

For consumer information only

VitalimeTM-Plus

(Vitamin C (Ascorbic Acid) 40 mg + Citrus Aurantifolia Juice Extract 55% (Nimbuca) 300 mg + Phyllantos Emblica Leaf Extract (Amla) 160 mg + Elemental Zinc 5 mg + Vitamin D 400 IU + Vitamin A 600 mcg + Curcumin Extract 50 mg + L-Selenomethionine 200 mcg Chewable Tablet)

Composition:

Each serving Chewable tablet contains (Approx):		% RDA*
Vitamin C (Ascorbic Acid).....	40mg	100
Citrus Aurantifolia Juice Extract 55% (Nimbuca).....	300mg	**
Phyllantos Emblica Leaf Extract (Amla).....	160mg	**
Elemental Zinc.....	5mg	42
Vitamin D.....	400 IU	100
Vitamin A.....	600mcg	100
Curcumin Extract.....	50mg	**
L-Selenomethionine.....	200mcg	**
Excipients.....	q.s.	
* Based on ICMR Guidelines ** RDA not established		

Clinical Pharmacology:

Vitamin C (Ascorbic Acid):

Vitamin C is an essential micronutrient for humans, with pleiotropic functions related to its ability to donate electrons. It is a potent antioxidant and a cofactor for a family of biosynthetic and gene regulatory enzymes. Vitamin C contributes to immune defense by supporting various cellular functions of both the innate and adaptive immune system. Vitamin C supports epithelial barrier function against pathogens and promotes the oxidant scavenging activity of the skin, thereby potentially protecting against environmental oxidative stress. Vitamin C accumulates in phagocytic cells, such as neutrophils, and can enhance chemotaxis, phagocytosis, generation of reactive oxygen species, and ultimately microbial killing. It is also needed for apoptosis and clearance of the spent neutrophils from sites of infection by macrophages, thereby decreasing necrosis/NETosis and potential tissue damage. The role of vitamin C in lymphocytes is less clear,

but it has been shown to enhance differentiation and proliferation of B- and T-cells, likely due to its gene regulating effects. Vitamin C deficiency results in impaired immunity and higher susceptibility to infections. In turn, infections significantly impact on vitamin C levels due to enhanced inflammation and metabolic requirements. Furthermore, supplementation with vitamin C appears to be able to both prevent and treat respiratory and systemic infections. The exact mechanism of action of Vitamin C for the treatment of symptoms and signs of scurvy (a disorder caused by severe deficiency in vitamin C) is unknown; however, administration of Vitamin C in patients with scurvy is thought to restore the body pool of ascorbic acid.

- ❖ **It acts as a detoxifier and powerful anti-oxidant, eliminating free radicals.**
- ❖ **Plays crucial in the maintenance of collagen.**
- ❖ **Helps in wound repair and healing/regeneration process.**
- ❖ **Enhances the availability and absorption of iron.**
- ❖ **Causes significant reduction in LDL and increase in HDL. Provides protection against CAD.**
- ❖ **Helps in prevention of atherosclerosis by strengthening the artery walls.**
- ❖ **Reduces fasting and postprandial oxidative stress. Blocks acute hyperglycemic impairment of endothelial function.**
- ❖ **Stimulates immune system by enhancing T-cell proliferation in response to infection.**
- ❖ **Supports antibacterial activity, stimulates natural killer cells.**
- ❖ **Helps to prevent certain diseases such as cancer, common cold, age-related muscular degeneration and cataract.**
- ❖ **Reduces the damage caused by UV-light exposure. Reduced the number of sunburned cells, decreased erythematic response and reduced DNA damage induced by UV exposure.**

Citrus Aurantifolia Juice Extract 55% (Nimbuca): It is widely used because of its antibacterial, anticancer, antidiabetic, antifungal, anti-hypertensive, anti-inflammation, anti-lipidemia, and antioxidant properties; moreover, it can protect heart, liver, bone, and prevent urinary diseases.

Phyllantos Emblica Leaf Extract (Amla): All parts of the plant are used for medicinal purposes, especially the fruit, which has been used in Ayurveda as a potent rasayana and in traditional medicine for the treatment of diarrhea, jaundice, and inflammation.

