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A REVIEW ON NUTRACEUTICAL PROPERTIES OF NATURAL HONEY TO FIGHT HEALTH ISSUES

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ABSTRACT

Natural honey is one of the most important. Honey is one of the oldest medicines known, its recorded use going back more than 4 millennia. It is used to treat wounds, ulcers, sunburn, and infection of the eye and cough. Natural honey is a sweet, flavorful liquid food of high nutritional value. This is produced by bees from the nectar of flowers. It is used for functional and industrial purposes. This review flashlights the physical, biochemical, and medicinal properties of honey, which were discovered by various researchers over the last forty years. The review richly discusses the composition, nutritional and therapeutic, and Yogavahi properties of honey.

KEYWORD:- Honey, Natural Honey, Nutritive Sweetner, Traditional use, Chemical properties, Medicine, Healthy food.

INTRODUCTION

Honey is a naturally sweet product by the bees from the nectar of flowers. There are two major types of honey, apiary and forest honey. Natural honey is a sweet, flavorful liquid food of high nutritional value. Honey is used in all religions and cultural activities. Honey is known as Madhu and its use is one of the most important medicines in the Ayurvedic medicine system. In India, Hindus consider honey as one of the panchamrita. In temples, honey is poured over the divinity in a ritual called 'Madhuabhisheka'. The Vedas and other

ancient times described honey as a good medicinal and healthy food. Honey plays an important role in the festival of MadhuPurnima celebrated in India and Bangladesh in Buddhism. Honey quality is primarily one of the sensory physicochemical and microbiological characteristics. In honey carbohydrates and other minor substances include minerals, protein, free amino acids, vitamins, enzymes, organic acids, flavonoids, phenolic acid, and other phytochemicals.

Composition of honey

The quality of honey is determined by its chemical, physical and microbial characteristics. Honey is mainly composed of carbohydrates and various smaller components. In honey sugar are present in high concentration. Honey contains 38 and 32.0% glucose. Glucose and fructose are the only monosaccharide's in honey and make up about 95% of honey's dry weight. The moisture content of honey depends on environmental conditions, pulp resources and harvesting practices. The water content in honey is between 17 and 20%. The generally honey are a content of carbohydrates 80-85%, water 15- 17%, proteins 0.3%, ashes 0.2% and minor quantities of amino acids, phenols, pigment and vitamins. Beside the other components are also found in major concentration. The total amount of polyphenols and vitamin-C is similar in different varieties of honey.

Properties and Therapeutic uses of honey

Many difference type of honey are mention in Ayurveda granthas-

I. Pauttika honey

- Honey collected by small black bee resembling a gnat called Pauttika. Pauttika bees build their home inside the hollows of trees.
- Pauttika honey has ghee like colour.
- This honey is especially dry, hot because of its union with poison

Medicinal uses

- It aggravates Vata, Rakta and Pitta and this is also Chhedi (Cuts tissues).
- It produces heart–Burn and intoxication

II. Makshika honey

- Makshika bees are brown in colour and big in size, honey produced by them is called Makshika honey.
- Makshika honey has oil-like colour.

- It is Laghu (Lighter than Kshaudra) and Ruksha (dry).

Medicinal uses

It is especially beneficial in diseases like asthma.

It is also useful in Kamla (Jaundice), Arsha (Piles), Kshata (Phithis), and Kasa (Cough).

III. Aarghya honey

- Aarghya bees make honey from Madhuka (Madhuka indica) trees, have sharp Mouth and Are yellow in colour.
- Aarghya honey is white in colour.
- It is Kashaya (Astringent in taste) and Katu vipaka (Pungent after digestion)
- Medicinal uses:
- It eliminates vitiated Kapha and Pitta dosha.
- It is Balya (Strengthening) and beneficial for eyes.

IV. Bhramara honey

- Bhramara bees are popular common bees (Which are black in color and of medium size) honey collected by them is called Bhramara honey.
- It is white in color.
- This honey is guru (Not easily digested) because of its Picchhila (Slimy) and Atiswadu (excessively sweet) properties.

Medicinal uses

It is Rakta pitta shamaka.

V. Auddalaka honey

- Auddalaka are small brown insects which store honey inside ant hills.
- The color of Auddalaka honey is yellowish brown.
- Auddalaka honey is Kashaya (Astringent) and amla rasa (Sour), Katu vipaka (Pungent after digestion)

Medicinal uses

- It aggravates Pitta.
- It is useful in skin diseases and helps in modulation of voice.

Nutritional and Therapeutic properties of honey

Little is known about the individual components of honey that are responsible for its exclusive activity.

1. Energy food

Honey is a high-energy carbohydrate food. The levulose and dextrose in honey are readily accepted into the bloodstream, providing an immediate source of energy. Improve the calcium fixation in bone and anorexia treatment to nutrient stimulation in honey. The high nutritional profile of honey with a broad range of nutrients stimulates its use as food.

2. Food ingredients

It is application potential in bakeries, snack foods, confectionery, value-added products of fruits and vegetables and beverages is ever-increasing. It is also a compulsory ingredient of different health drinks like decoction, and churned drinks.

