

tion was not only more complete, but was finished in a much shorter time than in the case of the dog to which peptone solution alone was administered.

That the emulsion quickens absorption is again manifest in the following experiment: In a dog the bowel was ligatured near the stomach, the upper end of the stomach was closed, and a dose of petroleum emulsion with egg peptone introduced through a gastric fistula. The animal lived for two hours; when opened after death the stomach was found empty. Allowing for paralytic effects which follow surgical injuries, there is no doubt that these mixtures are more quickly diffusible, and would be evidently more so under less artificial conditions.

Bearing in mind what has been recorded about mobility and miscibility of the particles of mixture of peptone and petroleum emulsion, the two following experiments show the effect of petroleum in promoting absorption from the intestines:

A large dog, fed carefully, was selected for the following experiment: The vena portæ was exposed, a canula introduced, and the flow noted and controlled, feeding being effected by peptone introduced through a fistula in the stomach. Next, a mixture of about fifty per cent. of peptone and petroleum emulsion was introduced through the fistula, which was then closed. Peristalsis was increased after introduction of peptone plus emulsion; the after-flow, when absorption commenced, was noted to be greater per minute, thus indicating increased absorption in the latter case in equal times. In regard to the effect of petroleum emulsion on peristalsis, a ligature was placed around the bowel of a rabbit and peristalsis noted to remain about the same above and below it. Peptone introduced through a fistula above the ligature caused little alteration. Peptone plus emulsion, after a short time, caused a decided increase down to the ligature, while the bowel below the ligature remained as before. It was particularly noted also that peristalsis was brisk, and persisted for quite a long time in those animals which had been fed on the emulsion. In those which had not had the emulsion, peristalsis almost ceased with death. Here, then, we have three things proved, viz., the effect of the petroleum is to increase mobility and miscibility of digested material by virtue of its lubricating action and capillary affinity, while increased peristalsis helps, by presenting these prepared materials constantly to the wall of the bowel for absorption, as well as aiding, by muscular movements, in sending the absorbed material up the veins.

Thus on purely experimental grounds, on evidence of the physical senses, is the action of petroleum explained: It facilitates and hastens the digestion of food stuffs, prepares them for absorption and absolutely compels absorption of the finished