

## **Honey revisited: the role of honey in pre-industrial diets**

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Many lay people believe honey has health-giving, magical properties 'it is pure, golden and natural'. On the other hand, refined sugar is 'bad for us'. Nutritionists tell us that the problem with refined sugar is that of dental caries and empty calories, that it tends to displace other more nutritious foods from the diet. But is this true? What of the time before sugar was known to us, when our only sweetener was honey? Nutritionally honey is little different from sugar, being a concentrated solution of fructose and glucose, with insignificant traces of vitamins and minerals. Was honey scarce, so that sweetness was, by necessity, an infrequent luxury? Or was honey available in abundance? Were we then, as now, able to placate our cravings for sweetness so regularly that a significant proportion of our energy intake came from the empty calories of concentrated sugars? We conducted an extensive search of ancient and modern literature in order to estimate honey intake at various stages during human history (1). A reappraisal of the evidence suggests that ordinary people ate much larger quantities of honey than has previously been acknowledged.

A 10 000 years old cave painting at Bicorp, Spain is the earliest firm evidence we have of honey hunting by humans. Large numbers of similar artworks indicate that honey was highly valued by early humans, but cannot tell us anything of the amounts eaten. We do know, however, that bees can make their home in any old log or broken pot and one did not need wealth or special skills to own a hive. The ancient Egyptians developed apiculture (the art of bee keeping) and used honey freely in their spiced breads, cakes and pastries, and for priming beer and wine. In a late Roman cookery book, credited to Apicius, half of the 468-odd recipes call for honey as an ingredient. Wines drunk at the beginning and end of meals were sweetened with honey; and meat, fruit and vegetables were sometimes preserved by immersion in it. In ancient Greece, the bodies of people who had died some distance from home were sometimes preserved in honey. These details give an impression of plenty.

In Ireland around AD 440, honey was stored in three types of jar. When full, the smallest could be lifted over the head, the middle one up to the chest and the largest to waist height only. In England around AD 1350, honey cost around 7 pence per gallon (equivalent to 1.3 pence per kg). This was much less than one would expect if it was a scarce and highly prized food item. Furthermore, an item used only in small amounts would not have been sold by the gallon. Accounts of the period 1485-1700 show honey was sold generally by the gallon, furkin (eight gallons), or even, sometimes, by the barrel (about 32 gallons), units unlikely to be used for a scarce commodity in only occasional use. During medieval times, poor people kept hives and rich people employed a bee keeper so great was the number of hives. Mead was a widely enjoyed alcoholic drink made by fermenting the final washings of honey from the comb in a solution with water. In fact mead was present in such abundance that it was occasionally used in place of water to extinguish fires.

We will never know how much honey the ordinary person living in the pre-industrial times consumed. What we can conclude, however, is that far more honey was eaten than historians have previously assumed. If we consider the low cost of production of honey, and the strong human predilection for sweetness, we might conclude that it may well have rivalled our current consumption of refined sugar. There are implications therefore for the role of sugar in modern diets. Refined sugar may not have displaced more nutrient rich items from our present day diets but only the nutritionally comparable food, honey.

1. Allsop K, Brand Miller JC. Honey revisited: a reappraisal of honey in pre-industrial diets. *Br J Nutr* 1996;75:513-20.