

The School of **“Self-Applied”** Prevention



**16oz Syrup / Tincture**



**24oz – 7oz**

**Freeze Dried Royal Jelly**

# Royal Jelly (Freeze Dried)

Royal Jelly has been made synthetically since 1950's and the 1950's standard for humans was 100 mg daily for life for miraculous results and 500mg daily for the king's royal dogs and 1,000 mg for the royal horses. Most if not all commercial royal jelly in capsules/skin care etc. products will be synthetic and not made by bees. North America and most of the world beekeepers cannot produce any volume of Royal Jelly; it takes an enormous amount of bees and labor to produce 1 pound of Royal Jelly. Raw RJ deteriorates quickly after collection and products selling raw RJ will be fake and or full of preservatives. The commercial world functions on "synthetics" made on command.

The "only" true Royal Jelly is collected by people that are dedicated for over 100 years to large volume Royal Jelly production and once Freeze Drying was developed, all quality RJ is freeze dried immediately at -80 degrees down to 1% moisture. Some people suggest **Freeze Dried is equal to 3x raw R/J**, due to the removal of the moisture. Once freeze dried, many people believe freeze-dried foods have a shelf life of 30+ years when properly kept sealed and indefinitely when kept refrigerated.

Those that have always been the only people on earth that entire towns only work with bees, they say approx. **2 tons of Freeze Dried Royal Jelly per month, per year** can be produced, while over 100 ton is sold yearly as a synthetic and sold as real. Most every commercial food / supplement sold today is Buyer Beware!

1950's Royal Jelly books all suggested 100 mg R/J daily as the miracle dosage, mostly because it was so rare, it was very expensive to obtain. In North America "real" Royal Jelly is not easy to import. The couple online beekeepers that claim to sale Raw Royal Jelly simple take freeze dried and blend with water and sale as fresh, because otherwise they would not have the capacity or ability to produce unlimited supplies. That and it has no practical use to turn RJ back to a liquid other than for profits.

Those that write books often do not sale Royal Jelly or have a recommended source. They write about "fresh" Royal Jelly and avoid details and avoid the subject that most R/J sold commercially is just a synthetic product. The Dr. Cass Ingram book, "Longevity" is 140 pages about the use of Royal Jelly, but only the pre 1950's R/J books explains Synthetic made R/J is sold commercially.

There is 1 hospital on earth that only uses Bee Products for all treatments of patients. R/J books generally suggested 100mg every day and the Dr. Cass Ingram book explains that you take more, based on your total health; the worse your health problems, the more you R/J you take. The following chart has specific dosages listed and since over ½ of the authors of the **369 books / scientific and medical studies** have last names similar to people from where the Bee Product Hospital is located, my guess is that the "dosage" chart came from that part of the world. **Apitherapy** is a branch of alternative medicine that uses honey bee products, including honey, pollen, propolis, royal jelly and bee venom. Royal Jelly is the only food the Queen Bee ever eats and as a result she can have 1,500 eggs daily and live 5+ years. Royal Jelly, like Honey is a Bee / Flower food.

- ❖ The only warning with Royal Jelly is for those with Bee Allergies! Normally not due to the bees, but due to total health issues. Those with such issues should **avoid** Royal Jelly in the same manner they avoid Honey and Bees. Healthy people not only can make use of all the Bee foods/venom, they can eat the whole bees. Dogs often eat honeybees. Freeze Dried Bee Venom today is used in pain creams and sprays. With all foods, herbs, supplements, medicines, start slow to make sure your body accepts what your self-experimenting with. Read many books for a variety of opinions.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11172503/> based on 369 studies world wide!

