sure is greater, and in some cases there is actual raising of blood pressure.

Since there is no reason to suppose that the vaso-constrictor center is the variable factor in the difference of vaso-constrictor effect which was obtained, it is reasonable to assume that the results are to be explained by the variation of the normal degree of vaso-constriction present in the periphery at the inception of the experiment. If the vessels were dilated, then reflex constriction could occur to a great extent and aid in the retention of normal blood pressure. If, on the other hand, the peripheral vessels were well constricted, further constriction from trauma would be impossible and the compensatory effect being absent, the blood pressure would fall.

In other words, the effect of intestinal trauma upon blood pressure is determined by the relative degree of constriction or dilatation which exists in the periphery at the inception of the procedure.

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Reflex cardio-inhibition in conditions of lowered blood pressure and " shock."

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The experiments reported here represent a continuation and amplification of those presented previously by Ewing and the present author.[1]

In the first series, the accelerator fibers were cut in the dog in order to remove accelerator effects as possible causes for the rise in threshold value of the cardio-inhibitory reflex, observed in conditions of low pressure (hemorrhage, etc.) where the rate of the heart is increased. This factor can be excluded as the same results were obtained as previously published.[1] The second series consisted in an attempt to alter the blood supply of the medulla

[1] Ewing and Jackson, *Amer. Jour. Physiol.*, 1914.

without lowering the general pressure. This was accomplished by ligation of the two carotid and two vertebrals. It is appreciated that even this procedure is incapable of absolutely prohibiting blood from passing to the medulla in dogs on account of the great collateral supply and anastomosis. However, the decrease in blood supply by this method yielded similar results to those obtained in hemorrhage and a reëstablishment of the circulation resulted in a return of the threshold to the normal if the duration of the anemia was not too prolonged. This was comparable to the effect of transfusion following hemorrhage. The third series represents an amplification of the previous work on the effect of trauma upon the cardio-inhibitory reflex. In the early experiments there appeared to exist a parallelism between the blood pressure following trauma and the threshold value for the reflex in the sense that low pressure brought about a high threshold and high pressure, a low threshold. A further study has brought about the conviction that this relationship may exist but that other factors, at present insufficiently studied, alter the results obtained. Following intestinal trauma blood pressure may be high or low according to the initial degree of vaso-constriction;[1] the threshold may be heightened or lowered when the blood pressure is either high or low. One might explain this apparent discrepancy in the findings by the assumption of a factor of inhibition acting independent of the blood pressure and altering the threshold reflexly It is possible, however, that determinations of carotid pressure may not represent accurately the pressure and volume flow of blood in the medullary capillaries. Thus vaso-constriction of the arterioles in the medulla would result in an anemia of that part although the pressure in the carotid might still be normal. It is our intention to examine more closely this phase of the matter.

[1] Muns, PROCEEDINGS SOC. EXP. BIOL. MED., 1915, XII, 87.