

During digestion the exit of the food from the stomach into the intestine is prevented by the pylorus being closed by the action of its sphincter muscle. It is clear that the food is required to remain for some time in the stomach in order to be perfectly digested, and this closing of the pylorus appears to be one means employed for attaining this end; and another is derived from the property which the gastric juice possesses of coagulating, or rendering solid, every animal or vegetable fluid susceptible of undergoing that change. This is the case with fluid albumen; the white of an egg, for instance, which is nearly pure albumen, is very speedily coagulated when taken into the stomach; the same change occurs in milk, which is immediately curdled by the juices that are there secreted, and these effects take place quite independently of any acid that may be present. The object of this change from fluid to solid appears to be to detain the food for some time in the stomach, and thus to allow of its being thoroughly acted upon by the digestive powers of that organ. Those fluids which pass quickly through the stomach, and thereby escape its chemical action, however much they may be in themselves nutritious, are very imperfectly digested, and consequently afford very little nourishment. This is the case with oils, with jelly, and with all food that is much diluted.* Hunter ascertained

* A diet consisting of too large a proportion of liquids, although it may contain much nutritive matter, yet if it be incapable of being coagulated by the stomach, will not be sufficiently acted upon by that organ to be properly digested, and will not only afford comparatively little nourishment, but be very liable to produce disorder of the alimentary canal. Thus, soups will not prove so nutritive when taken alone, as when they are united with a certain proportion of solid food, capable of being detained in the stomach, during a time sufficiently long to allow of the whole undergoing the process of digestion. I was led to this conclusion, not only from theory, but from actual observation of what took place among the prisoners in the Milbank Penitentiary, in 1823, when, on the occasion of the extensive prevalence of scorbutic dysentery in that prison, Dr. P. M. Latham and myself were appointed to attend the sick, and inquire into the origin of the disease. Among the causes which concurred to produce this formidable malady, one of the most prominent appeared to be an impoverished diet, consisting of a