

2. It is encountered in normal, neurotic and psychotic individuals.

3. It is of particular significance in patients under therapy, as it helps to determine the degree of resistance to improvement and the progress of therapy.

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THE B. E. S. T. IN THE TREATMENT AND CONTROL OF CHRONICALLY  
DISTURBED MENTAL PATIENTS--A PRELIMINARY REPORT\*

BY JAMES A. BRUSSEL, M. D., AND JACOB SCHNEIDER, M. D.

To the institution psychiatrist, there is nothing more trying, frustrating and perplexing than the problem of the management of the chronically disturbed patient. The situation is a multiple source of disappointments, since it involves more than the isolated question of the patient himself. There are hazards involving other patients; there are dissatisfied relatives who, seeing no improvement—or perhaps a worsening—in a patient's condition, carry unfavorable reports back to the community; there are matters of administration and economy; and considerations of distracted and harassed personnel, constantly menaced by physical harm.

The problem of the chronically disturbed patient at Willard (N. Y.) State Hospital reached its zenith on the female continued treatment service which is under the supervision of one of the present authors (J. S.). Here the census of such patients was mounting daily because: (1) None improved sufficiently to warrant even a trial on a quieter ward; and (2) new admissions were constantly arriving. It began to appear that major construction might be needed to provide large enough facilities for disturbed patients, not to mention increased allotments in employees, drugs, restraint, clothing, bedding, etc. All of the currently-employed methods of controlling disturbed patients had been tried without success, including sedation, individual nursing care, restraint and/or seclusion, and the various modalities of therapy, including electric shock.

One of the authors (J. A. B.) suggested that intensive electric shock therapy be tried in the same manner that had proved to be so efficacious in military service during World War II. No one can definitely say how or when this method was conceived but it certainly was in use in the latter two years of the war, developed by hospital ship psychiatrists assigned to the Pacific run. On these relatively small hospital ships, it became practically impossible, in the face of inadequate housing facilities and undermanned

\*Read at the May 1950 meeting of the Finger Lakes Neuropsychiatric Society, Willard, N. Y.

staffs, to control and care for violently disturbed patients for journeys that took up to 30 days. In the words of one colleague: "There were days when we thought these rampaging psychotics would scuttle the boat!" Purely on an empirical basis, it was discovered that the usual electric shock therapy application, administered in the morning and afternoon of two successive days, worked nothing less than miracles in converting wildly disturbed patients into quiet, tractable, co-operative, and often improved individuals. Port military authorities were frequently amazed to receive a shipment of docile and manageable patients about whom a prior radio message had been sent describing them as "disturbed."

It was decided to try this intensive therapy at Willard—a modality which the employees concerned came to dub the "Blitz," ultimately leading to the term "B. E. S. T." (Blitz Electric Shock Therapy.) The authors think time and results have justified this descriptive classification.

The first question was the matter of selection. In most research investigations two groups are chosen, one for control and one for experimentation. In the Willard case, one group could well stand for both, pre-treatment histories and recorded activities serving for control comparison. It was further decided to apply the traditional physiological concept of "all-or-none," and 50 of the most disturbed female patients were selected. The preliminary selection was made by the nurses and attendants who worked daily with these patients and knew them better than anyone else. So far as practicable the usual physical pre-treatment work-up was carried out.

In order to appreciate the results of B. E. S. T., it should be pointed out that most of the patients in the treatment group had already received full courses of electric shock therapy and were currently being carried on so-called "maintenance shock therapy," without any perceptible evidence of improvement. Some patients had had as many as 40 to 50 shock sessions in their initial courses. Thus, B. E. S. T., while founded on electric convulsive therapy, is fundamentally a different modality of treatment as judged by administration and results.

What constitutes "disturbed"? Is noisiness enough to warrant this classification? Are other well-known descriptive terms needed

singly, or combined in groups? So far as "mild," "moderate" and "severe," or "periodic" or "continuous" were concerned, one rule was rigidly adhered to, and that was that each candidate for "B. E. S. T." must be a chronically and extremely disturbed individual. As it was realized that one patient, for example, may be devastatingly destructive, moderately hallucinated, and yet completely co-operative at meal times, each of the 50 women in the group was carefully catalogued on each of her disturbed characteristics, arbitrarily using a rating scale of 0 to 4, representing none (0), mild (1), moderate (2), severe (3), and extreme or uncontrollable disturbances (4). Figure 1 represents in graphic fashion 10 of these elements based on the 0-4 scale and projected to compare the selected features, prior to and after therapy. Figure 2 does the same for three modes of control, but the figures here are based on the actual number of instances of use in the group of 50 patients.

