

## Uncommon Beehive Products and Their Surprising Uses

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Honeybees are among the most pertinent insects for humans, offering more than simply honey, which is a nutrient-rich substance that benefits health. Bees generate a variety of additional valuable items, such as beeswax, pollen, royal jelly, propolis, venom, bee bread, and honeycomb. These by-products have been used for a variety of reasons since ancient times. People in ancient Egypt, Greece, Rome, and China used bee products for medicinal purposes. Apitherapy, or the use of honeybee-derived products in alternative medicine, has been used to treat a variety of ailments, including arthritis, allergies, immunological and neurological illnesses, thyroid problems, and gingivitis. Even now, these natural therapies are popular for increasing immunity, particularly during the ongoing COVID-19 epidemic.



Many studies have shown that honeybee products have medicinal and therapeutic effects. Let's take a closer look at each of these goods and their many perks.

1. **Bee wax:** Worker bees produce wax from specialized glands in their abdomens at a young age. This wax is used to construct honeycomb walls and seal honey-filled cells with the goal of preserving the honey. Bee wax starts off white, but it progressively becomes yellow when pollen and propolis colorants collect. Bee wax includes a variety of chemicals, such as hydrocarbons, esters, and free acids. This bee by-product has long been valued in medicine, cosmetics, and haircare products.

### Benefits of Bee wax:

- **Moisturiser:** Offers anti-inflammatory and anti-allergic qualities together with efficient moisture retention.
- **Skin Care:** This remedy relieves inflamed skin and is frequently used to treat rosacea and eczema.
- **Hair care:** aids in retaining moisture, encourages growth, minimises hair loss, and moisturises hair.
- **Skin Protection:** In severe weather, the skin creates a barrier to protect it from outside irritants.
- **Pain Relief:** Has qualities that aid in the reduction of pain.
- Commonly used in the production of salves, lip balms, and candles. \
- **Aromatherapy:** Used in applications related to aromatherapy.

- Royal jelly:** The hypopharyngeal glands of nurse bees create royal jelly, which is utilised to nourish both adult queens and larvae. In light of its low pH, this substance could appear white, brown, grey, or yellow, and it tastes sour. It is a viscous, gelatinous fluid that gets denser with time. A variety of nutrients including minerals, vitamins, sugars like fructose and glucose, fatty acids, carbs, and amino acids are found in royal jelly.

#### Benefits of Royal jelly:

- **Anaemia and Development:** Promotes children's healthy development and aids in the fight against anaemia.
  - **Illness Management:** Helps cure adult viral infections, anxiety, depression, constipation, hypertension, diabetes, malnourishment, and hormone abnormalities.
  - **Therapeutic properties:** Include antimicrobial, antifungal, antioxidant, antibacterial, and anti-inflammatory qualities.
  - **Immune System Support:** Helpful in improving the performance of the immune system.
  - **Skin and Scalp:** Direct application can promote skin and scalp health and hasten the healing of wounds.
  - **Menopause and PMS:** Considered to alleviate menopausal and premenstrual syndrome (PMS) symptoms.
- Propolis:** One of the most well-known bee products is propolis, which is made of a combination of beeswax and resins extracted from flowers and leaf buds. Propolis is utilised by bees to seal hive fractures and coat the interiors of nest holes and brood combs. They also combine it with beeswax to cover brood cell openings and use it to seal deceased animals that are impossible to remove. As propolis has antifungal and antibacterial qualities that help prevent infections, illnesses, and the growth of germs that break down food, it is essential for bee colonies. The colour, content, odour, and therapeutic effects of propolis differ based on the place, season, and plant species surrounding the colonies. It is composed of a diverse array of beneficial compounds, such as vitamins, minerals, flavonoids, fatty acids, polysaccharides, and polyphenols.

#### Benefits of Propolis:

- **Antioxidant:** Exhibits antiviral, antifungal, and antibacterial qualities and functions as a natural antioxidant.
  - **Medicinal uses:** Utilised in medications to lower inflammation, strengthen immunity, and scavenge free radicals.
  - **Cosmetics and Skin Care:** Because of its capacity to regenerate tissue, it is frequently used into cosmetics and skin care products.
  - **Medical Treatments:** Beneficial in the management of a wide range of ailments, such as digestive disorders, respiratory infections, dental troubles, wounds, and burns.
  - **Immune Support:** renowned for enhancing immunity.
- Bee Pollen:** After gathering pollen from flowers, honeybees return to their hives and combine it with their hormones and digestive enzymes. In essence, bee pollen is a concoction of enzymes, nectar, wax, honey, pollen, and other secretions. This concoction is fed to the bee colony. Bee pollen is extremely nutrient-dense and is kept in the hive in the form of tiny balls. It is rich in vitamins, lipids, amino acids, and other active components.

