

its purifying circuit through the lungs. It next passes into the arterial blood, and, filtered through the capillaries, carries nourishment to every part of the system. But here we note a peculiarity in regard to alcohol: it utterly refuses to go through this digestive process. It must be into the blood at once. The moment alcohol enters the stomach it is hurried into the venous circulation, there to do its work, whatever it may be, with almost instantaneous rapidity.

A second preliminary remark is this:—poisons operate in different ways. Acids, and other caustics, destroy all structure; others, like alcohol and ammonia, irritate and inflame, others again impress mainly the nerves. Then, again, different poisons assail different parts of the system. Tobacco and digitalis affect the heart; iodine, the glands; strychnia, the spinal cord; alcohol, opium and all narcotics, the brain. Some poisons kill directly; some by inducing secondary diseases. Some, again, produce definite effects, dose by dose; others only after continued and frequent repetition. Lastly, the effects produced by alcohol depend largely on two circumstances: the strength of the dose, and the susceptibility of the person to whom it is administered. We are now ready for the question—"What are the effects of alcohol on the human constitution?" and we will consider

(1.) *Its effects on the physical constitution.*—In a state of health the effect is never good. Alcohol interferes with the process of digestion. It inflames the delicate membranes of the stomach, and neutralizes the solvent power of the fluids. At first the organs of digestion are stimulated to increased effort, and the "appetite" seems to be improved; but after a time this gentle excitement gives place to inflammation and congestion; the whole process of digestion is retarded, and the thousand-and-one ills of dyspepsia supervene.

Alcohol impairs the quality of the blood by introducing a poisonous element. The blood becomes more "venous" and less "arterial" in its character, and thus less capable of distributing nourishment to the various parts of the system. Alcohol does this by taking to itself the oxygen of the lungs, and leaving an insufficient supply for oxidating the "waste" tissue. This waste, so retained, clogs the system, and induces various forms of disease.