Tabulating the results of Figure 1 furnishes a terse, but pleasantly surprising, score as follows:

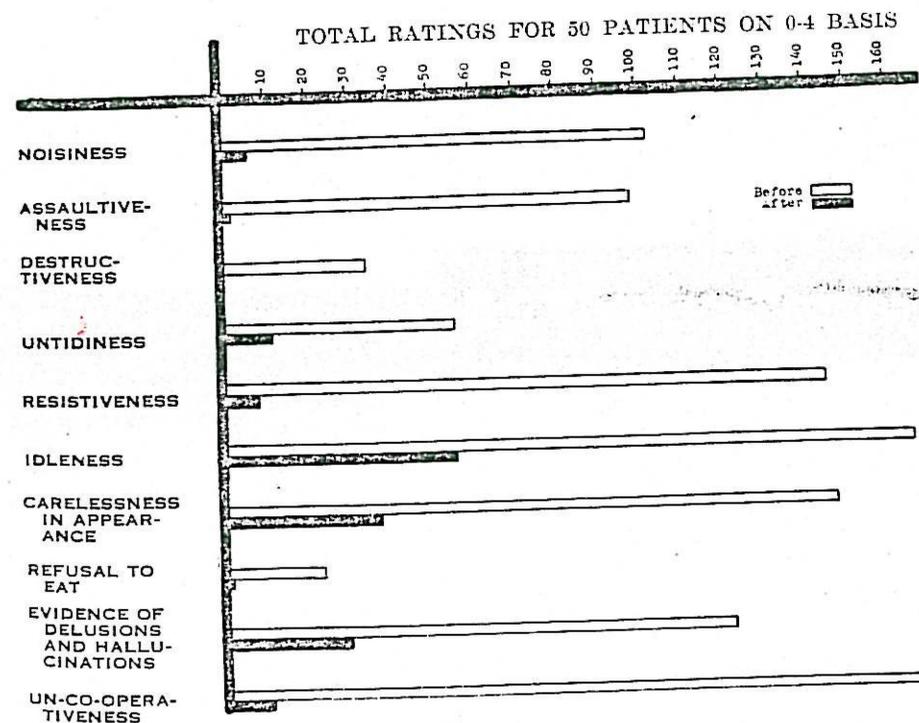


Figure 1

(4) [but then]

3

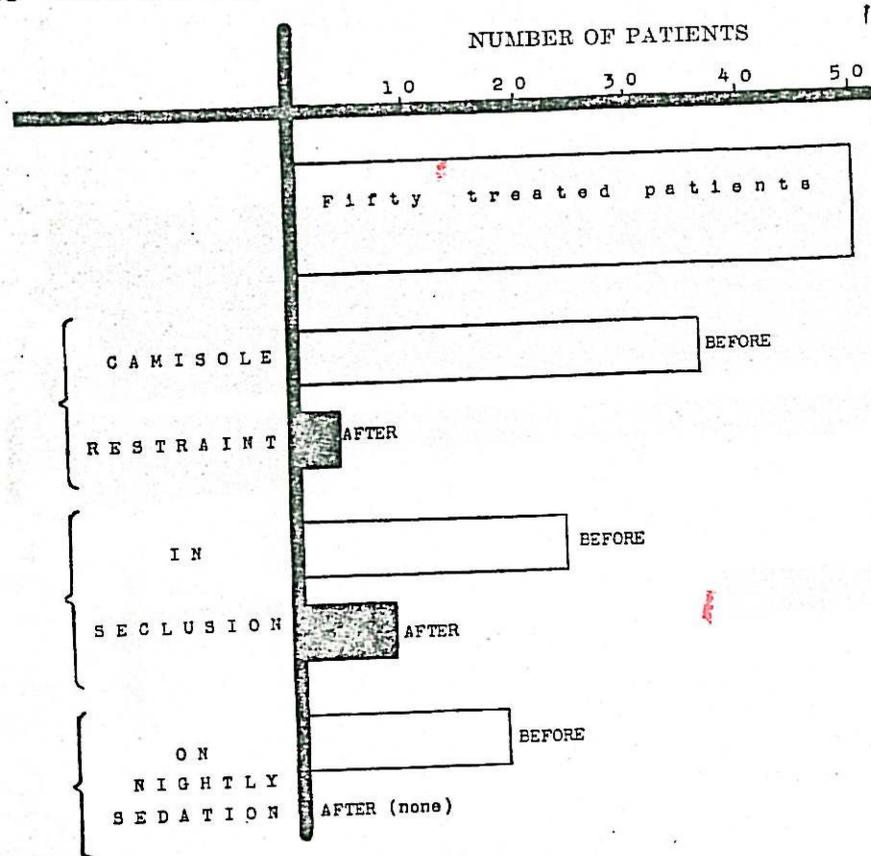


Figure 2

Element of disturbance	BEFORE treatment	AFTER treatment
Noisiness	102	5
Assaultiveness	99	2
Destructiveness	34	0
Untidiness	53	11
Resistiveness	144	7
Idleness	167	56
Carelessness of appearance	148	38
Refusal to eat	23	1
Evidence of delusions and hallucinations	122	29
Un-co-operativeness	168	10

