

and here a supplementary action is performed, which, if complete in checking the flow of sugar onwards, protects the contents of the general circulation, and hence the urine, from being influenced in relation to sugar by the food ingested. If the supplementary action is incomplete, the blood and urine become influenced, and in proportion to the incompleteness so is the extent of glycosuria. The entry of sugar into the general circulation constitutes the unnatural and not the natural occurrence. In order that we may be kept free from glycosuria, sugar must be kept out of and not thrown into the general circulation.

Whatever may be the means by which it is effected, it may be regarded as certain that to keep the sugar proceeding from the food out of the urine it must be kept out of the general circulation. The power by which this is accomplished falls within what we understand to be meant by the term "assimilative power," and it is through this power being at fault that in diabetes sugar gets into the urine from the food. In proportion as the power in question is diminished so is there a diminution in the amount of carbohydrate that can be taken without influencing the urine.

The position of things may be exemplified by a vertical column, representative of the power under consideration, with the maximum degree of power, or that belonging to health, standing at the top and successive stages of decrease, corresponding with what may be found to exist in different cases of diabetes, following on below until we arrive at the bottom where the power is *nil*. The maximum power is such as to be sufficient for providing for the disposal of the carbohydrate that is taken within ordinary limits; and thus it happens that under these circumstances no influence is exerted upon the urine. If carbohydrate, however, should be taken to an undue extent, and especially if introduced into the stomach in a soluble form and at a period of fasting, the tax upon the assimilative power surpasses the capacity to meet it, and as a result, notwithstanding we are in the presence of a healthy system, a portion escapes being disposed of, and is permitted to reach the general circulation as sugar, and in this state to find its way into the urine. This may be looked upon as the explanation of the saccharine urine, which it is known can be induced in both man and the lower animals by excessive ingestion of carbohydrate.

With rather less assimilative power existing than is normal, a given amount of carbohydrate that can be taken by a healthy person without producing any noticeable effect gives rise to glycosuria. Cases of this nature are not infrequently met with in practice, and prove perplexing to the medical man and to the patient. By one practitioner the patient is told that there is sugar in his urine, and for a while he may be inspired with gloomy forebodings. He possibly later on seeks the opinion of another practitioner, who pronounces his urine to be perfectly right, and by this he is consoled till it arrives that he is afterwards told again that there is sugar in it. This apparently puzzling state is entirely due to the amount of carbohydrate that may happen to have been ingested just previous to the urine being examined. When in excess of a certain limit, sugar is voided; when, on the other hand, below it, no sugar is found, the assimilative work to be performed being within the capacity existing for performing it. Like to what has been said with