Age	Dose / Period of treatment	Conditions / Diseases
Infants:	0.5 g/day for 2–12 months	growth and development / strengthen immunity and nervous system
Premat Babies:	50 mg to 1 g per day	growth and development / strengthen immunity and nervous system
Children 1-5	0.5 g/day	Low Immunity / Nervous system impairment / delivery complications /
Children 5-12	0.5-1 g/day	weakness / loss of appetite / anorexia / anemia, etc.
Children 1-5:	2.5 g/day 1-3 days	Acute infection and colds
	5 g/day 1-3 days	Children 5-12:
Children:	2 g, 3 months	Reduces (SLE) Systemic Lupus Erythematosus
Adults:	1 to 2 g/day	Immunity, insomnia, skin disorders, rejuvenation, for maintenance of skin, hair, nails, bones, joints, anemia, low libido, sexual vitality, hormonal imbalance, wounds, premenstrual syndrome, menopause, osteoporosis, etc., mental condition, memory, depression.
Adults:	3 to 5 g/day	Diabetes, depression, Hashimoto's disease, arthritis.
Adults:	3,000 mg/day 6 months	Osteoporosis, improved (BMD) Bone Mineral Density, and strength in postmenopausal women.
Adults:	Up to 10g/day for 1-3 days	In the beginning of colds
Adults:	10 g/day for 1-3 days then 5-10 g/day up to 3-5 days	In acute infections, to accelerate post-operative healing.
Adults:	1,000 mg, 8 weeks	Menopausal symptoms
Adults:	5,000 mg, 8 weeks	Sub-fertility
Adults:	1,000 mg, 8 weeks	Type 2 diabetes mellitus, high blood pressure
Adults:	3600 mg, 24 months weeks	Hemodialysis
✓ Adults:	10-15 g/day, long term anti-depressive, ant- anxiety	Neurodegenerative diseases, multiple sclerosis, Parkinson,
Adults:	800 mg, 12 weeks	Dry mouth sensations
Adults:	3,000 mg, 2 weeks	Traumatic brain injury
Adults:	100 mg, 8 weeks	Genitourinary syndrome
Adults:	900 mg, 13 weeks	Metastatic renal cell carcinoma
Adults:	3,000 mg, 6-8 weeks	Side effects of chemotherapy and radiotherapy such as parenthesis, pain or burning, sensation of fingers, imbalance during walking, the sensation of weakness in the legs, chronic fatigue, recovery from disease, immunological system stimulation

The 2024 review of 369 books, scientific and medical studies is over 100 pages long and the books are thousands of pages. I picked a few paragraphs that I liked.

1. RJ shows numerous physiological and pharmacological properties, including vasodilatory, hypotensive, antihypercholesterolaemic, antidiabetic, immunomodulatory, anti-inflammatory, antioxidant, anti-aging, neuroprotective, antimicrobial, estrogenic, anti-allergic, anti-osteoporotic, and anti-tumor effects. Moreover, RJ may reduce menopause symptoms and improve the health of the reproductive system, liver, and kidneys, and promote wound healing.

2. RJ is made of 60–70% water; 9–18% proteins (*w/w*) (albumin,  $\alpha$ ,  $\beta$ ,  $\gamma$  globulin, glycoproteins, lipoproteins, and 23 amino acids); 7–18% sugars (glucose, fructose, negligible amounts of ribose, maltose, isomaltose, trehalose, neotrehalos, gentiobiose, turanose, and inositol); 3–8% lipids (*w/w*) (sterols and glycerols, wax, neutral fats, fatty acids, phospholipids, phenolic lipids, and free organic acids), 0.7–1.5% minerals (K, Na, Ca, Mg, Cu, Fe, Mn, Zn, Si, Cr, Ni, Ag, Co, Al, As, Hg, Bi, Au, S, and P), and vitamins (B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>5</sub>, B<sub>6</sub>, B<sub>7</sub>, B<sub>9</sub>, B<sub>12</sub>, E, D, A, K, and C, 336–351 mg/100 g). In addition to proteins and peptides, RJ contains a large amount of free amino acids, such as lysine, proline, cystine, aspartic acid, valine, glutamic acid, serine, glycine, cysteine, threonine, alanine, tyrosine, phenylalanine, leucine, isoleucine, and glutamine. As mentioned, RJ is also rich in lipids that account for 15–30% of the lyophilized product. The lipid content predominantly encompasses fatty acids (more than 80%) that are followed by phenols (4–10%), waxes (5–6%), steroids (3–4%), and phospholipids (0.4–0.8%). The most abundant are medium-chain fatty acids (MCFAs), such as (10-HDA) sebacic acid and 9-hydroxy-2-decenoic acid. 10-HDA is the main constituent (app. 21 mg/g RJ) that is also regarded as a marker of quality and freshness. In addition to phenolic compounds, pharmacological effects of RJ are also attributed to 10-HDA, royalisin, apisin, and some antimicrobial proteins. According to Furusawa et al., apisin is a hetero-oligomer containing MRJP1 (55 kDa protein) and apisimin (5 kDa protein). The apisin content in RJ is fairly constant (i.e., 3.93 to 4.67 *w/w*%) and can be used as a quality standard of RJ.

3. Alzheimer's disease (AD), RJ was able to enhance learning and memory retention, as well as prevent and treat cognitive deficits.

4. In clinical trials, RJ was effective against high blood pressure, diabetes, multiple sclerosis, infertility, menopausal symptoms, and even cancer.

