

ImmuneGenic

Immune Support

Alimentum Labs

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Immune Support

Formulated for proper immune system function by supporting healthy *IL-6*, *TNF*, *CD4*, and other gene expression while providing AREDS2-based nutrients plus vitamin D3 and K2 for overall immune health.



Immunity



Brain



Whole Body



Gut

Health Indications

- Promote Autoimmune Regulation
- Reduce Reactions to “Die-Off” from Detoxing
- Provide “Drainage” and Lymphatic Support
- Enhance Heavy Metal Elimination
- Reduce Concurrent Infections
- Alleviate Allergy Symptoms
- Inhibit Respiratory Infections
- Provide Antibiotic-Induced Microbiome Support

Instructions For Use

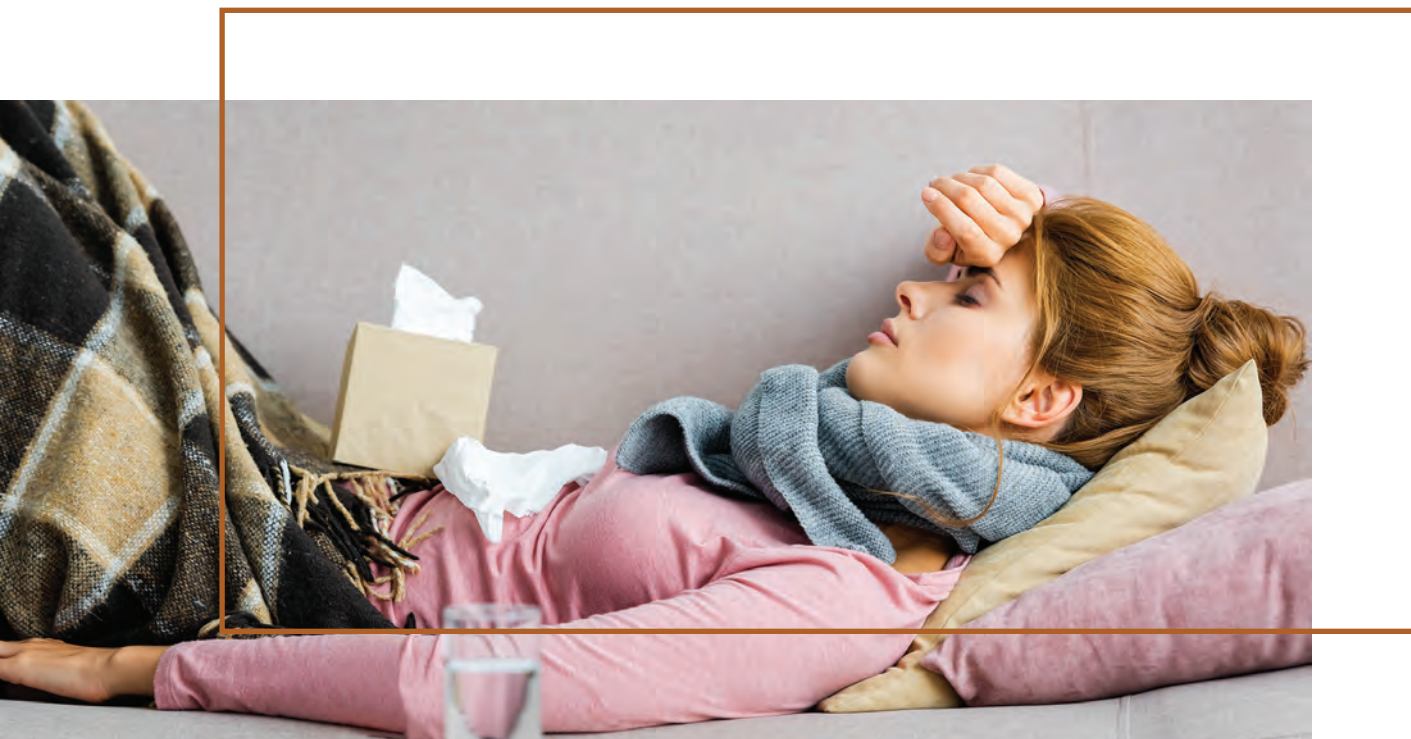
Take 2 capsules daily, with or without food, or as directed by your health care provider. It is highly recommended to use ImmuneGenic as part of a protocol that also includes Immune μ Biotic and Immune Superfood.