Tabulating Figure 2 in the same manner, we have:

Controlling modality	BEFORE treatment	AFTER treatment
Camisole restraint	36	3
Seclusion	23	8
Nightly sedation	18	0

The patients selected, considering the size of this initial group, covered most of the more commonly encountered mental illnesses: schizophrenia, 34 (14 catatonics, 13 paranoids, seven hebephrenics); psychosis with mental deficiency, seven; manic-depressive psychosis, three (two manics, one depressive), senile psychosis, two; and one each of psychosis with cerebral arteriosclerosis, involutional psychosis, and general paresis. The ages ran from 22 to 78 years, or an average of 41 years. The patients had spent an average time in the hospital of eight years, ranging from six months to 37 years. It can be readily deduced, therefore, that age and diagnosis are no contra-indications to B. E. S. T., and that prolonged hospitalization up to many decades is likewise no deterrent.

The usual and accepted technique is used in which the aim is a grand mal convulsion and the average dose is 600 milliamperes for .5 second. It goes without saying that a well-staffed and trained shock team (or teams) is a "must," for transporting these violently and constantly disturbed patients.

So uniformly gratifying have been the results that it has been found most difficult to restrain enthusiasm. No better judge of therapeutic results can be had than the exhausted and pessimistic employees who have labored for years with these people. Perhaps the unscientific comment of one attendant sums up the judging of results when she came upon one patient who had been sadistically assaultive, destructive and profane . . . now neat and tidy, quiet, and knitting a muffler in occupational therapy classroom. The amazed employee gaped and muttered, "I'll be damned!" And at no time has any post-treatment complication whatsoever been observed.

As a matter of statistics, in addition to those offered in figures 1 and 2, all of the 50 patients presented a remarkable degree of improvement. The duration of remission of symptoms averaged two weeks, ranging from three days to 42 days. As a matter of fact, only one patient failed to enjoy a six-day remission (she is the one who had but three days). On the fourth day after her initial B. E. S. T., however, a repetition of this intensive procedure provided a longer remission. Again, once a patient's remission is known approximately, B. E. S. T. can be repeated upon the return of prodromata at or near the termination of the expected remission period; and thus a schedule is established, enabling patients to enjoy unbroken remissions and maintain improvement as

long as B. E. S. T., at intervals, is not omitted. The implications of this fortunate time relationship lead to another and more forward undertaking which will be discussed later.

There are many more improvement features that cannot be reduced to the cold and implacable field of statistics. For example, Patient F. C. has for many years been constantly disturbed, noisy, assaultive, filthy, doing what mischief she could in converting her seclusion room into a veritable pigsty. What a dramatic change to find this patient sitting quietly on the ward, perfectly neat and tidy, and—without urging—cleaning her room! Another patient had, for years, been unable (or had simply refused) to converse in any language other than Italian; yet, after B. E. S. T. she is speaking clearly and coherently in English. A third had always refused to reveal her age, but after B. E. S. T. she freely gave this information and any other personal data about herself which was asked for. Those with experience in large mental hospitals can appreciate the writers' feelings when it was possible to remove a half-dozen chronically suicidal patients from restraint and/or seclusion. From the materialistic point of view, the economy of the improvement cannot be neglected. The monetary savings on otherwise smashed window panes, destroyed clothing, blankets and bed linen, destroyed furniture and supplies, and the savings in outlay for sedatives and restraint apparatus is an important budgetary benefit. One patient alone, during the month of February 1950, hit an all-time record by personally ripping to shreds 57 blankets! Following her first series of B. E. S. T. she became neat and orderly, eschewed all destructive activity, and has remained that way.

