts suffering withdrawal symptoms is so much like the types of excitement seen in some dementia precox patients that it occurred to Dr. Sakel that it might be possible to influence this latter type of excitement by insulin. Accordingly, he started giving insulin to dementia precox patients, only for them he used much larger doses than he had on the morphine addicts.

His spectacularly successful results attracted wide attention from fellow scientists. But because the treatment is so dangerous, they hesitated for months, years even, before they dared to try the new method. Dr. Sakel himself has always pointed out the danger of the treatment and urged extreme caution. The treatment can only be safely carried out in a well-equipped institution with a large, specially trained staff of doctors and nurses. To attempt it in the patient's home or the doctor's office would, quite literally, be fatal.

Patients suffering with dementia precox, however, have heretofore always been considered as good as lost—doomed to a lifetime of the living death of insanity. Dangerous as the insulin shock treatment is, it seems worth trying in these hopeless cases, and one by one, physicians on

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### EXPERTS

*Dr. Nolan D. C. Lewis, director of the New York State Psychiatric Institute, (left), Dr. Manfred Sakel, of the University of Vienna, and Dr. John R. Ross, superintendent of the Harlem Valley Hospital (right). They are conferring on the insulin treatment.*

the staff of mental hospitals have dared to try it.

The Harlem Valley State Hospital was one of the first in the United States to institute it, and it was begun there under the direct supervision of Dr. Sakel himself. He was invited by Dr. John R. Ross, the superintendent, to give a course of training in the new treatment to the staff of that hospital and to a group of physicians from other state hospitals in New York.

"Dr. Sakel first came to this country on the invitation of the head of a private hospital," Dr. Ross told me. "But I felt this treatment should be available to the masses as well as the classes, so I went at once to see him and asked him to give this training course."

At the Harlem Valley institution, the results of treatment are summed up according to four grades. Some of the patients—6 out of 52 treated so far—

have completely recovered, like the man who told me he only "imagined people were after him." Another 15 are in the class "much improved," no longer bothered by their delusions, but not realizing that they were only delusions. These patients are now at home living normal lives. Of the others, 22 are "improved" while 9 are "unimproved." There have been no deaths. When he told me that, one of the doctors literally crossed his fingers.

The results of the insulin shock treatment appear even more striking when the figures are looked at in another way. Harlem Valley State Hospital, like other state institutions, does not get patients until they have been sick for some time and the mental disease has become chronic with them. Dr. Sakel himself did not expect to get good results when he came to Harlem Valley.

Of the first 52 cases treated since December, 1936, 8 patients had been sick from 1 to 2 years. Of these, 3 recovered, 3 were much improved and 2 remained unimproved. Thirty-two of the patients had been victims of mental disease for from 2 to 6 years. Of this group of chronically sick, 3 recovered, 10 were much improved and able to go home, 15 were improved and only 4 were unimproved. Another group of 12 cases had been sick for over 6 years, one of them as long as 17 years. None of these recovered, but 2 were much improved and able to go home, 7 were improved and

only 3 of this apparently hopeless group were unimproved.

Similar results have been reported by physicians using the treatment at other institutions. Encouraging also were the reports of patients who continued to show improvement after the treatment stopped and they had been sent home. The patients themselves in some instances and often some of the relatives reported that, although they had seemed in fine shape when first they went home, they were even better several months later. Even some of the patients who showed no signs of improvement after weeks of treatment, so that finally it was stopped as a useless procedure in their cases, began to improve some weeks or months later.

On the other side is a darker picture. The treatment does not help all cases, is of greatest help in early stages of the mental disease, and can in no sense be considered a cure-all. Some relapsed after being much improved and had to be brought back to the hospital. Some of these improved again after further treatment, others did not. The relapse in some cases may have been due to the fact that the patients returned to the unfavorable home environment and difficult family situations which had contributed to their mental breakdown in the first place.

