

Allergy Support

According to the American College of Allergy, Asthma, and Immunology, as many as 50 million people (1 in 5 Americans) have allergies. An allergy is an immune reaction to something that your body perceives as an invader. The body mounts a defense against the perceived invader. The defense involves endogenous chemicals that produce characteristic allergic symptoms. An allergen is usually benign, such as food, pollen, dust mites, or mold.



Symptoms vary depending on where the allergic reaction occurs: nose, mouth, skin, throat, stomach, and/or intestines. Symptoms can include itchiness, redness, swelling, discharge from eyes or nose, wheezing, hives, vomiting, stomach cramps, diarrhea, indigestion, difficulty swallowing, cough, shortness of breath, dizziness, and more.

The term “allergy” refers to a specific immune reaction mediated by a particular antibody called IgE, or immunoglobulin E. Antibodies are protein components of our immune system. IgE produces an immediate hypersensitivity reaction characterized by the symptoms noted above. Allergy involves exaggerated, uncontrolled formation of IgE antibodies. IgE travels through the blood and binds to basophils and mast cells (components of immune system) which release chemical messengers like histamine, prostaglandins, and leukotrienes. This produces inflammatory/allergic symptoms: heat, redness, swelling, etc. Allergies can be associated with free radical damage (oxidative stress). Oxidative stress occurs as a result of inflammation.

Other antibodies (like IgG, IgM, and IgA) can produce delayed immune reactions & inflammation: a delayed hypersensitivity reaction. This reaction can be caused by food, for example. These reactions are more accurately called ‘intolerances’ or ‘sensitivities’ rather than ‘allergies.’ Cell-mediated food reactions are also common, such as intolerance to milk (casein or lactose intolerance) or soy.



A 2012 article published in the journal *Immune Network* correlated hyper-immune disorders like asthma, allergies, and atopic dermatitis with the hygiene hypothesis: a lack of early childhood exposure to diverse microorganisms causing increased susceptibility to allergic diseases. The “hygiene hypothesis” is a compelling theory suggesting that excessive cleanliness in the developed world, seen particularly among higher income level populations and those living in urban or suburban areas, disrupts normal immune system development

leading to an increase in allergies to food and environmental triggers. Exposure to germs, soil, and certain infections contribute to normal immune system development, whereas cultural/social choices that excessively avoid exposure to germs and dirt allow different parts of the immune system to dominate, promoting an allergic constitution.

Nutritional Frontiers Allergy Solutions



AirMaxx

was designed to support proper respiratory function.*This supplement contains ingredients to maintain histamine levels within normal ranges* AirMaxx is used for itchy skin, eyes, and nose; congested and runny nose; splotchy, red skin; and discomfort associated with skin irritation and respiratory dysfunction. AirMaxx contains Vitamin C (as Ascorbic Acid), Quercetin, Bromelain, N,N-Dimethylglycine HCl, Perilla Seed Extract (yielding: Polyphenols, rosmarinic acid, luteolin).

Quercetin is a flavonoid with many biological effects, including anti-allergy activity. It reduces the effects of histamine in the body. Weng and colleagues studied quercetin and the pharmaceutical drug cromolyn (a mast-cell stabilizer). They found that both inhibited secretion of histamine, prostaglandins, & leukotrienes. Quercetin was more effective than cromolyn in inhibiting some inflammatory mediators. Also, quercetin was effective prophylactically, while cromolyn can only be used acutely or it rapidly loses its effect. In another study, a quercetin product reduced allergic eye symptoms caused by pollen.

Bromelain may help relieve swelling and discomfort, as well as increase absorption of quercetin. Together, quercetin and bromelain work to help reduce discomfort associated with respiratory dysfunction and skin irritation.*

Vitamin C helps to regulate the production of histamine.* Vitamin C works with quercetin to support the reduction of histamine levels and minimize discomfort associated with allergic responses.*

Perilla Seed Extract (yielding Polyphenols, Rosemarinic Acid and Luteolin) is used to support histamine levels.* Perilla may help reduce discomfort associated with histamine release including skin irritation, redness, sneezing, stuffy nose, overproduction of phlegm, skin and eye irritation, and runny nose.* Animal & in vitro studies show that rosmarinic acid reduced allergic inflammatory reaction by decreasing IgE and histamine, which suggests benefits for allergic rhinitis and allergic rhinoconjunctivitis. Another animal study shows benefits of rosmarinic acid in allergic asthma. Luteolin, a flavonoid found in certain plants & foods, may have anti-allergic effects. Kang & colleagues found it inhibits inflammatory mediators and therefore may have a regulatory effect on diseases like allergies, RA (rheumatoid arthritis) and inflammatory bowel diseases.