A further and logical development has been the feasibility of convalescent care for these erstwhile disturbed patients, an idea that could never be otherwise entertained. Rather, it is this group for whom the gloomiest prognosis is given, and the lengthiest hospitalization anticipated. Preliminary planning is now under way at Willard to permit interested relatives (who had long ago abandoned all hope of ever having their patients at home), to take these radically improved individuals home on convalescence and look forward to maintained betterment and adjustment by continuing B. E. S. T. on an out-patient department basis. When the procedure, the time elements, and the goal are understood, these relatives should be more than willing to return the patient to the hos-

pital for two days, let us say, out of every two or three weeks as a far more desirable arrangement than having him remain in the institution for the rest of his life. A B. E. S. T. out-patient schedule can be predicated on each patient's remission period and a half-dozen beds on a rotating basis would replace the present system, whereby dozens of beds, meals, supervision, etc., are devoted constantly to the housing of disturbed patients. A plan should be achieved ultimately that carries a comparative time-table regularity. If insulin and liver have kept the diabetic and the anemic out of the hospital and well adjusted on an out-patient basis, it may be that B. E. S. T. can do likewise for the mentally ill.

Out of B. E. S. T., there is an interesting sidelight upon which to reflect with reference to the future of military psychiatry.<sup>2</sup> Maintaining the acutely disturbed neuropsychiatric casualty until he is discharged, encountering added difficulty in transporting him from foreign shores to the continental United States, and then from military establishments to hospitals of the Veterans Administration, has always presented serious problems to psychiatrists in the armed forces. Now we may justifiably anticipate the time when B. E. S. T. will obviate such difficulties.

Finally, the improved morale of employees has been so striking that cases will be cited here, with descriptions in substantially the words with which nurses and attendants wrote them up when their opinions were solicited.

#### *Case Histories*

*E. H.* Diagnosis, dementia præcox, catatonic; age, 35 years; in the hospital, 10 years. Previous to B. E. S. T., she was very disturbed, incoherent, un-co-operative, irritable, and beat herself about the head and body. She required almost constant restraint to prevent injury to herself and others, being assaultive to anyone who dared to approach her. Since B. E. S. T. (March 20 and 21), she has had periods of about two weeks when she is very co-operative, quiet, friendly, and enjoys doing embroidery work. April 10 and 11: She was as just noted; treatment was repeated before she became too disturbed again. April 26 and 27: She was much better and rallied from confusion following her third treatment earlier than previously. She continues good today (May 1) and is busily engaged in embroidery or reads to break the monotony.

*D. C.* Diagnosis, dementia præcox, catatonic; age, 42 years; in hospital, 19 years. Prior to B. E. S. T., this patient was extremely overactive and over-productive. She had an uncanny knack of getting out of a camisole regardless of its size or shape. She sang night and day, made up the lyrics to include the names of physicians, patients, nurses and supervisor, all with a sexual trend. She claimed that she was lactating and urged everyone to taste her milk; kept her pubic hair pulled out; tore camisoles with her teeth, ripped up mattresses and any clothing she had on; and during the past winter, destroyed four to five blankets every 24 hours for weeks. When removed from seclusion for bathing, *D. C.* was violently assaultive, would try to break windows and pull other patients' hair. She refused to eat when in restraint, would scream for long periods, and it was impossible to quiet her. During the rare times she was quiet, she would urinate on the floor of her seclusion room and then spread the urine evenly over the floor. First treated March 13 and 14, she was nauseated and vomited after each therapy session. She was very pale and did not get out of bed between treatments. Following B. E. S. T., she was quiet, co-operative, worked when asked to do something, seemed to be bothered by the noise of other patients, cared for her own clothes, and was neat and tidy. On April 2, she became very upset when another patient grabbed food from her tray. B. E. S. T. was repeated April 3 and 4, but this time the patient slept between sessions and did not vomit. Since that time, she has been quiet, co-operative, neat, clean, never destructive, and does many little favors for other patients. However, she remains somewhat seclusive.

*M. W.* Diagnosis, dementia præcox, catatonic; age, 36 years; in hospital, 11 years. Formerly very insulting, profane, assaultive, *M. W.* would kick at the doctor when he made his rounds, was threatening, foully abusive, spat, destroyed clothing and dishes, and was totally inaccessible. Following B. E. S. T., she worked all day, sweeping until blisters appeared on her palms. She became neater, and interested in other patients. She checks with the nurse each day to see if she is scheduled for B. E. S. T. When she is not, she breaks out in a broad smile. She now speaks of her family, which she never did before, and actually shows marked respect for other patients on the ward.

