

so on. Let one of these fail and the others are overworked; the overwork means damage to the overworked organs, and presently failure in their ability to excrete—and the body fluids carry a slightly increased percentage of toxicity. In addition, most of the bodies to which we refer are overfed. This means yet more toxicity. This toxicity—we have no idea of the chemical composition of the toxin—means that every heart muscle cell, every muscular or elastic fibre in every artery is not only less well nourished, but is, to a slight degree it is true, also poisoned. Then degeneration in heart muscle or in arterial and capillary wall means lowered power to do the required work: if nervous stimuli are still able to get out of damaged tissue the same work as before, it is constantly at a higher price—and the diminished excretion cumulates. Since we are referring to every capillary in the body, the damage is gradual, because universal; but at last it shows itself in some locality—with one a “sluggish” liver; with another a broken Charcot’s artery; if it were not for these “weakest links” the chain might remain unbroken for a long time.

Imperfect excretion then means toxicity—auto-intoxication is our usual word. We are familiar with the dire effects of certain quickly-produced toxins, although we cannot analyze them at all: for example, the toxin of eclampsia, of acute yellow atrophy of the liver, of superficial burns, of uraemia, of acidosis in diabetes and acidosis apart from diabetes, these are intoxications as evident as the intoxications of ptomaines or of the well-known bacterial injections. In each of these “home-made” intoxications there is manufactured in the body a large dose of a substance of unknown nature and composition, which poisons organs as definitely as does a chemical poison. The poison of uraemia is probably totally different chemically from that of diabetic coma, and both totally different from that which ordinarily causes slow degeneration of arteries, but the resemblance is there, and the difference one of degree and speed. The body fluids outside the vessels are laden with this mild toxin, the vessels are carrying it; where it is strong enough to contract arteriole-walls these contract, and as a result blood-