Immunity

DESCRIPTION

Immunity provides powerful immune-supportive ingredients such as the well-tolerated and absorbed Ester-C®, Vitamin D3, zinc, and a special proprietary blend of phytonutrients. This formula, designed by Douglas Laboratories' Clinical Advisor Dr. Julie Chen, is to be taken at the very first sign of wanting increased immune support.

FUNCTIONS

The immune system is strongly influenced by the intake of nutrients. Specific vitamins, minerals, and plant extracts have been shown to influence the body's immune reaction and cell activity. The innate immunity as the first line of defense represents a natural protection. The innate immune system is made up of leukocytes (white blood cells) which include the phagocytes (macrophages, neutrophils, and dendritic cells), mast cells, eosinophils, basophils, and natural killer cells. Innate cells are also important mediators in the activation of the adaptive immune system. The cells of the adaptive immune system are special types of leukocytes, called lymphocytes. B cells and T cells are the major types of lymphocytes; B cells are involved in the humoral immune response, whereas T cells are involved in cell-mediated immune response.

It is now clear that cells from the immune system are necessary to convert 25-hydroxyvitamin D to active 1,25-dihydroxyvitamin D. Mechanisms such as this are important for promoting immune responses in macrophages, and for regulating the maturation of antigen-presenting dendritic cells. T-cells also exhibit direct responses to 1,25-dihydroxyvitamin D. Therefore, vitamin D is a key factor linking innate and adaptive immunity which may be compromised under conditions of vitamin D insufficiency.

Zinc is known as an essential trace mineral because humans require it in very small amounts. Zinc directly affects immune function and even a mild zinc deficiency suppresses immunity. Natural killer (NK) cell activity, phagocytosis of macrophages and neutrophils are affected by zinc levels. Zinc activates T-cell function and influences TH1 cytokines.

The major role of vitamin C is the protection of the immune cells against free radical damage. Vitamin C concentrations in the plasma and leukocytes rapidly decline during acute illness and stress. Ester-C® is a unique form of vitamin C that is created through a patented, water-based process that combines vitamin C and calcium ascorbate. Ester-C® is non-acidic and should be well-tolerated by those who are sensitive to the acidic nature of ascorbic acid.

Andrographis is a shrub found throughout India and other Asian countries that is sometimes called "Indian echinacea." It is useful for general immune support and has been shown in research to be immune-supporting to individuals during the winter months. Used since ancient times in Traditional Chinese Medicine, Astragalus is an important supplement for both eastern and western herbalists. Often used in combination with other herbs, Astragalus has many uses, but is mostly known for its immune-stimulating properties. Numerous studies have indicated that Astragalus can have beneficial effects on the immune system by binding and activating B-cells and macrophages, stimulating lymphocytes and providing antioxidant activity.

Healthy immune function can also be maintained by supporting a well balanced production of cytokines. Studies using black elderberry have indicated that it may have effective immuno-protective abilities, including supporting a balanced production of cytokines. Honeysuckle *(Lonicera japonica*) has also been reported for its immuno-protective properties. Honeysuckle promotes the production of natural interferon, which is thought to support the function of natural killer cells (NKs). Study results suggest that Spirulina supports the immune response, particularly the primary response, by stimulating macrophage functions, phagocytosis, and IL-1 production. Garlic contains a wide spectrum of organic sulfur compounds that are thought to play important

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roles in health. The most important garlic sulfur compound appears to be allicin due to its chemical reaction with thiol groups of various enzymes. Research shows that garlic supports normal immune function, host defense, and possesses antioxidant properties.

INDICATIONS

Immunity is a dietary supplement indicated for support of the body's immune system response.

FORMULA (#202018-60X)

Serving Size 4 Vegetarian Capsules

Vitamin C (as Ester-C® calcium ascorbate and rosehips) .....1,000 mg
Vitamin D-3..... 1,000 IU
Zinc (from Zinc Glycinate chelate)....10 mg
Copper (from copper chelate) .....1 mg
Proprietary Blend.....1,353 mg
Andrographis extract (15:1, *Andrographis paniculata*, aerial parts), Black Elderberry Fruit (standardized to contain 30% Anthocyanins), Astragalus extract (10:1, root), Honeysuckle (*Lonicera japonica*, flowers), Garlic (bulb), Spirulina (algae)

Other ingredients: Hydroxypropyl methylcellulose (capsule), cellulose, vegetable stearate and silica

SUGGESTED USE

Adults take 4 capsules at the very first sign of wanting immune support; may take 4-8 capsules per day as needed for acute immune support, or as directed by your healthcare professional. Adults may take 2 capsules daily for on-going immune support.

*Please always see your doctor for evaluation if concerning symptoms are severe or persistent.
Please check with pediatrician prior to use for children.

WARNING: Pregnant or lactating women and people with known medical conditions and/or taking drugs should consult with a licensed physician and /or pharmacist prior to taking this product.

SIDE EFFECTS

No adverse effects have been reported.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

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For more information on Immunity, visit douglaslabs.com

† 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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Your patients trust you.**

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