

once in twenty-four hours, and probably before each meal, as in the case of the stomach. If there is a delay in the propulsion of the intestinal contents from the ileum into the cæcum, ileo-stasis is said to exist. This can only be determined with certainty in one way, namely, by examination with the X-rays. If a residue of barium remains in the small intestine more than seven hours after the meal is ingested, the motility of the intestine is below normal, and the longer the time it requires for the meal to pass into the cecum, the greater the degree of hypo-motility.

I should like in this connection to say a few words about the relations of motor function of the stomach and ileum. In the study of the motility of the ileum we should always keep in mind the fact that the neuro-muscular structures of the stomach and ileum are very much alike. In both, the vagus is the motor nerve and the sympathetic the inhibitory. In both, Auerbach's plexus is present. Both viscera exhibit rhythmical movements after being separated from their extrinsic nerve supply; but whether these movements are of myogenic or neurogenic origin has not been definitely determined. The presence of Auerbach's plexus in the walls of the stomach and intestine suggests a neurogenic origin, but we should not give too much weight to this argument, for a local plexus of nervous tissue is always to be found in the innervation of smooth muscular fibres. The very recent observations of Arthur Keith that nodal tissue, similar to that of the bundle of His in the heart, is to be found in the alimentary canal, is strong evidence in favor of the myogenic theory. One might mention other physiological, experimental and clinical facts illustrating the close relationship of the stomach and small gut; for instance, both viscera are similarly affected by drugs which influence the motility, such as eserine, pilocarpine and adrenalin. Again, both viscera seem to be influenced alike by depressive nervous factors. Cannon was probably the first to call special attention to this characteristic. In his experiments he found that in animals sick with distemper and other affections characterized by general asthenia, food would frequently lie in the stomach and intestine all day without the slightest sign of peristaltic wave. He also observed that when the stomach and intestines were disconnected from the central nervous system, an animal, though extremely asthenic from disease, would frequently exhibit normal activity of these viscera. This latter observation indicates that the loss of motility in the stomach and intestines in the asthenia of infectious diseases is due principally to inhibitory influence originating in the central nervous system. It also suggests, in determining the cause of ileo-stasis in any case,