Sweet Facts About Honey

How boney is made

Bees make honey from the flower nectar they collect. Nectar plays an important role as a reward for pollinators, including honeybees, but nectar is expensive for the plant to make. Consequently, most bee flowers have nectars that only contain 20 to 25% sugar concentration, the equivalent of a frozen yogurt or a light ice cream, which is much less sweet than the honey we have come to enjoy.

The transformation from nectar to honey is a process that takes place mostly inside the hive. Bees collect the light nectar from flowers and carry it to the colony in a special honey sac inside their bodies. This honey sac is not connected to their stomachs, but is a special organ in which nectar begins its transformation into honey. It is in the honey sac that the bee adds special enzymes to the nectar.

Once in the hive, the forager bee will pass on its nectar to a house bee which will then continue to transform the nectar into honey. The bee will extrude a little droplet of nectar and let it air dry. The warmth of the nest and the fanning of the bee's wings help the nectar dry out. As water is lost the relative sugar concentration increases and the nectar becomes sweeter. This sweeter nectar is now called "unripe honey." It has a high water content and the bees store it in open wax cells to dry over time until it becomes "ripe honey." Once the bees consider the honey to be ripe, they seal the cells with a wax cover. "Ripe honey" contains about 80% sugar, which is the equivalent sugar concentration of dry fruits.



Beekeepers harvest excess honey stored by bees. Only capped honey is taken to ensure the highest sugar concentration and the lowest water content. If unripe honey is harvested it will begin to ferment over time. The low water content of honey is what determines its ability to remain fresh and not spoil.



Medicinal and nutritional benefits of boney

The healing aspects of honey have been recorded since ancient times. The first reference to honey as a drug and an ointment comes from a Sumerian tablet written around 2000 years BC. Honey has long been used for treating wounds and has only recently been rediscovered by Western medicine.

Antibacterial properties of honey

A series of natural factors contribute to the antibacterial properties of honey:

1 - Honey contains hydrogen peroxide which is formed by combining enzymes added by the bees and the sugars found in nectar. Hydrogen peroxide is a commonly used commercial antiseptic. This compound can be found naturally in the human body and may signal the immune system to converge on a site and initiate healing.

2 - The acidity of honey (somewhere between 3.52 to 4.5 on the pH scale) is similar to that of tomato juice or black coffee and tends to inhibit the growth of disease-causing bacteria.

3 - The high sugar content of honey tends to draw water away from the microorganisms infecting a wound, thus reducing their chance to grow and multiply.



The antibacterial properties of honey vary depending on the floral resources from which it was made, consequently, doctors tend to use what is called "medical grade honey." Manuka and Tualang honey have been researched and praised for their high levels of antibacterial potency. Many types of honey have strong medicinal potential, especially when treating cases of antibiotic-resistant bacteria, and as a healing agent in burn cases. In addition, oral consumption of honey also appears to have a positive effect in treating diarrhea caused by bacterial infection.

Other health related benefits of honey

Antioxidant capacity of honey: Honey contains variable amounts of chemical compounds including flavonoids, phenolic acids, and enzymes, all of which reduce the oxidative processes in foods and provide health benefits.

Antimutagenic, antitumor, and skin healing properties of honey: The healing properties of honey are being studied in small mammals and in-vitro experiments, and the results are encouraging. Honeys from several floral sources including acacia, Christmas berry, and buckwheat, to name a few, showed evidence of anti-mutagenic action and anti-tumor effects in tissues under laboratory conditions.

Nutritional value of boney

The carbohydrates which constitute the bulk of honey make an excellent energy source. The sugars in honey tend to have a low to medium Glycemic Index; the body processes these sugars quickly and they tend not to increase blood sugar levels as much when compared to equivalent doses of processed sugars.

A word of caution: infants under one year of age should not be fed honey. The digestive system of very young children is not well equipped to deal with the spores of the bacteria that cause botulism. These spores can be found in soil, dust, some home-canned foods, and occasionally in honey. Consequently, in order to reduce the risk of exposure it is recommended to wait until a child is over 1 year of age before introducing honey into their diet. Research, however, indicates that there is no risk of transmitting botulism via breast milk, even if the mother consumes honey.





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