



## - Pure Royal Jelly -



### The Mystery of Queen Bee – Royal Jelly

Queen honey bees and worker bees are genetically indistinguishable. However, as they grow and develop, the queen bee grows much larger than the worker bees, being highly reproductive and lives at least 20 times longer.<sup>[1]</sup> Researchers believe reasons lay in the queen bee's diet. She is fed particularly on Royal Jelly - a potent mixture of pollen and special secretions from the glands of nurse bees. Royal jelly is the exclusive food for developing and maintaining the queen bee while worker bees feed on pollen and nectar only. Royal Jelly has long been consumed as a natural food around the world. For centuries, fresh Royal Jelly has been used as all natural energy boost and alternative medicine. As far as nutrition goes, it is packed full of a wide spectrum of nutrients that have been shown to increase energy, reduce stress and boost body defense.<sup>[2]</sup>

### Nutritional Profile of Royal Jelly

Royal Jelly contains remarkable amounts of proteins, lipids, sugars, vitamins, hormones, enzymes, minerals, and specific vital factors that act as biocatalysts in cell regeneration processes within the human body. Although some of the elements found in Royal Jelly are in microgram quantities, they still can act supremely with coenzymes as catalysts or can act synergistically.

Royal Jelly is rich in vitamins B1, B2, B6, C, E, niacin, pantothenic acid, biotin, inositol and folic acid.<sup>[21]</sup> In fact, it contains seventeen times as much pantothenic acid as that found in dry pollen.<sup>[3]</sup> Multivitamins provide antioxidants and energy boost to the cells.<sup>[4,5,23-32]</sup> It has also been shown that flavonoids and vitamins in Royal Jelly have free radical scavenging ability which help alleviate lipid peroxidation, one of the prominent causes of aging and degenerative diseases.<sup>[6,7,34]</sup> Royal Jelly also contains important essential minerals for various body functions including potassium, magnesium, calcium, iron, phosphorus, sulfur and manganese. Yet another component is acetylcholine which is a neurotransmitter.<sup>[8]</sup> Together with inositol, they could facilitate transmission of nerve impulses and maintain healthy brain function.

Protein fraction of Royal Jelly contains many valuable components and biologically active substances which include peptide antibiotics with antimicrobial and antifungal properties.<sup>[2,21]</sup>

In particular, Royal Jelly exclusively contains Royalisin, a Defensin-like protein which helps prevent bacterial infections.<sup>[9,21]</sup> Once the bioactive peptides are released into the body they can act as regulatory components with activity similar to that of hormones. Recent evidence shows that proteins of royal jelly may have physiological functions to suppress allergic reactions.<sup>[2,10]</sup>

Royal Jelly is also very high in essential unsaturated fatty acids, in particular 10-hydroxy-2-decenoic acid (10HDA).<sup>[8]</sup> In postmenopausal women, estrogen deficiency leads to decreased skin thickness and collagen content, together with increased dryness and wrinkling. 10HDA could promote collagen synthesis, protect skin cells against UVB and help maintain normal cell growth.<sup>[11]</sup> 10HDA could also relieve symptoms of rheumatoid arthritis and joint destruction by slowing down the progress of cartilage degradation and bone loss while enhancing intestinal calcium absorption.<sup>[12,13]</sup>

### Benefits of Royal Jelly:

- ✓ Promote general health and wellbeing<sup>[20-22]</sup>
- ✓ Increase vitality and energy<sup>[4,8,23,25,27-32,36]</sup>
- ✓ Alleviate fatigue and relief stress<sup>[2,4,21,23-25,27-32,36]</sup>
- ✓ Strong anti-oxidant and anti-aging<sup>[4-7,20,27,32-34]</sup>
- ✓ Relieve allergies<sup>[10,28]</sup>
- ✓ Promote healthy joints<sup>[21,32]</sup>
- ✓ Increase joints mobility and maintain strong bones<sup>[12,13,21,32,35-38]</sup>
- ✓ Promote collagen production<sup>[21,32]</sup>
- ✓ Provide protection against harmful UV light<sup>[21,26,32-34]</sup>
- ✓ Promote healthy skin grow and decelerate aging<sup>[21,32-34]</sup>
- ✓ Speed up wound healing<sup>[19,21,32]</sup>
- ✓ Relieve menstrual and menopausal symptoms<sup>[16,29,35,37]</sup>

### Recommended daily dose:

Adult: Take 1 - 2 softgel capsules daily or as directed by physicians.



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