5. Fermented milks with 0.5%, 1%, and 1.5% RJ have shown better radical scavenging activity (30.15%, 45.13%, and 58.36%, respectively) compared to fermented milk (27.62%). Fermented milk with 1.5% RJ demonstrated the best anticancer and antibacterial properties, but milk with 1% RJ had the best sensory acceptability (in terms of flavor, appearance, and color). Increasing the RJ content from 1.0% to 1.5% significantly improved the antimicrobial activities against *Staphylococcus aureus* ATCC 25923, *Candida albicans* ATCC 10231, *Aspergillus niger* NRRL 326, and *Aspergillus flavus* NRRL 1957. All fermented milks containing RJ (0.5–1.5%) have shown anticancer activity and the inhibited growth of various cancer cell lines, such as MCF-7, HepG2, HCT-116, and MCF7-12F, perhaps due to the presence of 10-HDA. The authors suggested that probiotic fermented milk with 1.5% RJ could be a promising option for developing novel functional symbiotic milk with health-promoting effects.

6. It is worth mentioning the numerous polyphenolic components of RJ, along with various glycosides, which have huge potential to contribute to human health.

7. All-together, increasing evidence suggests that RJ not only stimulates immunity and antioxidative activities, but also regulates the composition and structure of the gut microbiota. The gut barrier has an important role in transporting nutrients and metabolites across the epithelial cells and prevents damage by intraluminal substances.

8. Multiple sclerosis (MS), also a chronic inflammatory disease, affects about 250,000 to 350,000 individuals in the USA and markedly reduces their quality of life. Demyelinating lesions in the brain, spinal cord, and optic nerve are typical hallmarks of MS. Oshvandi et al. showed that supplementation with RJ can be beneficial in improving quality of life; following a 90-day period of supplementation, the patients' activity was increased. In another study, Seyyedi et al. have reported that the consumption of RJ, through its estrogenic effect and reduced vaginal atrophy, improves the quality of life of postmenopausal women. In addition to RA and MS, RJ can be useful in other human autoimmune diseases such as Graves' disease and lupus erythematosus by strengthening the immune system.

9. Therefore, the antioxidant, anti-inflammatory, and antisenescence properties of RJ as well as the modulation of cellular senescence by targeting Nrf2 activation can be a promising preventive strategy against cancer and other degenerative diseases (NAFLD, neurodegenerative diseases, aging, heart diseases, and cardiovascular diseases).

10. In humans, the intake of RJ can also **delay aging** and the development of some age-related disorders, improve the quality of life during aging, and significantly delay age-related motor dysfunctions. Salazar-Olivio and Paz-Gonzales also have shown that RJ proteins can have an effect in the **postponement and prevention of ageing**.

11. The skin is the largest organ that covers the entire surface of the body. The main function of the skin is to protect organism from environmental insults. In order to fulfil its function, the skin can initiate a defense process targeted at tissue repair and pathogen removal. However, an estrogen deficiency and decrease in collagen during menopause and natural aging reduce skin elasticity and strength. RJ constituents, especially 10-HDA, **can reduce cell aging** and **stimulate the production of procollagen** type I and transforming growth factor-1 (TGF- $\beta$ 1). Furthermore, Koya-Miyata et al. have shown a **beneficial effect of RJ on collagen production in skin** fibroblasts and an isolated active substance named the collagen production-promoting factor. The pharmaceutically active ingredients of RJ in collagen production were 10H-2DA and 10-HDA.

12. RJ is appreciated today as a protective agent against skin aging. Hence, according to the data provided, it seems that RJ could be an effective dietary supplement against the natural aging process of postmenopausal skin.

13. According to papers, RJ has many beneficial effects on cognition and AD pathology, **including the improvement of memory**, neuroprotection and regulation of neurotrophins, regulation of neurotransmission, regulation of brain energy metabolism, protection against oxidative stress and neuroinflammation, reduction of apoptosis, attenuation of A $\beta$ -induced neurotoxicity, and improvement of hormonal and metabolic abnormalities associated with cognitive impairment.

14. A recent study by Aslan et al. has shown that RJ (applied at a dose of 100 mg/kg bw during 56 days) **prevented fluoride-induced brain damage** via anti-oxidative effects. In addition, RJ reduced fluoride-induced increases in the expression of Bcl-2, NF- $\kappa$ B, and COX-2, and normalized the levels of caspase-3, caspase-6, Bax, and Erk.

