

are effected in part at the expense of cerebral nervous agency, which flows in the direction of the temporarily excited organ, and consequently leaves a diminished amount for the purposes of thought and bodily activity. This stage of digestion completed, the next calls into vigorous play other organs, as the liver—the pancreas and the smaller bowels. These are now the centre of vital operations, but a much less demand is made on the nervous system than in the first stage. The pulse, which was previously accelerated and increased in strength, becomes slower and softer—the breathing is easier and more natural—the mind becomes lively and more equal to exertion—the skin is not unfrequently suffused with moisture—the kidneys begin to act and urine is freely secreted. These phenomena are evidence that the nervous system, refreshed and invigorated, returns to its ordinary unexcited conditions, and ministers now to the production of other effects. The second stage of digestion consists in two operations: the *conversion* of the chyme or pulp received from the stomach into chyle, and its *absorption* by the lacteals, or vessels numerous distributed over the entire surface of the smaller intestines. Both these operations merit particular attention. When digestion is imperfectly performed, either from constitutional weakness or temporary derangement, both the conversion and absorption of the food are tedious, and for their accomplishment require the uninterrupted repose of the bowels—freedom from all disturbance arising from the action of aperient remedies. The importance of these remarks will be apparent in the further investigation of the subject.

When the second stage of digestion is completed—when the food is thoroughly elaborated and absorbed, the residue of the vital operations, conjoined with the secretions of the several organs forming the digestive apparatus, compose that refuse which has to be expelled from the bowels. We have now to consider the mode in which it is effected, which we have stated depends on *nervous* influence. This matter, which is useless to the sys-

tem, and would be detrimental if retained beyond a certain period, (but by this is not to be understood, except where the habit is acquired or is favored by gross indulgences and robust health, *daily* evacuations.) irritates, as a foreign substance, the sensitive surface of the alimentary canal, and by exciting the contractions of its muscular fibres, facilitates the gradual passage and ultimate expulsion of its contents. It is nervous power which originates the first contractile motion—it is nervous power stimulating these fibres, and unceasingly operating until nature has effected the desired object. It is important to establish this point. The subject has not hitherto been viewed in this light, and hence the nervous relations of the bowels to the rest of the nervous system, in their practical applications, have not been clearly apprehended by any writer. To form a just conception of them, the nerves of the alimentary canal must be regarded as an uninterrupted nervous chain, extending through circuitous paths, but unbroken channels, to the brain and spinal cord, the great centres of nervous energy. The nerves in question are the great media through which these centres transmit their vivifying power; and it must be recollected that the forced action of them, which is produced by the operation of drastic purgatives, is accompanied with the expenditure of a portion of the animating principle not existing in these nerves at the time, that is if the constitution be delicate or suffering from chronic or protracted derangement of the digestive organs, and consequently nervous power, proportionate to this expenditure or loss, *has to be drawn from other sources*, which under such circumstances are not in a condition to meet the demand without injury to themselves. Among these sources are to be enumerated the nerves, ganglia, and plexusses belonging to the heart—the stomach—the liver—the pancreas—the kidneys, and the urinary bladder. A portion of the nervous supply necessary to respond to the urgent requirements of the bowels, arising from their *forced* and active operation, is in the first instance derived from