

that direction. But I think it is used medicinally principally for coughs and colds and affections of the throat although possibly to some extent as a laxative. In former times it was employed medicinally to a much greater extent than it is now.

Honey has not only been used as a food but also for the manufacture of a beverage. In ancient times this beverage, mead, which is really a fermented liquor containing a considerable amount of alcohol, was used all over the northern parts of Europe. Now, I fancy the areas are very restricted in which that beverage is used or manufactured. It was known to the Greeks and Romans and took the place of the beer of to-day.

Mr. Clarke : About what per cent of alcohol is there in mead ?

Prof. Shutt : I should suppose about 7 or 8 per cent, but I haven't any data on that point. It is an interesting fact that in honey we are dealing with a substance which has been an article of food from prehistoric times ; for ages and ages before Christ it was the only form of sugar known to the world. Certainly for many centuries there was no other source of sugar known besides that in honey. It appears that sugar from sugar cane was known about 500 B. C. ; it was known to the Chinese and to the Indians at that date, but it didn't become an article of commerce for many centuries later. In fact I don't think that cane sugar was largely used for a thousand years after that date. So that honey retained its position as the most used saccharine matter both for sweetening materials and for other purposes in which sugar is used, for very many many centuries.

Mr. Clarke : Is there any truth in the idea that common sugar has led to the large increase of kidney dis-

eases in later times ?

Prof. Shutt : I don't think so. There are so many different kinds of kidney disease. Anyone afflicted with diabetes should of course refrain from all forms of sugar or materials which are easily converted into sugar ; but I am not at all sure that it has been the indulgence in sugar that has created that disease. It is rather due to an abnormal condition of the system in which the function of the kidneys is perverted.

I do not know whether the consumption of honey in this country is increasing or not, but I should suppose it were not. It does not seem to me that the general public prize and appreciate honey according to its merits. Many consider it only as a delicacy or luxury but it is really a food of much value and I think honey only needs judicious advertising to be found more generally on the table of our people.

Mr. Holterman : In connection with food if lean meat is largely carbon then the man who in summer tells you you should discard lean meat, must be entirely incorrect ?

Prof. Shutt : Yes, I should say so.

Mr. Holterman : Lean meat is never heat producing ?

Prof. Shutt : Yes, it may be used too by the system for that purpose. However if you ate nothing but lean meat you are consuming a great deal more nitrogen than is absolutely necessary for the repairing of the tissues, and giving the kidneys an extra amount of work to eliminate that nitrogen from the system. If all the food were in the form of albumenoids you would be taking in more nitrogen than is absolutely necessary and that nitrogen has to be got rid of. Now the special function of the kidneys is to excrete that nitrogen. We must have a balanced