

sponses of a given unit to sensory volleys scarcely vary in their latencies, but responses of some units occur about 20 msec following the responses of other units or recur about 20 msec after their initial responses. (iv) Application of strychnine causes repetitive discharge in nearly synchronous trains of approximately 85 percent of, but not all, the cells.

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15 October 1958

Reliability of Activation Level during Adaptation to Stress

Abstract. This study points out the stability of a quotient expressing the recovery of basal skin resistance (BSR) level. Changes noted in BSR during stress are consistent with the behavior of tranquilized patients and have significance for drug therapy. Information of this type may be quite useful for interpretation and objectivity in a wide range of clinical researches.

To date, studies of the reliability of BSR measures have concentrated on work with normal subjects and tend simply to demonstrate adaptation after repeated exposure to the stimulus. The following study was primarily designed to appraise the reliability of the base-line adaptation of mental patients during stress. Basal skin resistance was the measure chosen since it is inversely related to sympathetic nervous activity or "activation level."

The subjects comprised two groups of 16 patients each, one group composed of 13 on various tranquilizers of the phenothiazine class plus three on Marsilid, an "energizer," and the other group consist-

ing of nondrugged patients. Silver electrodes, stabilized by reversal of polarity every 3.1 sec, were applied to the palms of the patient's hands. The patient reclined on a couch and was instructed to look continuously at a Strobolux which was used to deliver a large field of flickering light from a distance of 7 ft. The Strobolux was turned on after a relaxation period of 10 min. Readings of BSR separated by $\frac{1}{2}$ -min intervals were made during the following periods: (i) 0.5 to 1.5 min, the initial resting period; (ii) 9 to 11.5 min; and (iii) 16 to 17 min. After a 3-day interval the procedure was repeated on each patient.

Two test-retest reliabilities were computed by using the following scores which were selected in advance of the data: (i) increase in BSR over the 7-min exposure to flicker, divided by the initial decrease in BSR due to flicker stimulation; (ii) increase in BSR, as above, divided by BSR just after Strobolux stimulation—that is, at 10.5 min.

Although the first of these scores is highly recommended in the literature for measuring the recovery quotient, its use gave insignificant reliabilities. The data strongly suggest that this is due to anticipatory activation during the second session. The use of the second score gave rank order correlations of .72 ($p < .01$) for both drugged and nondrugged groups and a total product moment coefficient of .78 ($p < .01$) for the combined groups. Considering that the second score compounds unreliabilities resulting from changes in adaptation and changes in BSR level at 10.5 min, the reliability is surprisingly high over a 3-day period when the anticipatory effects are taken into account.

A subsidiary experiment, an exploratory attempt at evaluating the validity of BSR measures of activation level, was conducted with data obtained from the above study. Casual clinical observations made by me and my associates on patients under the influence of tranquilizing drugs yielded general agreement to the effect that these patients were manifestly less aroused than those who were not receiving tranquilizing drugs. It was then reasoned that the manifest validity of BSR should be reflected by a higher resistance level for tranquilized than for nondrugged patients. Hence, the three patients on Marsilid were dropped from the drugged group along with three randomly chosen nondrugged patients. The subjects had been so chosen that it was possible to obtain balance or conservative bias with respect to the following characteristics; sex, race, diagnostic category, and manifest agitation (see Fig. 1).

The data were converted to log conductance units in order to approximate a normal distribution. An analysis of variance was made over drug categories for

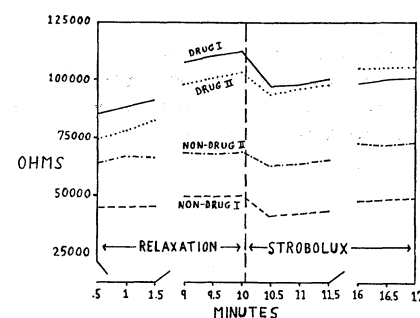


Fig. 1. Average BSR on drugged and nondrugged groups for sessions one and two

the initial resting period and over session number. Interaction and session number were not significant. Drug versus non-drug achieved an F of 9.63 ($p < .01$). A breakdown of this F by two t -tests, one for the first session which was significant at better than the 1-percent level and one for the second session which was not significant, suggested a further influence of anticipatory effects.

The three nondrugged patients were reincluded, and two exploratory hypotheses were tested *a posteriori*. It was found (i) that the change in initial resting level from session one to session two did not differ significantly for drugged or nondrugged groups, and (ii) that the change in BSR over the entire relaxation period was significantly different ($p < .05$) between drugged and nondrugged groups, the former showing a greater increase in BSR.

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28 July 1958

Effect of Chlorpromazine on *Salmonella enteritidis* Infection in Mice

Abstract. Chlorpromazine increases the susceptibility of mice to infection with *Salmonella enteritidis*.

Goldman reports that infections are numerically among the most frequently encountered complicating factors in the institutional use of chlorpromazine and reserpine (1). He states that it is not believed that increased susceptibility to infections is a specific effect of these drugs. Experimental work with different species of animals and different pathogenic organisms has not led to consistent conclusions (2, 3). The following experiment was designed to study in a strain of mice the interaction between various dosages of chlorpromazine and the susceptibility to varying inocula of a virulent organism.