*N. S.* Diagnosis, dementia præcox, hebephrenic; age, 30 years; in hospital, 11 years. This patient has shown the least change of any following B. E. S. T. Prior to treatment, she walked the floor all day long, pacing up and down, swinging her arms as though she would strike anyone within reach. She muttered and swore as if in response to hallucinations, and was assaultive on occasion, especially if the other person were smaller than she. She spat at every window she passed. At times, she screamed and threw herself into a chair, wailing she was being harmed. *N. S.* never answered people, except when her name was called, and then replied with a stock response, "Jesus Christ—what?" After B. E. S. T. (March 20 and 21), she would sit silently in a chair and look at others blankly and wordlessly when addressed. On April 11 to 12, she was quiet, co-operative, interested in her clothes and surroundings, but had blocking of speech as if unsure of herself. When asked, she would dust furniture or push a polisher. On April 30, *N. S.* became assaultive, but, after B. E. S. T. on May 1 and 2, became quiet again, interested in her personal appearance. Since then she has taken to sewing, and earnestly tries to do everything she is told.

*L. P.* Diagnosis, dementia præcox, catatonic; age, 31 years; in hospital, 13 years. *L. P.* was untidy, assaultive, un-co-operative, spending most of her time lying on a bench or the floor with her head and face covered. She did nothing voluntarily, had to be led, often pushed, to dining room, bed, or bathroom. She was frequently irritable, and if touched, would fly into a rage and bite, kick, scratch and pull hair. *L. P.* never talked, smiled or answered questions, but, while assaultive, would curse. After B. E. S. T. (April 20 and 21), she asked to go to bed after the first therapy session and was allowed to do so. Following the other three sessions, she slept for a brief interval each time. After the fourth treatment, she chanced to pass her physician. The patient was voluntarily going to the bathroom. The doctor asked her, "Lena, how do you feel?" "Fine," she replied brightly. "Why, do I look sick? Her appetite has improved. She is neat and tidy, takes an interest in her appearance and clothing, is friendly and co-operative. She does not accept the fact that she is in a hospital, and, if queried on this, will change the subject and talk of the

weather or her appetite, or ask for a cigarette. She objects to going to the dining room, asking to be served in her dormitory.† As of May 5, she continues to maintain improvement.

## SUMMARY

1. A method of treating chronically disturbed patients, regardless of age, diagnosis or length of hospitalization, is offered and described, with a title offered, for convenience, B. E. S. T. (Blitz Electric Shock Therapy). It is particularly recommended, and has proved to be remarkably efficacious, in those patients who cannot be controlled by such means as restraint and sedation, and for whom a hopeless prognosis is indicated.
2. Gratifying results have been described and the clinical factors have been tabulated for purposes of comparison. Other benefits such as better community relations, economic savings, improved employee morale, etc., are also briefly discussed.
3. The complete lack of unfavorable complications is mentioned.
4. B. E. S. T. is recommended as an adjuvant in therapy for military neuropsychiatry.
5. Convalescent care for these patients, with the administration of B. E. S. T. on an out-patient basis is delineated.
6. Sample case histories, with descriptions as written by nurses and attendants, are reported.

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## NONSTANDARD METHOD OF ELECTRIC SHOCK THERAPY\*

BY J. H. KOENIG, M. D., AND H. FELDMAN, M. D.

With the introduction of shock therapies for the treatment of the mentally ill, an enormous step forward was made in the field of clinical psychiatry.

Unfortunately, not all patients respond favorably to one type or another of these modalities, such as insulin, electric shock, metrazol or combinations of these. Great numbers of patients remain within the walls of our state hospitals permanently. Others, if released, return after short stays on the outside, not being able to readjust in the family and community.

The large numbers of patients who stay in our hospitals confront us with the problem of what can and should be done for them. With the passing of time, their regression and deterioration come more and more to the surface. Many become great behavior problems because of assaultiveness and destructiveness.

It is a challenge to all psychiatrists to find a way to improve the existing situation. The term "challenge" is used because all are fully aware that the methods now at our disposal of handling all such patients are inadequate and outdated, considering the great progress clinical psychiatry has made within the past decade. Are the protection sheet, camisole, seclusion or sedation the only things we can do for those patients to make them harmless to themselves, to other patients, to employees, to visitors, and to save hospital property from destruction? Such patients are kept in a state of hibernation, deprived of their freedom of movement for weeks and months at a time; and under their restraint, they often develop decubitus ulcers and secondary infections. When one thinks of them, there is a feeling of helplessness and frustration.

In 1942, while hopes were still high that electric shock therapy was the answer to mental ills, "miraculous cures," accomplished through its application, gained wider and wider recognition; electric shock practically replaced metrazol and insulin in many hospitals throughout the country. The present writers shared in the general enthusiasm, but soon realized that the application of elec-

\*Read at the down-state interhospital conference of the New York State Department of Mental Hygiene. New York State Psychiatric Institute, April 11, 1950.