3. Honey in food processing

Honey is often heated to 60-77^{0}c to decrease its viscosity prior to filtration. Some honey is pasteurized, which requires temperatures of 72^{0}c or higher. The heating process also reduces the moisture content, delay crystallization, and destroys yeast cells, enhancing shelf life. Lee found honey to have very useful characteristics in food processing such as fruit juice classified agents. Vacuum impregnation with honey is more effective in controlling browning discoloration than a simple immersion treatment. Jeon and Shaw suggested that honey has the potential to be used as a natural ingredient to prevent enzymatic browning in fresh-cut fruits.

4. Honey as medicine

Honey is used in the Ayurvedic and Unani systems of medicine. It is used as a blood purifier a preventive agent against cold, cough, and fever, and a curative for an eye sore ulcer of the tongue throat, and burns. The general medicinal properties and curative properties of honey were mentioned by Sampath Kumar et al.:

- Honey is useful as a sedative.
- It stimulates digestion and regulates the acidity of gastric juice.
- Honey can be taken with warm milk or with lemon juice and radish juice as a remedy for cold.
- Honey in warm milk or water can be given relief to a sore throat.
- Gargling with honey is very useful for gingivitis.

5. Honey in child health

Honey has widely used for infant feeding. It cures many deficiencies in infants and older children. It is Sheeta (cold potency), have a sweet and astringent taste, and pacifies raktapitta and Kapha dosha (disease-causing agents). It also acts as a source of energy because it contains mainly fructose (about 38.5%) and glucose (31.0%) as well as vitamins and multi-minerals. Daily consumption of honey strengthens the immune system of children and thereby develops their disease-resistance capacity.

6. Digestive

Honey is said to improve food assimilation and to be useful for chronic and infective intestinal problems such as constipation, ulcer, and liver disturbance. Honey is used to cure gastrointestinal problems. Honey is used as a treatment of gastritis and stomach and duodenal ulcers.

Medicinal properties of honey

The concept of using honey as medicine started at least six thousand years ago. The scientist and philosopher Aristotle discussed honey as being a good cream for sore eyes and wounds but Dioscorides describes honey as being good for all rotten and hollow ulcers, sunburn, coughs, and inflammation of the throat and tonsils. The ancient Greeks was using honey for the treatment of fatigue. The support for using honey as a treatment avoiding for peptic ulcers and gastritis comes from traditional folklore as well as from reports in modern times. Honey may promote the repair of the damaged intestinal mucosa, stimulate the growth of new tissue and work as an anti-inflammatory agent. Many times, it can be used on skin grafts and infected skin graft donor sites successfully.

- **Antimicrobial activities of honey**

Honey has been reported to have an inhibitory effect on different species of bacteria, which are including aerobes and anaerobes gram-positive and gram-negative. The anti-bactericidal and antifungal activities of honey have been held responsible for its acidity, increased osmolarity, production of hydrogen peroxide, presence of phenolic acid, lysozyme, flavonoids, etc. The high antimicrobial potential of honey has been confirmed in many in vitro tests, but it is also in vivo studies. Hydrogen peroxide is produced from the oxidation of glucose with the enzyme glucose oxidase when honey is ripening. Glucose oxidase produces from the hypopharyngeal glands of honey bees. Carnwath et al have demonstrated the antimicrobial activity against common equine wound bacterial separation.

- **Antibacterial activities of honey**

It was first reported that honey has antimicrobial activity in 1982. Honey of many varieties from different plant origins has shown antimicrobial activity, e.g. honey, from Erica, canola, Castalia, Abeto, Acacia, and from multi-floral honey. Different types of honey have been reported from diverse geographical origins like Brazil, Ethiopia, New Zealand, Iran, India, and Pakistan to have potent antibacterial activity. The mechanism of honey antibacterial is not fully understood while now.

- **Antioxidant activity of honey**

In addition to ide antimicrobial properties, honey can word off infection in a number of ways, including by promoting a writing system with antioxidant activities. The free radical scavenging compounds in honey may prevent reactive oxygen species mediated cytotoxicity. Honey have remarkable reactive oxygen species. scavenging activities. These one effect might be due to the phenolic content and the lipid metabolism enhancing effect of honey. This is a advantageous effect of honey, which has the ability to counteract prevent the oxidative damage and Protect liver and kidney tissues.

- **Skin and Wound healing**

Some experiments have shown that honey has an anti-inflammatory and antibacterial effect helps in wound healing:

A large range of wounds in being treated all over the world with unprocessed honey to different sources. Honey was most effective in decreasing ROS levels. It was selected for use in wound healing manufacture. Honey is an immune modulatory agent for various deformation.

- **Antibacterial activities of honey**

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- **Honey for diabetics**

The utilization of honey can provide a beneficial effect on the body weight and blood lipids of diabetic patients. Studies have shown that honey compatibly produces a lower glycemic effect when compared to glucose and sucrose in normal and type-I diabetics, and does not have moreover acute hyperglycemic effect over an isoglucidic amount of bread in type-II diabetics.

CONCLUSION

The physicochemical properties of natural honey remain on four large factors species, floral source, environmental factors, and processing factors. Is quality & use of honey depend on its flower source and its properties. Honey is not food material only but or combination of many medicinally important chemicals either honey bees. Hence, honey is used in drug manufacturing by the latest medicinal Companies. The complex effect of honey and Plant extracts has opened the door for developing a safe and highly potent natural drug against infectious diseases like tuberculosis, tetanus, influenza, hepatitis & human immune deficiency Syndrome. It can be concluded, the different users. If it has stronger immunity and helps to maintain health by preventing various types of disease but it must be aseptic and authentic.

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