**Individual needs may vary; please consult your practitioner before altering the prescribed doses or protocols.

Product Description

Personal genetics are a significant factor in autoimmune disorders and immune system function. Specific genes known as immune-related genes (IRGs) are directly linked to the development or management of autoimmune conditions. These genes can be directly influenced by poor dietary choices, such as diets high in processed foods, sugar, and unhealthy fats, which can lead to inflammation and autoimmune responses.¹

Factors such as sedentary lifestyles, a lack of exercise, and inadequate sleep can weaken the immune system, making individuals more susceptible to illness. Additionally, exposure to environmental toxins, like pollutants and chemicals, can trigger or worsen autoimmune conditions. Certain infections, especially viral ones like Epstein-Barr, have also been associated with an increased risk of autoimmune diseases. This interplay between genetics and lifestyle contributes significantly to individual susceptibility.



ImmuneGenic aims to support the immune response through the regulation of immune system–related gene expression. ImmuneGenic can be taken to address any autoimmune concern as it supports the regulation of a healthy inflammation response and immune cell production and function. This formula can also help the immune system in fighting off infections like the common cold and flu, as well as other lingering viral, bacterial, and fungal infections.

Keep in mind, ImmuneGenic contains vitamin D3 and synergistic vitamin K2, along with minerals, amino acids, and herbal ingredients that facilitate vitamin D3's receptivity. This combination helps quickly regulate vitamin D levels in the body, making ImmuneGenic a must–have choice to increase or maintain vitamin D levels.

ImmuneGenic also contains ingredients that support eye health. "AREDS" stands for the renowned Age–Related Eye Disease Study, a series of clinical trials conducted by the National Eye Institute (NEI) to explore the influence of specific nutritional supplements on age–related macular degeneration (AMD) and cataracts. The AREDS and AREDS2 studies investigated nutrients like antioxidants and zinc, identifying a combination that promotes eye health. Leveraging these findings, our product incorporates the same ingredients tested in the AREDS studies.

While originally designed for immune system support, ImmuneGenic can also benefit those with eye conditions, as the ingredients align with the formulations of AREDS2, supporting both ocular and nervous system health.²



Key Elements and Features of ImmuneGenic

Autoimmune Regulation

Through the modulation of specific genes called IRG's, or immune-related genes, ImmuneGenic supports the regulation of the immune system by promoting healthy inflammatory responses, as well as proper immune cell production and function.

Fights Difficult, Lingering, and Recurrent Infections

ImmuneGenic helps the immune system fight off infections like the common cold and flu, as well as other lingering viral, bacterial, and fungal infections.

Increases Vitamin D Levels

ImmuneGenic contains crucial and necessary cofactors that many supplement companies refuse to include due to their expense. Overuse of vitamin D3 without concurrent supplementation of vitamin K2 can result in a decline in heart and bone health.

Reduces Brain and Systemic Inflammation

ImmuneGenic contains nature's most powerful array of antioxidants and phytochemicals, enhancing the body's most vital cellular activities and providing a powerful inflammation-reducing process. ImmuneGenic also provides impressive full-body neuroprotective effects, protecting the brain from neurodegeneration and neuroinflammation.

Supports Eye and Brain Health

Modern living, with its constant exposure to blue light and environmental toxins, and the natural aging process, can collectively impact eye health. These factors, coupled with the body's immune system responses, contribute to the oxidative stress that affects the macula, optic nerve, and brain. ImmuneGenic contains ingredients from the famous AREDS2 study, meaning it is clinically proven to protect, maintain, and support all aspects of visual neurology. Clinical studies have shown improvements in age-related macular degeneration (AMD) with the supplementation of these ingredients.