#### Benefits of Bee pollen:

- **Nutrient-Rich:** Packed with every vital nutrient required by humans, this superfood is incredibly nutrient-dense.
- **Vitamin B12:** Enriched with this vitamin, which supports general health.
- **Antiviral and antibacterial:** Can combat both viruses and bacteria.
- **Cholesterol and Capillaries:** Promotes capillary strength and cholesterol reduction.

- **Disease Management:** The active enzymes in bee pollen help fight against rashes, eczema, hives, diabetes, asthma, and other illnesses as well as skin disorders.
  - **Weight Management and Fertility:** Beneficial for enhancing immunity, controlling weight, and increasing fertility.
  - **Child Development:** Often administered to youngsters to promote their cognitive and physical growth.
5. **Bee bread:** Honeybees make a protein-rich material called "bee bread" to feed their larvae and young bees. It is created by combining honey, lactic ferments, and pollen, and then sealing the mixture inside the honeycomb's cells. This combination becomes bee bread after about three months of fermentation. Bee bread has a range of vitamins, minerals, enzymes, lactic acid, and amino acids, much like other bee products. When properly maintained at room temperature, bee bread retains its beneficial characteristics for a lengthy duration.

#### Benefits of Bee bread:

- **Energy Boost:** Helps raise haemoglobin levels and is a fantastic source of energy.
  - **Detoxifying:** Has the ability to cleanse.
  - **Immune Support:** Designed to strengthen the immune system, this supplement is advised for kids and those who are deficient in minerals and selenium.
  - **Appetite Regulation:** lowers hunger, supports weight control, and helps control triglyceride and cholesterol levels.
  - **Medical Treatments:** Beneficial for treating constipation, intestinal issues, and disorders of the liver.
6. **Bee venom:** In many parts of the world, bee venom has been utilised as a traditional medicinal for thousands of years. The bee's sting exudes this colourless, acidic material, which is made up of many substances such as minerals, carbohydrates, amino acids, and enzymes. It also contains substances that are both pro- and anti-inflammatory. Bee venom contains peptides that have anti-inflammatory and pain-relieving properties in addition to their potential to function as poison. Furthermore, a few of the enzymes in bee venom have immune-protective qualities.

#### Benefits of Bee Venom:

- **Allergy Treatment:** For those who are allergic to bee stings, immunotherapy with bee venom considerably lowers the risk of an allergic response for up to ten years.
  - **Skin Conditions:** According to clinical investigations, bee venom may be useful in the treatment of inflammatory skin disorders like psoriasis.
  - **Pain management:** Apipuncture, a type of acupuncture that uses bee venom, is being evaluated as a drug-free pain management technique. It is thought to help manage pain.
  - **Disease Treatment:** It could also be helpful in the treatment of ailments including frozen shoulder, rheumatoid arthritis, and Parkinson's disease.
7. **Honey comb:** The dwelling that honeybees construct to keep their young, honey, and other goods is called honeycomb. It has hexagonal cells that are packed with honey, bee pollen, bee bread, or royal jelly. It is made of propolis and beeswax. The entire honeycomb, including the waxy cells, is edible. It includes pure, unfiltered honey that has retained all of its natural sweetness, enzymes, and antioxidants. It is high in carbs and antioxidants. Because it contains a variety of useful bee products, honeycomb is regarded as an extremely wholesome and nutrient-dense diet.

#### Benefits of Honeycomb:

- **Heart Health:** All bee products include health-promoting qualities that can contribute to the maintenance of a healthy heart.

- **Infection Prevention:** Helps prevent infections by possessing antibacterial, antifungal, and antimicrobial properties.
- **Sugar Substitute:** This might be a healthy substitute for sugar in drinks.
- **Respiratory Health:** By virtue of its honey content, it helps cure children's coughs and respiratory tract infections.

## Conclusion

Hive products, including honey, propolis, royal jelly, beeswax, and bee pollen, offer a diverse range of benefits that extend beyond their traditional use as food. These natural products are rich in bioactive compounds, making them valuable in various fields such as medicine, cosmetics, and nutrition. Honey, with its antimicrobial and wound-healing properties, is widely used in traditional and modern medicine. Propolis, known for its antiviral and anti-inflammatory effects, is increasingly utilized in health supplements and skincare products. Royal jelly is recognized for its potential to boost immune function and promote anti-aging effects. Beeswax, due to its emollient and protective qualities, is a key ingredient in cosmetics and pharmaceuticals. Bee pollen, rich in vitamins, minerals, and antioxidants, is gaining popularity as a dietary supplement.

The growing interest in natural and sustainable products has further highlighted the importance of hive products, driving research into their applications and benefits. As these products continue to be explored for their potential health and wellness contributions, it is crucial to ensure sustainable beekeeping practices to protect bee populations and their ecosystems. Ultimately, hive products not only provide direct benefits to human health but also underscore the broader environmental significance of bees as essential pollinators in maintaining biodiversity and food security.