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Review: Honey in Medicine

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❖ ABSTRACT

The most likely natural product is honey. Honey serves as a nutritional supplement as well as a component of pharmaceuticals and cancer patients. Asthma, Throat infections and eye problems are among conditions it is used to treat. According to artwork from the stone period women's have been using honey for over 8000 years. Around 60 types of bacteria, some species of fungus and some species of viruses have been shown to be inhibited by honey according to reports. Due to our it of components including phenolic, peptides, organic acid and enzymes, honey's antioxidants play a significant role in the treatment of many dise ase and ailments. Honey has been consumed in a variety of ways, including as a sweetener and flavoring agent.

❖ **KEYWORDS:-** Honey , Antioxidant , Flavonoids, Modern medicine, Therapeutic values.

❖ INTRODUCTION

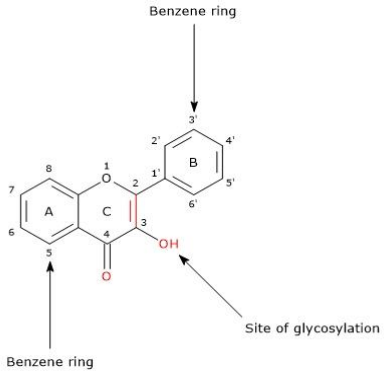
Humans have had a very long-standing conception of honey. As a sweetening and flavoring additive, it has been employed in a variety of new marble foods and beverages. Honey has a long history of being valued for its nutritional and medicinal properties [1]. Everywhere in the world, honey is produced. Carbohydrates in the form of monosaccharides, fructose, glucose, and disaccharides are the most crucial component of honey, and their presence is what gives honey its sweetness [2].

Honey is a natural substance made by honey bees from floral material. Both nutritional and medicinal purposes are served with honey [3-5].

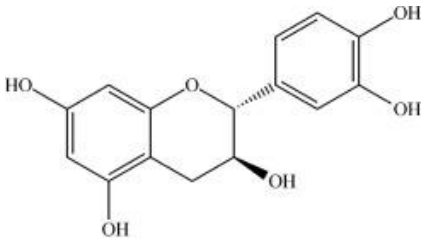
Honey is the only naturally occurring insect-derived substance with nutritional, aesthetic, medicinal, and industrial benefits. Honey is regarded as a healthy food with equal appeal for males and females of all floral. Honey doesn't require refrigeration because it never degrades and can even be kept unopened at room temperature in a dry location [6-10].

❖ HONEY'S PHENOLIC ACIDS AND KEY FLAVONOID'S ORGANIC ACID STRUCTURES

With a 15carbon structure and two benzene rings connected by a heterocyclic pyrane ring, flavonoids are a class of biologically active natural compounds. They are categorized as flavonols, flavones, flavanones, and anthocyanidins. It has been reported that some flavonoids, such as genistein, chrysin, luteolin, and naringenin, exhibit estrogenic activity. These compounds are frequently referred to as phytoestrogens. The flavonoids and phenolic acids found in honey are depicted in Figure 2 by their chemical structures [11-13].



Flavonols



Catechin

❖ THE BIOLOGICAL FUNCTIONS OF HONEY

1. Antioxidant properties

The role of antioxidants, which are found in foods and the human body, in antioxidant activity involves accident agents like oxygen in preventing damage. However, the function of all natural antioxidants in the human body is still not fully understood [14]. Dietary antioxidant effects of honey are possible. According to the scientific literature, honey administered alone or in conjunction with conventional therapy may be a new antioxidant in the management of conditions typically brought on by oxidative stress [15].

2. Antimicrobial activity

The enzymatic glucose oxidation reaction and a few of its physical characteristics are the main causes of honey's anti-microbial activity, but other factors such as high osmotic pressure, low PH, protein content with a high carbon to nitrogen ratio, low redox potential because of the high level of reducing sugars, a viscosity that restricts dissolved oxygen, and other chemical agents can also contribute [16,17].

❖ *Honey in* Medicine

In addition to its composition and flavour, honey contains a number of significant properties. A thick liquid, newly extracted honey is. Its viscosity changes with composition, notably with the amount of water present, as it is dependent on a wide range of different chemicals. Another characteristic of honey is its hygroscopic, which refers to its capacity to draw moisture from its surroundings and hold it. Normal honey with a water content of at least 18.8% will be able to draw moisture from air with a relative humidity of at least 60%. According to the honey's origin, its surface tension varies, and colloidal components are most likely to blame. It is the cause of honey's foaming properties, along with high viscosity.

1. Honey in wound

Honey is used in the healing of wounds, one of the most researched and successful applications [18]. The historical scientific literatures have discussed the medicinal use of honey. Honey's ability to promote wound healing is mostly attributed to its antibacterial activity, ability to keep a wound moist, and high viscosity, which helps to create a barrier of protection against infection [19]. During World War I, the Russians employed honey to speed up wound healing and avoid infection. The Germans used a mixture of honey and cod liver oil to heal boils, burns, and ulcers. It has been discovered that honey therapy is effective for almost all types of wounds, including burns, chill blains, broken nipples, surgical wounds, and abdominal wall wounds [20].

2. ***Honey in asthma***

In traditional medicine, honey is frequently used to cure fever, coughing, and inflammation. It was demonstrated that honey can function as a preventive agent to stop the development of asthma or to lessen symptoms associated with asthma. In animal modelling, oral honey ingestion is used to treat bronchitis and asthma. Future research is necessary to explore these effects of honey, nevertheless, in order to comprehend how it works to lessen asthma symptoms [21,22].

3. ***Honey in cough***

Cough is a major concern for everyone and even one of the most common complaints presented to general practitioners [23]. Common in youngsters and linked to numerous underlying reasons. Children are more vulnerable than adults to the negative consequences of words. Children's immune systems are still developing, making them more vulnerable to a wide range of diseases that may be accompanied by persistent or protracted coughing [24].

In the current study**,** the research literature was evaluated**,** and it was discovered that honey has **a** great safety profile and **a** positive impact on the prevention of coughs**.** An upper respiratory tract infection with nocturnal cough that lasted for about **a** week was studied in 300 kids between the ages of **1** and **5[**25**].**

❖ CONCLUSION

Consuming honey has significant medicinal and nutritional benefits. Honey's phytochemical content mostly relies on its flower source, kind, concentration, and bee species. Each variety of honey's biological activity are impacted by the factors. Basically, the polyphenols in honey are what give it its therapeutic benefits. Since there is no food matrix in honey's composition, there are no food interactions, and honey polyphenols are not subjected to any chemical reactions like extraction that might compromise their quality, the study confirms that honey polyphenols have a high bioavailability value compared to other functional foods.

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