Gene Spotlight

There are hundreds of genes involved in the complex web of the immune system. Ensuring that each of them can be expressed effectively ensures an immune system that is ready to defend against pathogens without harming the body with overexpression. ImmuneGenic was designed with particular genes in mind that have a wide-reaching, yet specific beneficial impact on the immune system.

Genetic Interactions

***ARMS2* (Age-Related Maculopathy Susceptibility 2) Gene**

The *ARMS2* gene has been heavily implicated in age-related eye disease. It is involved in the immune system and clearing cellular debris, which is particularly important in the eye. When the *ARMS2* gene doesn't function properly, cellular debris, inflammation, and plaques can build up in the eye and affect vision.^{3,4}

***CFH* (Complement Factor H) Gene**

The *CFH* gene encodes a protein that works in conjunction with other proteins and cells in the immune system to ensure that they work properly. It helps to distinguish between damaged cells, cellular debris, invading organisms, and foreign matter from healthy functioning cells. When this protein doesn't function correctly, it can cause the immune system to over-respond, leading to an attack on healthy tissues. It is a known partner to the *ARMS2* gene involved in age-related eye diseases.^{4,5}

***TNF* (Tumor Necrosis Factor) Genes**

Tumor necrosis factors (TNFs) are a group of cytokines (small signaling proteins) produced by various cells in the body, including immune cells. They play a crucial role in regulating the immune system and inflammatory responses, exhibiting both pro-inflammatory and

anti-inflammatory effects depending on the context in which they operate. *TNF* genes, particularly *TNF-alpha*, are critical for regulating immune responses. Furthermore, their modulation has been proven to be beneficial in managing certain autoimmune conditions.⁶

***IL* (Interleukin) Genes**

Interleukins (IL) are a large group of cytokines, which are signaling molecules that play a crucial role in regulating the immune system and mediating communication between immune cells. There are numerous types of interleukins, each with specific functions. The interplay of various interleukins, immune cells, and genetic factors can influence the development of autoimmune diseases and overall immune response. Interleukin genes and proteins play a pivotal role in immune system regulation, with varying pro-inflammatory or anti-inflammatory effects. Dysregulation can lead to autoimmune conditions, and targeted interventions hold promise in managing these diseases by modulating the immune response.⁷

***IFN* (Interferon) Genes**

Interferons (IFNs) are a group of signaling proteins or cytokines that play a crucial role in the immune system's response to infections, particularly viral infections. They are produced and released by various cells in the body, primarily in response to the presence of pathogens such as viruses, bacteria, and other microorganisms. Interferons have a broad range of functions, from limiting viral replication to activating immune cells and regulating inflammation, ultimately helping the body fight off pathogens and maintain immune system balance. Interferon genes code for these IFN proteins.⁸

HLA (Human Leukocyte Antigen) Genes

These genes are critical for the functioning of the immune system and play a central role in antigen presentation, T cell activation, and distinguishing between the body's healthy cells from unhealthy cells or intruders. They are extremely important when it comes to disease susceptibility, and autoimmune conditions.⁹

CD4 and CD8 (Clusters of Differentiation) Genes

These genes encode cell surface receptors found on T cells (CD4+ and CD8+ T cells); CD4 is primarily found on helper T cells, while CD8 is found on cytotoxic T cells. These receptors are highly involved in the immune response as they facilitate the recognition and activation of immune cells.¹⁰

Ig (Immunoglobulin) Genes

These genes are responsible for encoding immunoglobulins (antibodies), which play a central role in the adaptive immune response by recognizing and neutralizing pathogens. Variations in *Ig* genes can affect the production and function of these antibodies.¹¹

TLR (Toll-Like Receptor) Genes

These genes code for a class of proteins that play a crucial role in the innate immune system by recognizing specific molecular patterns associated with pathogens. Various phytochemicals and herbal compounds have been studied for their potential to modulate *TLR* gene expression and the TLR-mediated immune response.¹²

How ImmuneGenic Works

The two most important factors to the immune system are genetics and the microbiome. ImmuneGenic focuses on the genetic aspect of the immune system. The ingredients used are meant to regulate the multiple genes that influence immune system functions. ImmuneGenic also contains vitamin D to help the “adaptive” immune response maintain its innate balance with the body’s “acquired” immune system processes. Additionally, it contains the necessary vitamin K2, which should always accompany vitamin D supplementation when aiming to increase or maintain healthy vitamin D levels crucial to immune function.