15. Royal Jelly and Diabetes: **RJ contains compounds functionally and structurally similar to insulin**. Moreover, as one of the most powerful therapeutic formulations with regenerative features, RJ may **regenerate damaged pancreatic cells** and **prevent the development of diabetes**. The regeneration of pancreatic cells and preservation of insulin levels are key factors in lowering blood glucose.

✓ **In healthy volunteers, RJ significantly reduced serum glucose levels 2 h after ingestion.**

The same results are observed in diabetic patients. In particular, RJ intake **(3 g per day)** reduced serum glucose, increased serum apolipoprotein (Apo) A-I, and modified the ApoB/ApoA-I ratio following 8 weeks of supplementation.

Hence, it is likely that RJ contains biologically active substances with insulin-like activity. Similarly, Pourmoradian et al. demonstrated that supplementation with RJ (**1000 mg once a day** during 8 weeks) decreases FBG and serum glycosylated hemoglobin (HbA1c) levels and increases the insulin concentration in patients with type 2 diabetes.

They also observed the antioxidant effect of RJ evidenced through the **significant increase in SOD** and GPx activities in erythrocytes and a decrease in the MDA concentration. An increase in the total antioxidant capacity and a decrease in insulin resistance after RJ supplementation in patients with type 2 diabetes was also shown by Shidfar et al. ...

16. Positive Effect of RJ on Overweight and Obesity ; Obesity is one of the major health problem worldwide. Moreover, it is associated with increased cardiovascular risk factors such as dyslipidemia, glucose intolerance, and hypertension. A social context that encourages a sedentary lifestyle, easy, 24 h availability to high-energy food, and large portion sizes, are all components of the obesogenic environment, which is a contributing factor to obesity.

✓ According to Vajdi et al. supplementation with RJ reduces body weight (BW) and the body mass index (BMI) at the dosages **<3000 mg/day**. On the other hand, as mentioned previously, numerous data show that dietary supplementation with **RJ improves** oxidative stress, inflammation, lipid metabolism, and insulin sensitivity, suggesting its potential use in the prevention of obesity-related metabolic disorders.

Hence, RJ may be a novel promising food ingredient to **combat obesity** and metabolic disorders because it exerts its effects on fat accumulation and hepatic triglycerides without modifying food intake. RJ reduces the accumulation of body fat and restores glucose homeostasis.

✓ RJ increased leptin levels in obese adults. Leptin is a hormone that inhibits hunger and regulates energy balance.

According to Pandeya and co-authors, RJ may be a potential drug in the treatment of obesity.

17. RJ can be appreciated as a functional food for regulating blood pressure in people with hypertension. Moreover, the intake of RJ hydrolysates reduces a high cholesterol level and increases hemoglobin values in humans, thus having a positive effect on organism homeostasis.

18. More importantly, the oral use or injection of RJ reduced serum lipids and cholesterol in arteriosclerotic patients with moderately high cholesterol levels. Vittek reported the effect of RJ on the reduction of total lipids (around 10%) in serum and the liver, but also on the lowering of the cholesterol level (for 14%). RJ was used at a dose of 5–100 mg daily during at least 2 to 3 months.

19. The daily intake of RJ may help to normalize HDL-C, LDL-C, and total cholesterol (TC). In healthy volunteers, an intake of RJ (6 g/day during 4 weeks) decreased LDL-C and TC without affecting HDL-C and TG levels. In another study, Lambrinouadaki et al. analyzed cardiovascular risk markers in postmenopausal women after three months of RJ administration (150 mg daily).

20. Estrogen Effect of Royal Jelly: Mishima et al. have shown the weak estrogenic effect of RJ. In MCF-7 breast cancer cells with estrogen receptors, RJ increased the proliferation rate. Estrogen has an essential role in the bone metabolism, particularly in women. Accordingly, a lack of estrogen is the main factor of bone loss and the development of osteoporosis in postmenopausal women, whereas the dietary intake of phytoestrogens has been suggested as an option in the prevention of osteoporosis. RJ stimulated the proliferation of the same cells, as well as the production of type I collagen. RJ may be used as a dietary supplement in osteoporosis prevention.

21. Similar data were obtained in laying hens where RJ at doses of 100 or 200 mg/kg body weight attenuated the negative effects of senescence, improved the morphology of the reproductive tract, stimulated follicular growth and the rate of egg production, and improved the internal egg quality parameters in elderly laying hens.

22. In addition, RJ has an important role in the regulation of the hormonal balance. It increases the production of testosterone and estrogen.

