

to expect that even when given in relatively small and harmless doses they might be capable of exerting some restricting influence on the multiplication of bacteria in the mucous membrane and contents of the bowel, whether specific or otherwise. That such is actually effected in respect to the various putrefactive organisms which, as a matter of fact, are generally more resistant than the pathogenic species to the action of antiseptic agents, is obvious from the marked diminution in the fetor of the stools which is usually soon apparent as the result of their administration. Further, recognizing, as we do, the extent to which the vital activities of micro-organisms are influenced by very slight changes in their environment, it is surely not too much to assume that, as the result of the presence of even very minute quantities of an antiseptic, typhoid bacilli present in the intestinal mucosa and at a somewhat later stage in the blood and tissues may be so influenced as to be rendered in some degree less capable of elaborating their particular toxin than would be the case were the fluids in which they were living free from any trace of such substance. That the virulence of a micro-organism could be artificially reduced by adding a small quantity of an antiseptic to the culture medium was clearly established by Pasteur, who for a time was in the habit of utilizing this method exclusively for attenuating cultures of the bacillus anthracis in the preparation of his anthrax vaccine. That the blood may actually become impregnated with the antiseptic is proved by its appearance in the urine, as in the case of carbolic acid, urotropin, and others, and the fact that certain volatile oils, such as cinnamon and eucalyptus, which are known to possess antiseptic properties, may be readily detected in the breath and in the exhalations from the skin as a result of their continued internal administration is additional evidence to the same effect.

That the antiseptic method, though frequently misunderstood, is founded on a scientific basis is undeniable. This was vigorously maintained by Dr. I. Burney Yeo, who has done so much to popularize its employment. We do not give antiseptics in the belief that they are competent either to slay the germ of typhoid fever or to neutralize its toxin, but in the confident anticipation that they will exert a restraining influence on the propagation of the specific bacillus and its congeners and on the various putrefactive organisms which are associated with it in the alimentary canal. Moreover, even if antiseptic remedies are incompetent to exercise any inhibitory influence on the multiplication of bacilli which have already passed into the circulation and have been conveyed to distant organs, we are prepared to believe that