

A REVIEW OF IMPORTANT FACTS DESCRIBE IN AYURVEDA WHILE CONSUMPTION OF HONEY FOR HEALTH BENEFITS

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ABSTRACT

Honey is an organic natural substance that is produced from the nectar of flowers by *Apis mellifera* and is a sweet, flavorful liquid. It contains sugars, small quantities of proteins, enzymes, amino acids, minerals, trace elements, vitamins, aroma compounds, and polyphenols. It is widely accepted as food and medicine by all generations, traditions and civilizations, in both ancient and modern science. Honey is heavily used by ancient countries such as Sri Lanka, India, Nepal and Pakistan in their traditional medicinal systems. It is used as a remedy for burns, cataracts, ulcers, diabetes, wound healing, etc. The medicinal properties of honey have been known since ancient times. There are many types of bees honey mentioned in Ayurveda. Their effects differ and 'Makshika' is considered medicinally the best. According to

modern scientific view, the best bees honey is made up by *Apis mellifera capensis*. In Ayurveda, *Madhu* (honey) is used for both internal and external applications. It shows mild laxative, bactericidal, sedative and antiseptic properties and is found to be useful in the treatment of bronchial asthma, tuberculosis, cough and cold, eye diseases, wounds, constipation, hiccups, skin disorders, worm infestation and urinary tract disorders etc. Old honey reduces fat and obesity and is highly scarificant. Honey is much used in the preparation of confection and electuaries and as an adjunct to decoctions, pills and powders. But problem of its adulteration is becoming a common issue in present scenario, so it is always necessary to use genuine honey for attaining desired benefits and reject the spurious and adulterated honey which is sold cheaper in the market. While using of *Madhu* precautions should be taken because of its some side effects given in Ayurveda science. The

aim of this study is to emphasize the review of *Madhu* (honey) and precautions to be taken while using honey as explained in Ayurveda & biomedical science.

INTRODUCTION

Honey is considered 'Amrita' or 'Healthy Nectar' in Ayurveda, its health benefits and unparalleled healing potential long used as both food for medicine from thousands of years. However it has the power of heal; it can harm as well depending how it is used. Therefore knowing the best methods to use it and when to avoid it are essential.

Honey is a by-product of flower nectar and the upper aero-digestive tract of the honey bee, which is concentrated through a dehydration process inside the bee hive. Honey is the name given to the sweet, yellowish liquid that is produced by honey bees. Bees honey is one of the most valued and appreciated natural substances known to mankind since ancient times. Honey has a very complex chemical composition that varies depending on the botanical source. It has been used both as food and medicine since ancient times. Human use of honey is traced to some 8000 years ago as depicted by Stone Age paintings. In addition to important role of natural honey in the traditional medicine, during the past few decades, it was subjected to laboratories and clinical investigations by several research groups and it has found a place in modern medicine. Honey has been reported to have an inhibitory effect on around 60 species of bacteria, some species of fungi and viruses.

Honey is a natural product that has been widely used for its therapeutic effects. It has been reported to contain about 200 substances. Honey is composed of fructose and glucose but also contains fructo-oligosaccharides and many amino acids, vitamins, minerals and enzymes.^[1] The composition of honey varies depending on the plants on which the bee feeds. However, almost all natural honey contains flavonoids such as apigenin, pinocembrin, galangin etc. phenolic acids, ascorbic acid, tocopherols peptides etc. most of those compound works together to provide a synergistic antioxidant effect.^{[2][3][4][5][6]} Honey has had a valued place in traditional medicine for centuries, however, it has a limited use in modern medicine due to lack of scientific support. For a long time, it has been observed that honey can be used to overcome liver, cardiovascular and gastrointestinal problems.^[7] In an inflammatory model of colitis, honey was as effective as prednisolone treatment.^[8]

In Ayurveda, Honey was used for nutritional and therapeutic purposes since many continues both internally and externally. Honey is used as Anupana (is a food vehicle taken with of

after medicine or eating and which aids or assists the action of main ingredient) with principal drug in Ayurveda clinical practice. It is externally used for the treatment of eye diseases, cutting and burning wounds. Internally used with other herbal preparations specially for respiratory disorders such as cough, asthma and phlegm with or without fever, as a treatment for thirst, vomiting and hiccup, for diabetes, decoctions prescribed with adding bee honey, for obesity specially use old honey, for diarrhea, bee honey added to fresh herbal juice or decoction specially in traditional medicine. It is also used as natural preservative and sweetener in many Ayurveda or in traditional medicines such as Navratna kalka. In most ancient cultures honey has been used for both nutritional and medicinal purposes. Ayurvedic system of medicine is one of the most ancient traditional systems of medicine. Ayurveda described different aspects of honey including its different varieties, pharmacological properties, nutritional and therapeutic importance.