- ✓ RJ (1 g/kg) can reduce premenstrual symptoms and improve quality of life in the menopause and postmenopause phase by relieving genito-urinary syndromes. Furthermore, RJ can alleviate postmenopausal symptoms such as hot flashes, night sweats, and other symptoms. In addition, menopause is characterized by estrogen depletion which affects the autonomic nervous system, leading to the development of neurodegenerative diseases like Alzheimer's disease, mood disorders (e.g., anxiety, depression), headaches, and low-back pain. Through its estrogenic activity, RJ significantly reduces these symptoms without side effects.

23. It should be emphasized that the content of antioxidants in RJ may overcome free-radicals-induced oxidative stress in women before getting pregnant. Good nutrition before conception can reduce the risk of complications at the time of conception that could threaten the health of the offspring. Stress that occurs in women during preconception may greatly affect the health of the mother and cause menstrual disorders, polycystic ovary syndrome (PCOS), and infertility. Oxidative stress in preconceived women can be treated with non-pharmacological therapy, one of which is RJ. Up to 20% of women of reproductive age are diagnosed with PCOS. PCOS is an endocrine disorder characterized by high androgens and ovulatory dysfunction, which consequently leads to infertility and mental illness such as anxiety and depression. Hamid et al. investigated the effect of RJ, applied at doses of 100 mg/kg, 200 mg/kg, and 400 mg/kg over a period of 4 weeks, on the hormonal profile of PCOS animal models. The most effective dose of RJ was 200 mg/kg which improved the regularity of the estrus cycle, histology and ovarian function, the level of reproductive hormones (LH, testosterone, FSH, and estradiol), as well as the antioxidant status of the ovaries (MDA, total antioxidant capacity (TAC), GPx). The authors suggested that royalactin is responsible for the histological changes of the ovaries. Furthermore, data showing the protective effect of RJ on the liver and kidneys through the reduction of lipid peroxidation and increased the GSH content, as well as the presence of 10-HDA which has an anti-inflammatory effect, indicating the potential of RJ in reducing oxidative stress. In addition, the positive effect of RJ could be due to its effect on the accelerated growth and development of follicles that secrete estradiol to stimulate the uterus, increasing the level of LH and triggering ovulation.

24. Effect of Royal Jelly on Spermogenesis: RJ improves fertility in both men and women. In men, it increases the quality of the sperm, whereas in women, it increases the quality of the ovules. Previous studies have shown that RJ increases the levels of male hormones, improves the sperm count, motility and morphology, and reduces the damage of the reproductive tract induced by various toxic stimuli. Shahzad et al. showed that RJ (0.1–0.3%) protects spermatozoa during freezing and increases their mobility. The increased motility of sperm after freezing may be due to the high

antioxidant capacity of RJ, as well as the presence of active biological amino acids such as aspartic acid, cysteine, glycine, cysteine, tyrosine, leucine, lysine, isoleucine, and valine. RJ treatment at a dose of 100 mg/kg/day for 4 weeks protected the testicular structure from the damaging effect of diabetic oxidative stress through its antioxidant effect, thus preserving male fertility.

25. The most important unwanted consequences or side effects of chemotherapy are: bone marrow suppression (myelosuppression or myelotoxicity); weakness, nausea, and vomiting; oral mucositis (inflammation of the mucous membranes in the mouth and throat), stomatitis (inflammation of the membranes and tissues in the oral cavity and the entire mucosa of the digestive tract), and esophagitis (inflammation of the mucous membrane of the esophagus); diarrhea and dehydration; constipation; allergic reactions and anaphylaxis; hair loss; extravasation (exit of cytostatics from the blood vessel into the surrounding tissue); changes in the sense of taste; anemia due to the reduced number of erythrocytes, shortness of breath, and chronic fatigue; bleeding and bruising as a result of thrombocytopenia; phlebitis (inflammation and the formation of clots in superficial veins); increased infection risk (due to the reduced number of leukocytes); febrile neutropenia (a result of a reduced number of granulocytes); cardiac toxicity, nephrotoxicity, and bladder damage; pulmonary toxicity; neurological toxicity; gonadal dysfunction; hepatotoxicity; induction of secondary tumors; and tumor rapid disintegration (lysis) syndrome, among others. The side effects can be as detrimental as the cancer itself and may greatly reduce one's quality of life. Moreover, the addition of other drugs to ameliorate the side effects of the anticancer therapy may trigger other health hazards. The polypharmacy may result in predictable and unexpected drug–drug interactions, posing the additional risk to the patient's health.

One of the main challenges in cancer therapy is to find effective drugs with minimal adverse effects. In that regard, natural products may minimize the unwanted side effects. They also may act synergistically with standard therapy, improve the efficacy of cytostatics, and improve the quality of life of cancer patients. Moreover, natural products, such as RJ, are readily available, economical, and relatively safe.

