

would be found possible to alter, by intestinal manipulation, the threshold of reflexes of more vital importance to the animal than flexion and crossed-extension. Porter has shown that the vaso-motor center is still in active operation in shock; it is by no means exhausted. It is still capable of giving as great percentile changes of blood pressure as before. It might still turn out to be true, however, that following intestinal manipulation the center is more inaccessible than before to the nerve impulses which ordinarily play upon it and properly control its activities. The writer hopes to test this out in the near future. At any rate it is evident that intestinal manipulation sends impulses to the central nervous system which disturb its normal functioning, and Crile's contention that such impulses should be prohibited from their pernicious activity would seem to be justified.

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**On the influence of some antipyretics on the neuro-muscular  
coördination test of "tapping."**

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In connection with a psycho-pharmacological study of the antipyretics including observations on their effect on the reaction-time, blood pressure, vision, and hearing, some observations were made on the influence of these drugs on the well-known psychological coördination test of "tapping." This test consists briefly in the continuous tapping by the subject with a brass stylus upon a brass plate so adjusted that each tap or contact of the stylus on the brass plate is electrically registered on a counter. The number of taps made over a definite period of time is a rough index of the neuro-muscular coördination of the arm muscles. In the present investigation, observations were made upon the authors and occasionally on other subjects. The subject was required to tap continuously for three minutes at a time, and the number of taps registered was noted at the end of each minute. Having noted the normal tapping number in any one experiment,

the subject was given an antipyretic by mouth and the test was repeated, generally about an hour later, but in some cases several readings were repeatedly taken at definite intervals. The effect of the following drugs was studied: Phenacetin, antipyrin, acetanilid, quinine sulphate, pyramidon, aspirin and salol. In addition to the study of individual drugs, the following combinations were also administered: Acetanilid plus phenacetin, 5 grains each; phenacetin plus salol,  $2\frac{1}{2}$  grains each and 5 grains each; aspirin and salol, 5 grains each; acetanilid and salol,  $2\frac{1}{2}$  grains each and 5 grains each; and antipyrin and aspirin, 5 grains each. The results of the experiments were not very striking. Briefly, however, the effects of the drugs may be summarized as follows: Phenacetin, acetanilid, antipyrine and quinine in the ordinary doses (not exceeding 5 grains) showed a definite tendency to improve the tapping rate. Larger doses of these drugs (8 or more grains) tended to impair the efficiency of the test. The improvement after phenacetin and antipyrin was greater than that after acetanilid and quinine. After pyramidon, salol and aspirin, no definite change could be noted as the different subjects showed different results. Combinations of the various drugs studied all showed a tendency to improve the tapping rate. This was especially marked after the combinations of acetanilid and salol and phenacetin and salol.