Considering honey is widely used in many preparations like food breakfast products, cosmetic products etc. keep in mind its medicinal and cosmetic properties. As per Ayurveda context, necessary precautions are advised while using Madhu (honey), which are extremely important to prevent any harmful side effects. This article has reviewed honey and some important precautions should be taken while using honey.

REVIEW OF LITERATURE

Nirukti (Etymology) of Madhu

Madhu is said to be derived from “*Manyat iti madhu*” meaning sweet, delicious and pleasant.^[9]

Synonyms of *madhu*: *Madhu, Mashika, Madhvika, kshaudra, Saragha, Makshikavanta, Varti, vanta, Bhrungavanta and Pushparasodbhava.*^[10]

Types and qualities of honey according to Ayurveda

According to Charak Samhita, honey is of four types namely *Makshika, Bhramara, Kshaudra* and *paittaka*. *Makshika*, the best type of honey is produced by reddish variety of honey bee. This type of honey is of the color of *Tila Taila* (sesame oil). *Bhramara* honey is produced by the *Bhramara* type of bee. It is Guru (heavy to digest) and is of white colour. *Kshaudra* honey is produced by a small type of honey bee and is brown in colour. *Paittaka* honey is produced by a large type of bee and is of the color of Ghee.^[11]

According to *Sushruta Samhita*, honey is of the eight types i.e. *Pauttika*, *Bhramara*, *Kshaudra*, *Makshika*, *Chatra*, *Arghya*, *Oudalaka* and *Dala madhu*.^[12]

According to *Bhavprakash*, honey is of the eight types i.e. *Makshika*, *Bhramara*, *Kshaudra*, *Pauttika*, *Chatra*, *Aarghya*, *Oudalaka* and *Dala madhu*.

Table 1: Types of madhu according to different Acharyas.^{[13][14]}

	Charak Samhita sutrasthan a 27/243	Sushruta Samhita sutrasthana 45/133	Ashtang Sangraha sutrasthan a 6/98	Ashtang Hridya	Madanpal Nighantu Ikshukadi varga 9/23	Kaidev Nighantu Aushadi varga 1/179	Bhavprakash Nighantu Madhu varga /6
Varieties	4	8	4	-	4	8	8
<i>Pauttika</i>	+	+	+	-	+	+	+
<i>Bhramara</i>	+	+	+	-	+	+	+
<i>Kshaudra</i>	+	+	+	-	+	+	+
<i>Makshika</i>	+	+	+	-	+	+	+
<i>Chattra</i>	-	+	-	-	-	+	+
<i>Aarghya</i>	-	+	-	-	-	+	+
<i>Auddalaka</i>	-	+	-	-	-	+	+
<i>Dala</i>	-	+	-	-	-	+	+

- *Makshika* honey is collected by large honey bees. It is *laghu* (lighter than *kshaudra*), *ruksha* (dry), it is useful in *kamla* (jaundice), *arsha* (piles), *kshata* (phitis), *kasa* (cough) diseases. It is the best and especially beneficial in diseases like Asthma.
- *Bhramara* honey is collected by large bees. This honey is *guru* (heavy-not easily digested) because of its *picchila* (smily) and *ati swadu* (excessively sweet) properties. It is *rakta pitta shamak*.
- *Kshaudra* honey is collected by medium sized honey bees. It is *sheeth* (cold), *laghu* (light easy to digest) and *lekhana* (anti-obesive). It is the best and especially beneficial in diseases like *prameha*(diabetes).
- *Pauttika* honey is collected by very large bees from the nectar of poisonous flowers. It is *ruksha* (dry), *ushna* (hot), it increases *vata*, *rakta* and *pitta*, and this is also *chedana* (liquefaction). It produces burning sensation in chest. It is also sedative and reduces fat. It is useful in diseases like diabetes and dysuria.
- *Chatra* honey is *Madhura* (sweet after digestion), *guru* (honey), *sheetha* (cold) and *picchila* (slimy). It cures bleeding disorders, leucoderma (*shwittra*), urethritic discharges and worm infestations.