26. Antimicrobial Activity of Royal Jelly: Due to the huge problem of the rising resistance of microorganisms to known antibiotics, there is an urgent need for novel antibiotics with the advanced mechanisms of action on which microorganisms cannot develop resistance. In this decade, molds and bacteria have been investigated as the source of new antibiotics. Insects only recently became interesting to scientists as fat tissue and other insect cells produce numerous antimicrobial peptides that can be found in their hemolymph. Antimicrobial peptides (AMPs) are also present in RJ. In addition to antibacterial activity, these peptides show antiviral, antitumoral, immunoregulatory, and hepatoprotective effects as well. The cationic AMPs interact with the negatively charged membranes of various microorganisms and change their membrane electrochemical potential, which ultimately ends in bacterial death due to the disturbance of membrane integrity. Some examples of AMPs are royalisin, jelleines, and aspimin which are present in RJ in small amounts. The antifungal properties of RJ have been shown against *Aspergillus fumigants*, *Aspergillus niger*, *Candida albicans*, and *Syncephalastrum racemosum*. Finally, high concentrations of RJ are effective against *Pseudomonas Aeruginosa* which may be important when using RJ in the wound healing process. Furthermore, RJ can inhibit the growth of *Trypanosoma cruzi*, a parasitic protozoan. Its activity has been confirmed for another parasite, dysenteric amoeba. It effects flu viruses as well.

27. The health claims of RJ are supported for categories of diet and cardiovascular diseases, physical strength and fitness, diet and cancer, and mental health and effectiveness. In particular, a preventive intake of RJ at doses of 100 to 200 mg daily may enhance the health of the cardiovascular system by decreasing blood fats and cholesterol, the main cardiovascular risk factors RJ should be taken for 30 days and followed by 2-to-3-week break. After a break, it is recommended to restart with lower doses. Regarding physical strength, the intake of RJ may increase physical strength, fitness, and work ability, especially in the elderly (anti-age effect). Taking RJ also may decrease one's risk of cancer and enhance their mental status and physical effectiveness. Again, these effects are particularly important in the elderly.

### 369 Reference books / scientific studies - that lead off to thousands of other studies on Royal Jelly

1. Antioxidants in functional foods.
2. A study about physicochemical composition of fresh and lyophilized royal jelly.
3. Promoting Properties of Bee Royal Jelly: Food of the Queens.
4. Molecular and Cellular Mechanisms of Propolis and Its Polyphenolic Compounds against Cancer.
5. New Insights into the Biological and Pharmaceutical Properties of Royal Jelly.
6. Use of Royal Jelly as Functional Food on Human and Animal Health.
7. Current Status of the Bioactive Properties of Royal Jelly: A Comprehensive Review with a Focus on Its Anticancer, Anti-Inflammatory, and Antioxidant Effects.
8. Chemical composition of royal jelly.
9. The role of 10-hydroxy- $\Delta^2$ -decanoic acid in the formation of fibrils of the major royal jelly protein 1/apisimin/24-methylenecholesterol complex isolated from honey bee (*Apis mellifera*) royal jelly.
10. Quantitative Analysis of Apisin, a Major Protein Unique to Royal Jelly.
11. Major royal jelly proteins influence the neurobiological regulation of the division of labor among honey bee workers.