Key Ingredients

Non-Provitamin A (Lycopene, Lutein, Astaxanthin, and Zeaxanthin)

Non-provitamin A carotenoids, unlike beta-carotene, don't convert to vitamin A in the body. However, they have other vital functions that indirectly impact the immune system. They support immune cell health, maintain mucosal surfaces, and can affect genes related to inflammation and immune cell function, including those coding for cytokines like IFN-gamma and IL-2, which are crucial for T-cell activity and differentiation.¹³ Lutein and zeaxanthin specifically are part of the AREDS2 formulation.

Propionyl-L-Carnitine

Supplementing L-Carnitine stimulates the immune system by enhancing the health and function of immune cells. It can reduce inflammation caused by infections and protects lung tissue during illness.¹⁴

Taurine

Taurine can boost white blood cell count even during chemotherapy. It acts as a protective agent for organs during oxidative stress and injury; it's particularly known for its powerful protective effects on the heart. Taurine is a key component in neutrophils, making up about half of their amino acids. It serves two main roles: reducing inflammation and acting as an antioxidant. Neutrophils produce reactive oxygen species (ROS) to combat pathogens, including hypochlorous acid (HOCl). Taurine reacts with HOCl to create a less harmful substance called taurine chloramine (TauCl), which both acts as an antioxidant and reduces inflammation.^{15,16}

Resveratrol

Resveratrol, found in parts of plants like red grapes, has multiple beneficial effects on the body. It targets sirtuin genes involved in energy production, promotes antioxidant activity, and regulates the expression of inflammatory cytokines. It also regulates toll-like receptor 4 (TLR4), which is known for recognizing lipopolysaccharides (LPS) found on the surface of gram-negative bacteria.¹⁷

Epigallocatechin Gallate (EGCG)

EGCG, found in green tea, has been studied for its potential immunomodulatory effects in helping autoimmune conditions, including its ability to influence the production of antibodies such as IgE and IgG. It has also been shown to modulate TLR expression and activity to aid in fighting off pathogens.^{18,19}

Curcumin

Curcumin, derived from turmeric, has the ability to regulate the expression of toll-like receptor (*TLR*) genes, particularly *TLR4*. By reducing *TLR4* expression, curcumin may help modulate the inflammatory response to lipopolysaccharides (LPS) and other *TLR4* ligands.²⁰

Vitamin D3

Vitamin D upregulates normal immune processes and produces over 200 peptides used in microbial relations, including cathelicidin, a naturally occurring peptide necessary for overall immune health. It also helps ensure the absorption and bioavailability of calcium and phosphorus, which are necessary for normal bone maintenance, as well as supports hundreds of cell receptors that require vitamin D.²¹

Vitamin E

Vitamin E is a fat-soluble antioxidant that is important for brain, nerve, blood vessel, heart, liver, skin and immune health. As part of the AREDS2 formulation, vitamin E deficiency greatly impairs the function of immune cells and the immune system as a whole. Supplementation with vitamin E can improve immune function, especially in immunocompromised individuals.^{4,22}

Vitamin K2 MK-7

Vitamin K2 is primarily produced by the beneficial microbes in the gut. Due to modern diets and environmental exposures, many people experience a dysfunctional gut that struggles to produce adequate levels of micronutrients like vitamin K2. It serves as a cofactor for certain proteins involved in the immune system, particularly those associated with T cells and toll-like receptors (TLRs). Studies have reported its ability to suppress inflammatory reactions in individuals with autoimmune conditions.^{23,24} As mentioned above, it is important to combine vitamin D supplementation with vitamin K2 for optimal benefits.

