

Selected Article.

THE ACTION AND DOSAGE OF PHENOLPHTHALEIN.

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Phenolphthalein has been known as a purgative for about eight years,¹ but so little has been written concerning its physiological action and definite dose that it has not received the attention from the medical profession that it deserves.

In reviewing the literature the following problems present themselves: (1) What is the physiological action? (2) Has it toxic properties or is it broken down in the course of its passage through the body into substances which are toxic? (3) What limits, if any, must we place on the dose prescribed, and how is it best administered?

Valmosy² and Tunnicleffe³ believe that phenolphthalein remains unchanged in the acid media of the stomach, but on reaching the intestine forms a sodium salt in the presence of the bile. This salt is said to increase the osmotic pressure in the intestine and thus to act as a hydragogue cathartic.

It is a well-known fact that phenolphthalein is much less active in dogs than in man, and Valmosy² explains this by saying that less of the sodium salt is formed in dogs.

With these statements in view, I performed the following experiments on dogs: Three dogs were selected, weighing 35, 25, and 7 pounds, respectively. The stools were carefully watched for ten days, the average number and consistency being noted. On the eleventh day phenolphthalein in aqueous suspension was administered by means of a stomach tube in doses of one grain per pound of body weight; i.e., the 35-pound dog received 35 grains; the 25-pound dog received 25 grains, and the 7-pound dog received 7 grains. During the forty-eight hours following no change was noted either in the number or consistency of the stools, although phenolphthalein could be detected in the stools of all three dogs by the end of thirty-six hours.

On the fourteenth day 70, 50, and 14 grains, respectively, were administered in the manner described above, with the same