- *Arghya* honey is beneficial for eyes, eliminates vitiated *kapha* and *pitta dosha*, *Kashaya* (astringent in taste), *katu vipaka* (pungent after digestion) *balya* (strengthening).
- *Oudalaka* honey is useful in skin diseases and helps in modulation of voice. It is *Kashaya* (astringent) and *amla rasa* (sour), *katu vipaka* (pungent after digestion) and aggravates *pitta*.
- *Dala* honey is *ruksha* (dry). It mitigates vomiting and diabetes mellitus.^[15]

Properties of *Madhu* according to different *Acharyas*^{[16][17][18][19][20][21][22]}

	Charak Samhita sutrasthan 27/245	Sushruta Samhita sutrasthan 45/132	Ashtang Sangraha sutrasthan 6/92,95	Ashtang Hridya sutrasthan 5/52	Madanpal Nighantu Ikshukadi Varga 9/25-27	Kaidev Nighantu Aushdahi varga 175-178	BhavPrakash Nighantu Madhu Varga 2-5
Rasa	Madhura Kashaya	Madhura	Madhura Kashaya	Madhura Kashaya	-	Madhura	Madhura
Anurasa	-	Kashaya	-	-	-	Kashaya	Kashaya
Guna	Guru Ruksha	Laghu Ruksha, Picchila	Guru Ruksha	Ruksha	Laghu Ruksha, Vishad	Laghu Ruksha, Vishad, Sukshma	Laghu Ruksha, Vishad, Sukshma
Virya	Sheeta	Sheeta	Sheeta	-	Sheeta	Sheeta	Sheeta
Vipaka	-	-	Katu	-	-	-	-
Dosghanta	Vata Karak Kapha pitta nashak	Tridosha nashak	Vata Karak Kapha pitta nashak	Vata Karak Kapha pitta nashak	Alpa vatlam, Kapha pitta nashak	Vata Karak Kapha pitta nashak	Alpa vatlam, Kapha pitta nashak

Properties of fresh and old Honey in Ayurveda

According to Sushruta, some actions of fresh and old honeys are very much opposite to each other. Fresh honey has *Bruhana guna* (nourishing the body) but it does not eliminate vitiated *Kapha Dosha* much and is a laxative. Old honey is (stored for at least 1 year) is *Grahi* (anti diarrheal), reduces fat and obesity, is constipating and highly scarificant.^[23]

Properties of Mature and Immature honey according to Ayurveda

According to Sushruta, mature honey eliminates vitiated *Tridosha* while immature honey vitiates *Tridosha* and is sour in taste.

Properties of *Madhu* according to modern science

Various experiments and studies on honey have shown that honey is antiseptic, antimicrobial, antipyretic, anti-inflammatory, anti allergen, antitoxic, sedative laxative, anti-anemic,

antioxidant, healing and cleansing (external & internal), moisturizing and blood purifying. It promotes rehydration, easily digestible, stimulates immunity and is beneficial for all types of skin diseases.^[24]

Special Property of *Madhu* (honey) according to Ayurveda

Ayurveda explains another special quality of honey is *Yogvahi*. This is one of the best *Yogvahi* substance since it has a quality of penetrating the deepest tissue. When honey is used with other herbal preparations it enhances the medicinal qualities of these preparations and also helps them to reach the deeper tissues.^[25]

Properties according to modern sciences

Studies and experiments on honey have shown that honey is antiseptic, antimicrobial, antipyretic, anti-inflammatory, antiallergent, antitoxic, sedative, laxative, anti-anemic, antioxidant, healing and cleansing (external and internal), moisturizing and blood-purifying. It promotes rehydration, easily digestible, stimulates immunity and is beneficial for all types of skin diseases.^[26]

Beneficial uses of *madhu* (honey)

- ✓ It is used for cold, cough, fever, sore eye and throat, tongue and duodenal ulcers, liver disorders, constipation, diarrhea, kidney and other urinary disorders, pulmonary tuberculosis, marasmus, rickets, scurvy and insomnia.
- ✓ It is applied as a remedy on open wounds after surgery.
- ✓ It prevents infection and promotes healing.^[27]
- ✓ It has been proved that honey promotes rapid healing as it stimulates tissue regeneration, angiogenesis, and fibroblast growth. Epithelial cell growth is stimulated as these cells grow with the skin level so that no scab is formed and so no excessive scarring and hypertrophication. Anti-inflammatory action of honey soothes and promotes healing by reducing pain and swelling.
- ✓ The use of honey internally and of sunlight externally to the body direct, has been eulogized as an ideal remedy to regulate the secretion of the internal glands and calcium metabolism.
- ✓ Recent reasearches have shown that *Pratisarana* of *Laksha Churna* with *Madhu* on scaling wound can have better line of treatment in the successful management of tartar without any systemic use of drugs.

