

## The Hidden Powers of Hive Products: Uses and Benefits from Honey to Propolis

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Honeybees are among the most valuable insects for humans, offering much more than just honey—a nutrient-rich substance that benefits health. They produce several other valuable by-products, including beeswax, bee pollen, royal jelly, propolis, bee venom, bee bread, and honeycomb. These products have been used for various purposes since ancient times. Civilizations such as the ancient Egyptians, Greeks, Romans, and Chinese have long utilized bee products for their therapeutic properties. Apitherapy, the practice of using honeybee-derived substances in alternative medicine, has been employed to treat conditions such as arthritis, allergies, immune and neurological diseases, thyroid disorders, and gingivitis. Today, these natural remedies remain popular, especially for boosting immunity during the ongoing COVID-19 pandemic. Extensive research over the years has highlighted the medicinal and healing properties of honeybee products.

### Beeswax

Worker bees produce beeswax from specialized glands located in their abdomens as they mature. This wax is used to build the honeycomb structure and to seal honey-filled cells, ensuring the honey's preservation. Initially white, beeswax gradually takes on a yellow hue due to the accumulation of pollen and propolis colorants. Beeswax contains various compounds, including hydrocarbons, esters, and free acids. Over time, it has proven valuable in medicine, cosmetics, and haircare products.



### Benefits of Bee wax

**Moisturizing Agent:** Effectively retains moisture while offering anti-allergic and anti-inflammatory benefits.

**Skin Care:** Calms irritated skin and is frequently used in treatments for eczema and rosacea.

**Hair Care:** Hydrates hair, reduces hair loss, promotes growth and helps maintain moisture.

**Skin Protection:** Creates a protective barrier on the skin to defend against environmental irritants and harsh weather conditions.

**Pain Relief:** Exhibits properties that can alleviate pain.

**Popular Products:** Widely used in the creation of candles, lip balms, and salves.

**Aromatherapy:** Utilized in various aromatherapy practices.

### Royal jelly

Nurse bees produce royal jelly from their hypopharyngeal glands to nourish both larvae and adult queens. This substance can vary in color, appearing white, brown, gray, or yellow, and

has a sour taste due to its low pH. Royal jelly is a gelatinous, viscous fluid that becomes denser as it ages. It is rich in a variety of nutrients, including minerals, vitamins, carbohydrates, amino acids, fatty acids, and sugars such as glucose and fructose.

### Benefits of Royal jelly

**Anemia and Development:** Aids in fighting anemia and supports healthy growth and development in children.

**Disease Treatment:** Helps treat viral infections, depression, anxiety, constipation, hypertension, diabetes, malnutrition, and hormonal imbalances in adults.

**Therapeutic Properties:** Exhibits antibacterial, antioxidant, antifungal, antimicrobial, and anti-inflammatory effects.

**Immune System Support:** Enhances immune system function.

**Skin and Scalp:** Can be applied directly to stimulate the skin and scalp and promote wound healing.

**Menopause and PMS:** Effective in alleviating symptoms associated with menopause and premenstrual syndrome (PMS).



### Propolis

Propolis is a highly valued bee product, composed of a blend of resins collected from flowers and leaf buds mixed with beeswax. Bees use propolis to line the interior of nest cavities and brood combs, seal cracks within the hive, and encase dead animals that cannot be removed. They also mix propolis with beeswax to close brood cells. Propolis is essential for protecting bee colonies due to its antifungal and antibacterial properties, which help defend against diseases, infections, and the growth of decomposing bacteria. Its color, composition, scent, and medicinal qualities can vary based on the region, season, and local plant species surrounding the hives. Propolis contains a range of beneficial compounds, including vitamins, minerals, flavonoids, fatty acids, polysaccharides, and polyphenols.



### Benefits of Propolis

**Antioxidant:** Functions as a natural antioxidant with antibacterial, antifungal, and antiviral properties.

**Medicinal Uses:** Utilized in medicine to reduce inflammation, enhance immunity, and neutralize free radicals.

**Cosmetics and Skin Care:** Frequently included in cosmetics and skincare products for its tissue-regenerating properties.

**Health Treatments:** Effective in addressing a range of conditions, such as cardiovascular issues, respiratory infections, dental problems, wounds, burns, and digestive disorders.

**Immune Support:** Renowned for its ability to boost the immune system.

### Bee Pollen

Honeybees collect pollen from flowers and transport it back to their hives, where it is combined with their hormones and digestive enzymes. Bee pollen is a blend of nectar, pollen, wax, honey, enzymes, and other bee secretions. This mixture serves as food for the bee colony and is stored in the hive in small balls. Bee pollen is highly nutritious and contains a range of active substances, nutrients, amino acids, lipids, and vitamins.