Zinc:

It is an essential trace mineral, is required for the metabolic activity of 300 of the body's enzymes, and is considered essential for cell division and the synthesis of DNA and protein. Zinc ions (Zn^{2+}) are closely involved in the normal development, differentiation, and function of immune cells, thus considered critical for generating both innate and acquired (humoral) antiviral responses. Zn is involved in various cellular processes and possesses a variety of direct and indirect antiviral properties. It was demonstrated that Zn deficiency is associated with reduced antibody production, affected function of the innate immune system (e.g., low natural killer cell activity), decreased cytokine production by monocytes, and the chemotaxis and oxidative burst of neutrophil granulocytes. It also results in thymic atrophy, altered thymic hormones production, lymphopenia, and defective cellular- and antibody-mediated responses that lead to increased rates and duration of infection. In particular, Zn deficiency reduces the number of peripheral and thymic T cells, their proliferation in response to phytohemagglutinin, and the functions of T helpers and cytotoxic T cells. In addition, Zn deficiency acts indirectly by reducing the levels of active serum thymulin, a zinc-dependent nonapeptide hormone that regulates the differentiation of immature T cells in the thymus and the function of mature peripheral T cells. On the other hand, Zn can affect several aspects of monocyte signal transduction and secretion of pro-inflammatory cytokines, and interfere with the binding of leukocyte function-associated antigen-1 to ICAM-1, thus suppressing inflammatory reaction. Zinc is also critical to tissue growth, wound healing, taste acuity, connective tissue growth and maintenance, immune system function, prostaglandin production, bone mineralization, proper thyroid function, blood clotting, cognitive functions, fetal growth and sperm production.

Vitamin D:

It is hydroxylated in the liver to form 25-hydroxycholecalciferol and then undergoes further hydroxylation in the kidney to form the active metabolite 1,25 dihydroxycholecalciferol (calcitriol). In its biologically active form vitamin D₃ stimulates intestinal calcium absorption, incorporation of calcium into the osteoid and release of calcium from bone tissue. In the small intestine it promotes rapid and delayed calcium uptake. The passive and active transport of phosphate is also stimulated. In the kidney, it inhibits the excretion of calcium and phosphate by promoting tubular resorption. The production of parathyroid hormone (PTH) in the parathyroid is inhibited directly by the biologically active form of vitamin D₃. PTH secretion is inhibited additionally by the increased calcium uptake in the small intestine under the influence of biologically active vitamin D₃.

Vitamin A:

It is a micronutrient that is crucial for maintaining vision, promoting growth and development, and protecting epithelium and mucus integrity in the body. Vitamin A is known as an anti-inflammation vitamin because of its critical role in enhancing immune function.

Curcumin Extract:

Most of the medicinal effects of turmeric have been attributed to curcumin, the principal curcumanoid found in turmeric. Recent evidence that curcumin exhibits strong anti-inflammatory and antioxidant activities and modulates the expression of transcription factors, cell cycle proteins, and signal transducing kinases has prompted the mechanism-based studies on the potential of curcumin to primarily prevent and treat cancer and inflammatory diseases.

L-Selenomethionine:

A potent nutritional antioxidant that carries out biological effects through its incorporation into selenoproteins. Given the crucial roles that selenoproteins play in regulating reactive oxygen species (ROS) and redox status in nearly all tissues, strongly influences inflammation and immune responses.

Indications:

- ❖ As powerhouse antioxidant.
- ❖ To improve Immune function.
- ❖ For wound repair and healing.
- ❖ Coprescribe in cardiac management.
- ❖ Coprescribe in Diabetes management.
- ❖ Coprescribe in Infectious diseases.

Route of administration: Oral.

Type of tablet: Chewable tablet.

Flavour: Delicious orange lemon flavour

Dosage:

As Dietary Supplement, 1 Tablet daily.

Storage

Store in cool and dry place.

Presentation: Vitalime-Plus Chewable tablet is available as 10x 10 Tablet.

Marketed By:



EPIONE PHARMACEUTICALS PVT.LTD.

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