- ✓ Honey works quicker than many antibiotics because it is easily absorbed into the blood stream.
- ✓ It is also useful in healing of carbuncles, chaps, scalds, whitlows and skin inflammation: as vermicide; locally as an excipient, in the treatment of *aphthae* and other infection of the oral mucous membrane.
- ✓ It is recommended in the treatment of pre-operative cancer.
- ✓ Honey, mixed with onion juice is a good remedy for arteriosclerosis.
- ✓ It is used as a medium in the preservation of cornea.

Some Precautions to be taken while using *madhu* (honey)

- Over consumption of honey should be avoided due to its properties- rough, heavy, astringent and cold. If taken in excess quantity, resulted a condition called *Madhvama* (a situation of indigestion of honey in Ayurveda) which is very difficult to treat. Hence it is very harsh and kills immediately like poison.
- Honey should not be heated, boiled or mixed with hot foods. The study revealed that heated honey mixed with ghee produces HMF (hydroxyl-Methyl-Furfural) which may produces harmful effects and act as a poison.
- Honey should not be consumed while working in hot surroundings. Poison has hot or *Ushna* qualities.
- Honey should never be mixed with rain water, mustard fermented beverages like whiskey, rum, brandy etc.
- Infants younger than one year of age should never be fed honey. It increases the risk of botulism (a type of food poisoning). Honey sometimes contains dormant endospores of the bacterium *Clostridium botulinum*, which can be dangerous to infants, as the endospores can transform into toxin producing bacteria in the infants immature intestinal tract, leading to illness and even death.
- Honey contains nectar of various flowers of which same may possibly of poisonous.
- Honey can be fermented to produce ethanol, which can be intoxicating.
- Sometimes it may be poisonous as it contains nectar of various flowers.
- Avoid taking honey and ghee in aqual quantity as it imbalance the *vatta*, *pitta* and *kapha doshas*.
- Honey when boiled causes harmful chemical changes. Do not boil or mix honey with boiling hot water or milk.
- Honey should not be used with radish it can be toxic.

- Avoid honey if you are allergic or hypersensitive to honey, its constituent, celery or other bee related allergens.
- Honey may contain contaminants like *C.botulinum* and gray toxins that might be harmful to the pregnant lady and the growing fetus. Therefore it is advisable to consult your doctor before taking honey if you are breastfeeding.
- *Madhu* should not be used during *Swedana* (sweating) treatment because it may cause acute circulatory failure and hypotension.
- Honey and water, honey and ghee, mixed in equal quantities should not be consumed as it has been proved that heating of honey reduces the specific gravity with a subsequent rise in its ash value, pH, HMF (hydroxymethyl furfuraldehyde), browning, phenolics, and antioxidant activity. The mixing of honey with ghee brings about enhancement in browning, antioxidants and specific gravity without altering the food consumption and organ weight of the rats. The study revealed that heated honey (>140°C) mixed with ghee produces HMF which may produce deleterious effects and act as a poison in due course.
- It is recommended that diabetic patient should avoid honey as it is at least 20 percent sweeter than sugar.

DISCUSSION

Honey a natural substance has been used since ancient time for medicinal purposes. Honey is widely accepted as food and medicine by all generations, traditions and civilizations, both ancient and modern. Various ingredients of honey have helped it to become not only a sweet liquid, but also a natural product with high nutritional and medicinal value. Honey can be used singly or in combination with other ingredients in treatment of various diseases. In Ayurveda science some precautions given before it using, according to Acharyas no other kind of indigestion is more difficult to treat than that caused by honey because of the need of opposite kinds of treatment. So do not eat honey in excess quantity because it cause madhvama (a situation called indigestion of honey in Ayurveda) it is very severe and kills immediately like poison. It should be kept in mind that honey should not be heated or consumed warm as it causes toxic effect.

CONCLUSION

Honey is an indispensable natural substance with many and various usages. It is included in *nitya sevaniya dravya* by Ayurveda.

It is concluded that

- It strengthens the immunity and help to maintain the health by preventing various types of diseases but it must be pure and genuine.
- While it is using precautions should be taken mandatorily.

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