Dimethylglycine (DMG) is an antioxidant that supports the proper function of the immune and respiratory systems.* DMG modulates cytokine production, is anti-cancer, anti-inflammatory, and a methyl donor.* DMG also enhances athletic performance by improving oxygen utilization. It supports overall body health both as a methyl donor and by assisting the biosynthesis of vitamins, hormones, neurotransmitters, antibodies and nucleic acids.



Rad Free

is used to manage free radical damage.*Rad free may support allergies, immune health, energy production, capillary integrity (hemorrhoids, varicose veins), skin, bruising, nose bleeds, and cardiovascular health.*The free radical-fighting ingredients include ActiVin®, bioflavonoid complex, resveratrol, quercetin, and glutathione.

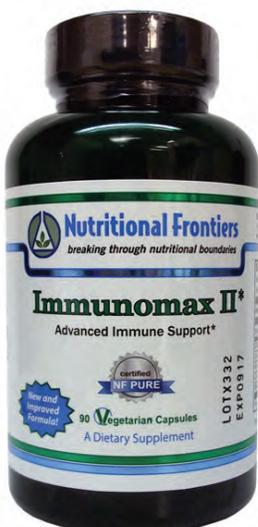
ActiVin® is a novel grape seed proanthocyanidin extract. Many research studies have shown that ActiVin® possesses a wide range of antioxidant, chemoprotective, and biological properties. It also demonstrates benefits as an anti-microbial, antioxidant, & anti-inflammatory agent. These benefits can be helpful in people with allergies who may have higher free radical production.

Bioflavonoids are a group of plant pigments that are responsible for the colors of many flowers and fruits. Citrus bioflavonoids are found in citrus fruits such as lemon, orange, tangerine, grapefruit, etc. These substances possess antioxidant activities, which help fight poor health and aging. Studies show that flavonoids can have an anti-allergic effect. Rutin (a flavonoid) was shown in a rodent study to reduce atopic dermatitis & allergic contact dermatitis. Rutin reduced serum IgE levels, IgG levels, and various interleukins (inflammatory mediators).

Tanaka (2013) reports that flavonoids inhibit the activation of mast cells and basophils thereby suppressing release of chemical inflammatory mediators. Various studies of flavonoids in allergic models such as asthma, atopic dermatitis, anaphylaxis and food allergy demonstrate their beneficial effects. For example, animal studies show that administration of flavonoids can inhibit IgE synthesis and mast cell degeneration, decreasing allergic symptoms. They can also reduce airway responsiveness in allergic asthma, decrease histamine and cytokines, and reduce expression of IgE receptors on cells.

Resveratrol is a naturally occurring compound found in grapes and red wine as well as nuts. Studies show the benefits of resveratrol in reducing allergy mechanisms and symptoms.

Glutathione is an endogenously produced tripeptide, made from glycine, glutamate, and cysteine. It plays an important role in detoxification and as an antioxidant, and helps reduce oxidative stress. Research shows that people with allergic rhinitis and asthma may have reduced levels of glutathione. Furthermore, asthma and allergic rhinitis are associated with increased oxidative stress in the airways in children.



Immuno Max

is especially indicated for those people with allergies who also get sick frequently or have trouble recovering from infectious disease. This formula contains Dimethylglycine HCl (DMG), Larix occidentalis, Maitake PD-Fraction, Beta 1,3 Glucan, and Olive Leaf Extract.

Vitamin D is a fat-soluble vitamin that is essential for maintaining normal calcium metabolism. Vitamin D3 (cholecalciferol) can be synthesized by humans in the skin upon exposure to ultraviolet-B (UVB) radiation from sunlight, or it can be obtained from the diet.

DMG, according to numerous studies, can help maintain a strong immune system by supporting increased resistance to invading microorganisms and enhancing antibody and lymphocyte production. Three U.S. Patents have been awarded based on extensive research on DMG's role in immune response.

Arabinogalactans, which supports the immune system by increasing the number of immune cells and limiting unhealthy cell replication.

Maitake mushroom is a highly concentrated source of Beta-1, 6-Glucans which research has found stimulates the body's first line of defense, including macrophages and natural killer cells. Maitake D-Fraction® has been extensively researched, and is one of the most comprehensive immune support formulas available. There is no other formula on the market that is more pure or potent and it is the only Maitake product that has been approved by the FDA for conducting phase 2 clinical studies (IND #54,589).

Olive Leaf Extract works directly against unwanted materials by stimulating your own protective cells (phagocytes) to ingest them without suppressing the immune system or damaging the body's beneficial flora.

Beta-1, 3- Glucans are shown to activate B-Cells and T-Cells. Although derived from yeast there are no yeast proteins in it. The Beta Glucans are made from the cell walls of baker's yeast, which is then purified, and free of allergenic material.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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