Vitamin A

Vitamin A is necessary for a strong immune system, good vision, and healthy skin. It is known to have an integral role in both branches of the immune system, innate and adaptive.²⁵

Zinc

Zinc plays a crucial role in the immune system by supporting immune cell development, function, and response to pathogens. As part of the AREDS2 formulation, it acts as a cofactor for various enzymes and transcription factors involved in immune cell activation. Zinc can also help regulate the balance between pro-inflammatory and anti-inflammatory processes, leading to reduced inflammation.^{4,26}

Copper

Copper is an essential trace element that significantly affects the development and function of the immune system.²⁷ It has been included as part of the AREDS2 formulation to avoid zinc-related copper deficiency, which can result in neurological deficit and anemia.²⁸

Rosmarinic Acid

The polyphenolic compound rosmarinic acid exhibits numerous biological activities, including antiviral, antibacterial, antioxidant, antimutagenic, and anti-inflammatory effects.^{29,30}

Bilberry

Anthocyanins in bilberries exhibit anti-inflammatory properties by reducing the expression of tumor necrosis factor (TNF)- α , interleukin (IL)-6, and IL-1 β , stimulating nitric oxide synthases and cyclooxygenases, and modifying the nuclear factor kappa B and Janus kinase-signal transducer and activator of transcription signaling pathways.³¹

Inositol

Inositol is a crucial component in the regulation of immune cell development.³²

Maqui Berry

Polyphenolic compounds in maqui berries have shown great nutraceutical potential by regulating antioxidant and anti-inflammatory pathways.³³ Anthocyanins found in maqui berries also show promise as antifungal agents.³⁴

Warnings/Contraindications

When used as directed there are no known contraindications for ImmuneGenic.

It is always recommended that you consult your practitioner prior to adding any new supplement to your regimen if you are pregnant, breastfeeding, experiencing renal failure, undergoing an organ transplant(s), managing diabetes with insulin, or are taking medication(s) for any pre-existing conditions.

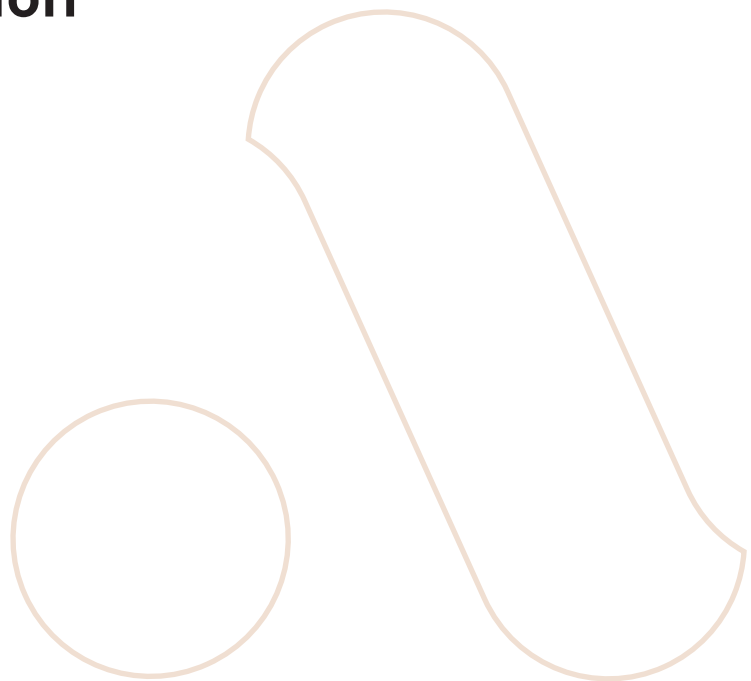
Safety

All ingredients are tested before use for:

- Pathogenic microbial contaminants
- Heavy metals and/or chemical contaminants
- Purity

Additional Information

- Gluten Free
- Dairy Free
- Vegan
- No Sugar
- Non-GMO
- cGMP Facility
- No Egg



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