This brings up the question of whether the shock treatment is really a cure. Dementia precox, or schizophrenia as it is also called, has hitherto been a hopeless mental ailment. Always there have been some patients who appeared to recover without any treatment, a few permanently, but most of them only to relapse still further into mental disorder. Whether the insulin-treated patients will stay well is a question that cannot be answered yet. Not enough time has elapsed to show whether the improvement is any more lasting than that which has occurred in some cases that had no treatment. One authority believes that the constitutional tendency to the disease

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will always remain and that even those patients who recover after insulin treatment may relapse if subjected to severe or protracted mental strain.

The more hopeful view is that even if the first insulin-treated cases relapse, the treatment will succeed in the end. Questions of dosage and of how long to continue the treatment have not been established. Dr. Sakel is frequently questioned on this very point of how much insulin to give and how many times to repeat the shock. His answers to physicians are always that each case has to be considered by itself and the treatment adapted to the condition and reaction of the patient. Some patients need a large enough dose of insulin to produce convulsions. Others improve without convulsions but after the shock of coma.

The victims of this most common and most tragic of all mental ills number over 150,000 in the United States alone. They fill one-fifth of all the hospital beds in the country. Most of the victims are stricken just as they are attaining maturity, at the very outset of their economic independence. The cost of their support and care, at home or in institutions, plus the loss of their removal from productive pursuits, is at least \$1,000,000 a day. Some authorities put the figure at \$2,000,000 daily.

Added to this is the incalculable cost of the disease in terms of human suffering. The share of this that must be borne by the patients, shut away from the world of the sane by the thick clouds of mental disorder, cannot even be imagined. Easy to imagine but hard to evaluate is the cost in grief to the families who must stand helplessly by, unable to aid and, in many cases, unable even to make themselves recognized or to bring that cheer and sympathy which helps assuage the suffering of patients hopelessly ill with bodily disease.

For all these, insulin shock treatment brings hope for freedom from economic burden, from shame or old-fashioned stigma, from grief and suffering, best of all from insanity itself.

*Science News Letter, May 21, 1938*

#### PSYCHIATRY

### Shocks of Many Kinds Are Useful Against Mental Ills

**S**HOCK appears to be a cure for dementia precox in some cases regardless of the agent producing the disturbance to the nervous system.

Insulin is one agent being used successfully to literally shock patients out of their mental disease.

Other compounds are being used to create shock for the dementia precox patient. One of the first tried was camphor. A dose of the drug will produce in the patient convulsions like epileptic seizures, and with recovery from these fits comes recovery from the mental disease also.

Metrazol is now replacing camphor, because it acts more immediately. Like camphor, it is being used reluctantly for the reason that physicians know so little about possible complications in the use of this drug.

The satisfactory part of the insulin therapy is that it is so easily and instantly controlled. Physicians can let the shock proceed as far as seems necessary or desirable and then instantly stop it with the administration of a little sugar.

When the convulsion-producing drugs are used, patients may sometimes go into a state of having one seizure after another, in which case, the physician can only stand helplessly looking on. This occurs only very rarely, however, and ordinarily the force of the drug is spent within a single minute.

This short duration of treatment as compared with the hours required for the insulin administration, is an important advantage of the metrazol type of shock.

Serious complications, including dislocations and bone fractures due to the violence of the convulsion, and also lung abscess have been warned against.

Among the patients treated with metrazol at Brooklyn State Hospital who had been ill less than six months, 91.3 per cent showed definite improvement. More than two-thirds (69.5 per cent) were released from the hospital. Of the group who had been ill between seven months and two years, 41.3 per cent showed improvement and 29 per cent were paroled. Of those ill more than 2 years, 34.9 per cent showed improvement and only 11.3 per cent were paroled.

The insulin and metrazol produced shocks are not the first known to have cured the mentally ill. Dr. N. D. C. Lewis, director of the New York Psychiatric Institute, has reported several surprising cases that were suddenly

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