### Benefits of Bee Pollen

**Nutrient-Rich:** Packed with essential nutrients, making it a highly nutritious superfood for humans.

**Vitamin B12:** Abundant in vitamin B12, which supports overall health.

**Antiviral and Antibacterial:** Exhibits antiviral and antibacterial properties.

**Cholesterol and Capillaries:** Aids in lowering cholesterol levels and strengthening capillaries.

**Disease Management:** Contains active enzymes that help combat diseases such as cancer, diabetes, asthma, arthritis, and skin conditions like rashes, eczema, and hives.

**Fertility and Weight Management:** Benefits fertility, assists in weight management, and enhances immunity.

**Children's Development:** Often given to children to support both physical and cognitive development.

### Bee bread

Bee bread is a protein-rich substance created by honeybees to nourish larvae and young bees. It is produced by mixing pollen with lactic ferments and honey, which is then sealed in honeycomb cells. After about three months of fermentation, this mixture becomes bee bread. Like other bee products, bee bread is rich in vitamins, minerals, enzymes, lactic acid, and amino acids. When stored correctly at room temperature, bee bread retains its beneficial properties for an extended period.

#### Benefits of Bee Bread

**Energy Boost:** Provides a significant source of energy and helps elevate hemoglobin levels.

**Detoxifying:** Offers detoxifying benefits.

**Immune Support:** Enhances immune system function and is beneficial for children and individuals with mineral and selenium deficiencies.

**Appetite Regulation:** Helps reduce appetite, supports weight management, and assists in regulating cholesterol and triglyceride levels.

**Health Treatments:** Effective in addressing liver disorders, intestinal issues, and constipation.

### Bee venom

Bee venom has been utilized as traditional medicine for thousands of years across various cultures. This colorless, acidic substance is secreted through the bee's stinger and contains a variety of components, including enzymes, sugars, amino acids, and minerals. It features both inflammatory and anti-inflammatory compounds. While the peptides in bee venom can act as toxins, they also provide pain-relieving and anti-inflammatory benefits. Additionally, some enzymes in bee venom offer immune-protective properties.



#### Benefits of Bee Venom

**Allergy Treatment:** Bee venom immunotherapy can significantly reduce the risk of allergic reactions in individuals sensitive to bee stings, providing protection for up to a decade.

**Skin Conditions:** Clinical trials indicate that bee venom may be effective in treating inflammatory skin conditions, such as psoriasis.

**Pain Relief:** Known to assist in pain management; apipuncture, a form of acupuncture using bee venom, is being explored as a drug-free pain relief method.

**Disease Treatment:** Potentially beneficial for treating conditions like arthritis, Parkinson's disease, and frozen shoulder.



## Honeycomb

Honeycomb is the structure that honeybees build to store honey, bee products, and their young. Constructed from propolis and beeswax, it features hexagonal cells filled with honey, bee pollen, bee bread, or royal jelly. The honeycomb, including its waxy cells, is edible and rich in carbohydrates and antioxidants. It contains pure, unfiltered honey, preserving all its natural goodness, enzymes, and antioxidants. Due to its inclusion of various beneficial bee products, honeycomb is considered a highly nutritious and healthy food.



### Benefits of Honeycomb

**Heart Health:** Incorporates the beneficial properties of all bee products, which can support cardiovascular health.

**Infection Prevention:** Contains antibacterial, antifungal, and antimicrobial properties, aiding in the prevention of infections.

**Sugar Substitute:** Serves as a natural alternative to sugar in beverages.

**Respiratory Health:** Effective in treating respiratory tract infections and coughs in children due to its honey content.

### Conclusion

Bee products offer extensive benefits across various aspects of human health and wellness. From honey's nutritional value to the therapeutic properties of bee venom and the nutrient-rich profile of bee bread, these natural substances play a crucial role in both traditional and modern medicine. However, it's essential to ensure that the extraction of these products is conducted ethically to protect the well-being of bees and their colonies. Companies like Bee Hively Group exemplify sustainable and ethical practices in the harvesting of honey and other by-products. By adhering to responsible beekeeping methods and supporting beekeepers in regions such as India, Bhutan, and Nepal, Bee Hively not only delivers raw, unprocessed honey to a global market but also aligns with the United Nations Sustainable Development Goals. Their commitment to bee-friendly practices helps ensure the continued health of bee populations and the environment.