

together. When the call to retire is responded to, and the fecal matter passed from the sigmoid flexure into the rectum has been voided, the remaining contents of the large intestine are slowly urged forward from the cæcum through the colon to the sigmoid flexure to be extruded in their turn. Consequently when the call to defecate is properly responded to, and that physiological act thoroughly accomplished, the excrementitious matter in the sigmoid flexure and cæcum is voided; that part contained in the former cavity being the first to pass away, and that lodged in the latter slowly traversing the ascending, transverse and descending colon and making its exit through the rectum without stopping for any length of time at any point between the cæcum and the anus. The fecal matter lodged in the large intestine prior to the call for defecation seems to be divided into two masses, and to rest in two distinct cavities—one portion being lodged in the cæcum and the other in the sigmoid flexure—and while it is certain that normally none of the feces distend the canal of the rectum except at the time, and under the circumstances noted, it is also quite probable that the ascending transverse and descending colon are equally free from its presence.

It would not be uninteresting to review the minute anatomy of the parts about the junction of the rectum and sigmoid flexure, and to trace the course of the vessels, both arterial and venous, in their course along the walls of the rectum and at the anal aperture. The distribution of a few of the external longitudinal fibres which enter into the structure of the muscular walls of the rectum must not be passed over, for they are active in the production of certain movements of the parts not less important in their pathological than their physiological relations. This muscular coat is composed of circular and longitudinal fibres; the former internal, the latter external. Aggregations of these circular fibres constitute the sphincter which guards the passage-way between the sigmoid flexure and the rectum; an accumulation of similar fibres at the anal outlet forms the internal sphincter. This internal sphincter is merely the thickened lower border of the inner layer of the muscular wall of the rectum—externally,

it is in apposition with the layer of longitudinal muscular fibres; internally, it is separated from the mucous lining of the intestine by a quantity of loose areolar tissue. This loose areolar tissue separates the mucous membrane of the rectum from the internal layer of circular fibres over the lower fourth of that organ, and permits the passage of a few of the external longitudinal fibres of the muscular wall of the rectum to which allusion has already been made. These longitudinal fibres pass down the external aspect of the rectum to the lower border of that organ, where they curve under the thickened ring of circular fibres constituting the internal sphincter and ascend on its inner surface to be attached to the fibrous substratum of the sub-mucous areolar tissue. A moment's reflection will render apparent the office performed by these fibres. In a word, these structures explain the phenomena of eversion of the mucous membrane of the anus which occurs during defecation. The first effect of contraction on the part of the longitudinal fibres which curve under the sphincter is to draw down, and then evert and protrude, the mucous lining of the lower end of the alimentary canal. When the fecal matter is discharged the protruded parts are promptly retracted by the natural contractility of adjacent structures, especially the levator muscles. Consequently, the mucous membrane of the lower part of the rectum during defecation moves freely over subjacent tissues; the part investing the internal and external sphincters is especially prone to change position during the functional activity of the organ; and ocular inspection demonstrates the fact that these movements may be from side to side during dilatation of the sphincter as well as in the line of the long axis of the intestine when the mucous membrane is first everted and then retracted with the commencement and conclusion of the physiological process of defecation.

These few facts premised, let us revert to the consequences of habitual neglect to empty the rectum at the proper time daily. One of the first results is that the rectum does not empty itself as completely as at first, and the lower part of its canal becomes a reservoir for fecal accumulations. In such cases, instead of