12. A review on Royal Jelly proteins and peptides.
13. Molecular Insights into Royal Jelly Anti-Inflammatory Properties and Related Diseases.
14. Biological properties and activities of major royal jelly proteins and their derived peptides.
15. Purification and characteristics of individual major royal jelly protein 1–3.
16. Architecture of the native major royal jelly protein 1 oligomer.
17. Royal Jelly Proteins and Their Derived Peptides: Preparation, Properties, and Biological Activities.
18. The MRJP/YELLOW protein family of *Apis mellifera*.
19. Evolution of the Yellow/Major Royal Jelly Protein family and the emergence of social behavior in honey bees.
20. Proteomic analysis of summer and winter *Apis mellifera* workers shows reduced protein abundance in winter samples.
21. 350-kDa royal jelly glycoprotein (apisin), which stimulates proliferation of human monocytes, bears the beta1-3galactosylated N-glycan.
22. Proteomic analysis of royal jelly from three strains of western honeybees (*Apis mellifera*).
23. Bioactive compounds and health-promoting properties of royal jelly:
24. A comparative transcriptome analysis of the head of 1 and 9 days old worker honeybees (*Apis mellifera*)
25. Comparative proteomics analysis of the head proteins of worker honey bees (*Apis mellifera*) in production stage of royal jelly.
26. Royal jelly-derived proteins enhance proliferation and migration of human epidermal keratinocytes in an in vitro scratch wound model.
27. Changes in hepatic gene expression associated with the hypocholesterolaemic activity of royal jelly.
28. Royal jelly has estrogenic effects in vitro and in vivo.
29. Antioxidant capacity of major royal jelly proteins of honeybee (*Apis mellifera*) royal jelly.
30. Honey bee Royalactin unlocks conserved pluripotency pathway in mammals.
31. The carboxyl-terminal penta-peptide repeats of major royal jelly protein 3 enhance cell proliferation.
32. Effects of long-term administration of royal jelly on pituitary weight and gene expression in middle-aged female rats.
33. Stimulation of cell growth in the U-937 human myeloid cell line by honey royal jelly protein.
34. Effect of royal jelly on bisphenol A-induced proliferation of human breast cancer cells.
35. Immunochemical approach to detection of adulteration in honey: Physiologically active royal jelly protein stimulating TNF-alpha release is a regular component of honey.
36. Royal jelly inhibits the production of proinflammatory cytokines by activated macrophages.]
37. Major royal jelly protein 3 modulates immune responses in vitro and in vivo.
38. Antimicrobial activity of the C-terminal of the major royal jelly protein 4 in a honeybee (*Apis cerana*)
39. Determination of (E)-10-hydroxy-2-decenoic acid content in pure royal jelly.
40. Multifunctionality and intrinsic disorder of royal jelly proteome.
41. How Honeybees Defy Gravity with Royal Jelly to Raise Queens]
42. A suggestion for royal jelly specifications.]
43. Royalactin induces queen differentiation in honeybees.
44. DNA methylation and expression of the egfr gene are associated with worker size.
45. Consumption of tyrosine in royal jelly increases brain levels of dopamine and tyramine and promotes transition from normal to reproductive workers in queenless honey bee colonies.
46. Long-term administration of Greek royal jelly improves spatial memory and influences the concentration of brain neurotransmitters in naturally aged Wistar male rats.
47. Epigenetics Mechanisms of Honeybees: Secrets of Royal Jelly.
48. Royal Jelly as a Nutraceutical Natural Product with a Focus on Its Antibacterial Activity.
49. Pheromone communication in honey bees (*Apis mellifera*)
50. Regulation of histone deacetylase 3 by metal cations and 10-hydroxy-2E-decenoic acid: Possible epigenetic mechanisms of queen-worker bee differentiation
51. Royalactin is not a royal making of a queen.
52. Chemical Characterization and Antioxidant Activity of Apilarnil, Royal Jelly, and Propolis Collected in Banat Region, Romania.
53. **Royal Jelly and Its Components Promote Healthy Aging and Longevity: From Animal Models to Humans.**
54. Potassium modulates electrolyte balance and blood pressure through effects on distal cell voltage and chloride.
55. **Essential metals in health and disease.**
56. Effect of Calcium Fortified Foods on Health Outcomes: A Systematic Review and Meta-Analysis.
57. **Health effects of high serum calcium levels.**
58. **The Fate of Major Royal Jelly Proteins during Proteolytic Digestion in the Human Gastrointestinal Tract.**
59. **Royal Jelly as an Intelligent Anti-Aging Agent—A Focus on Cognitive Aging and Alzheimer's Disease.**
60. **New Findings on Biological Actions and Clinical Applications of Royal Jelly.**
61. Royal Jelly Improves the Physicochemical Properties and Biological Activities of Fermented Milk with Enhanced Probiotic Viability.
62. Chemical composition of royal jelly and effects of synbiotic with two different locally isolated probiotic strains on antioxidant activities.
63. Antioxidant Potential of Propolis, Bee Pollen, and Royal Jelly: Possible Medical Application.
64. Integrated microbiomic and metabolomic analyses reveal the mechanisms by which bee pollen and royal jelly lipid extracts ameliorate colitis in mice.
65. Structures and properties of antioxidative peptides derived from royal jelly protein.
66. Antioxidant Activity in Bee Products: A Review. Antioxidants.
67. Royal jelly enhanced the antioxidant activities and modulated the gut microbiota in healthy mice.
68. 10-hydroxy-2-decenoic acid of **royal jelly** exhibits bactericide and anti-inflammatory activity in human colon cancer cells.
69. **Honey Bee Products: Preclinical and Clinical Studies of Their Anti-inflammatory and Immunomodulatory Properties.**
70. Anti-inflammatory effects of royal jelly on ethylene glycol induced renal inflammation in rats.
71. Proteomic characterization of royal jelly proteins in Chinese (*Apis cerana*) and European (*Apis mellifera*) honeybees.
72. Royal Jelly Protected against Dextran-Sulfate-Sodium-Induced Colitis by Improving the Colonic Mucosal Barrier and Gut Microbiota.
73. Major royal-jelly proteins intake modulates immune functions and gut microbiota in mice.
74. Effect of Royal Jelly on Mouse Isolated Ileum and Gastrointestinal Motility.
75. Can probiotics modulate human disease by impacting intestinal barrier function?
76. Effects of Major Royal Jelly Proteins on the Immune Response and Gut Microbiota Composition in Cyclophosphamide-Treated Mice.
77. The Role of Free Fatty Acid Receptors in the Immune System.
78. The Chemical Biology of IL-12 Production: Via the Non-Canonical NFkB Pathway.
79. The Nuclear Factor Kappa B (NF-KB) Signaling in Cancer Development and Immune Diseases.
80. Effects of Royal Jelly on Gut Dysbiosis and NAFLD in *db/db* Mice. Nutrients.
81. Non-alcoholic fatty liver disease: The role of nuclear receptors and circadian rhythmicity.
82. Royal jelly attenuates nonalcoholic fatty liver disease by inhibiting oxidative stress and regulating the expression of circadian genes in ovariectomized rats.

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357. pH-dependent stability of honey bee (*Apis mellifera*) major royal jelly proteins.
358. Sugar composition of French Royal Jelly for comparison with commercial and artificial sugar samples.
359. A targeted approach for studying the effect of sugar bee feeding on the metabolic profile of Royal Jelly.
360. Development and validation of an analytical methodology based on solvent extraction and gas chromatography for determining pesticides in royal jelly and propolis.
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364. The Fertility Outcome of Royal Jelly versus Intra Uterine Insemination: A Pilot Randomized Controlled Trial Study, Jundishapur.
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366. Effect of oral intake of royal jelly on endothelium function in hemodialysis patients: Study protocol for multicenter, double-blind, randomized control trial. Trials.
367. The Effects of The Royal Jelly on Dry Mouth Sensation with Normal Saliva Function: A Double-Blind, Placebo-Controlled, Cross-Over Trial Clinical Study.
368. The effect of royal jelly on the level of consciousness in patients with traumatic brain injury: A double-blind randomized clinical trial. Nurs. Midwifery Stud.
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Among the most common neurological diseases is multiple sclerosis (MS) mainly occurring in young adults and more frequently in women . As a chronic inflammatory disease, it is identified by demyelinating lesions in the brain, spinal cord, and ophthalmic nerve. It is estimated that 250,000 to 350,000 individuals in the United States of America are diagnosed with MS, and about 200 new cases of MS are diagnosed almost every week. Several studies comparing the life quality of these patients and those with other chronic diseases, such as epilepsy, diabetes, rheumatoid arthritis, and inflammatory bowel disease, demonstrated that patients with MS had significantly lower quality of life. Although the usual treatment of these patients can decrease the recurrence, severity, and progress of the disease, it has a minimal effect on signs, functional recovery, and life quality of these patients; therefore, they usually seek different methods of treatment.

- ✓ One of the bee products is royal jelly, which is full of minerals and vitamins B, E, and sex hormones, and its gamma-globin strengthens the immune system. In addition, it is useful for the treatment of weakness, weight loss, and reduction of anorexia, stress, and insomnia. Since apitherapy has been used in many cultures, bee products, such as royal jelly, are used for the treatment of a range of diseases (e.g., arthritis, MS, central and peripheral nervous system diseases, in addition to heart and blood system diseases).

Note: Royal Jelly is a “food” made by bees. Dr. Cass Ingram wrote 30 health books and Royal Jelly is the subject of his Longevity Book. It is the best / modern book to learn about Royal Jelly.

**Royal Jelly / Mountain Top Wild Oregano Oil / Wild Chaga Mushroom / Natural Vitamin C rich herbs / B rich herbs**  
Herbs suggested by Dr. John R. Christopher’s books and Dr. Cass Ingram’s books----“ALL” work better when used with Royal Jelly. All great herbs / foods are taken daily for Longevity!

**People are poisoned in endless ways, what has accumulated inside them, poisons them and feeds parasites!**

**Self-Applied Prevention**

**Self-Learning**

**No one cares about your health more than you do!**

**You and You alone decides what to eat, drink, take and do. You are in control of you!**