

Each softgel contains

Vitamin D3: (200000 IU) (Cholecalciferol from natural source) USP

HEART HEALTH Multiple studies have linked Vitamin D₃ deficiency with higher risk of high blood pressure and cardiomyopathy. Vitamin D₃ supplementation appears to lower risk of death from these ailments in certain at - risk populations. In vitro and animal studies suggest that Vitamin D₃ may modulate such risks via the inhibition of the renin-angiotensin-aldosterone system. The renin-angiotensin system (RAS) is a hormone system that regulates blood pressure and fluid balance. When blood volume is low, cells in the kidneys secrete a protein, renin, directly into circulation. Renin is a Vitamin D₃ modulated gene. Unlike many other genes, renin may be down-regulated or decreased by Vitamin D₃.

BODY ACHES & PAINS Low Vitamin D levels are implicated in various chronic pain conditions. Research has shown that Vitamin D exerts anatomic, hormonal, neurological, and immunological influences on pain manifestation, thereby playing a role in the aetiology and maintenance of chronic pain states and associated comorbidity. Persistent pain is associated with Vitamin D-related bone demineralization, myopathy, and musculoskeletal pain. Vitamin D deficiency has been associated with headache, abdominal, knee, and back pain, persistent musculoskeletal pain, costochondritic chest pain, and failed back syndrome and with fibromyalgia.

BONE HEALTH Vitamin D plays an essential role in maintaining a strong mineralized skeleton for humans. Vitamin D₃ promotes Calcium absorption and helps maintain Calcium and phosphate levels necessary for mineralization of bone. It is also needed for bone growth and bone remodeling by osteoblasts and osteoclasts. Vitamin D₃ deficiency can result in thin, brittle, or misshapen bones, as well as rickets in children and osteomalacia in adults.

OESTEOARTHRITIS Insufficient levels of Vitamin D may raise the risk for perpetuating or causing osteoarthritis due to its well-known impact on bone structure and function. Vitamin D may be key to reducing the risk of obesity, a common determinant or outcome of osteoarthritis. Other benefits may include a lower falls prevalence rate that can lead to secondary osteoarthritis, and bone fractures.

OSTEOPOROSIS Low concentrations of vitamin D lead to alterations in Calcium and phosphorus homeostasis, secondary hyperparathyroidism, bone loss, osteoporosis, and an increase in fracture risk. Adequate Vitamin D and Calcium intake is considered an essential component of osteoporosis management.

IMMUNE HEALTH Vitamin D₃ has been defined as natural immune modulator, and upon activation of Vitamin D₃ receptors (VDRs), it regulates Calcium metabolism, cellular growth, proliferation and apoptosis, and other immunological functions. Epidemiological data underline a strong correlation between poor Vitamin D₃ status and higher risk for chronic inflammatory illnesses of various etiologies, including autoimmune diseases.

AUTO IMMUNE DISEASE Diseases with an autoimmune etiology like Multiple sclerosis, Rheumatoid Arthritis and Crohn's disease have been shown to have strong association with low levels of Vitamin D₃. Different studies have assessed the direct association with Vitamin D₃ deficiency.

PREGNANCY Vitamin D₃ deficiency during pregnancy is relatively common and may cause significant adverse health issues for both mother and child. Studied health issues associated with low Vitamin D₃ status during pregnancy include preeclampsia, infertility, birth by cesarean section, gestational diabetes, postpartum depression, and low birth weight.

CANCERS Higher intake of Vitamin D₃ and Calcium may be associated with lower risk of pre menopausal breast cancer. Vitamin D₃ may have this anti-cancerous effect by modulating anti proliferative and pro-differentiating ability of human cells expressing Vitamin D₃ receptor (VDR). Although there is a list of cancers showing relation to low levels of Vitamin D₃, the most prominently addressed in research so far are cancers of the breast, colon and prostate.

DIABETES MELLITUS Vitamin D₃ supplementation helps increase the body's sensitivity to the blood sugar-regulating hormone, insulin, thus reducing the risk of diabetes, researchers have found. Vitamin D₃ stimulates insulin secretion. This is via direct action on pancreatic beta cells and indirectly by normalizing calcium levels extracellularly. The evidence of the aforementioned has been confirmed by finding Vitamin D₃ receptors (VDRs) on the insulin promoter gene, the presence of Vitamin D₃ receptors (VDRs) on the pancreatic beta cells.

WEIGHT LOSS The American Journal of Clinical Nutrition, says that consuming Vitamin D₃ may help lose abdominal fat and prevent weight gain. A high Vitamin D₃ intake may increase the Leptin levels, a hormone that alerts the body to stop eating. Research also links Vitamin D₃ deficiency to insulin resistance, which leads to excess hunger increasing the need to over eat.

MENTAL HEALTH Vitamin D₃ may improve brain function. Age affects the cognitive function of the brain negatively, which researchers have linked to Vitamin D₃ deficiency. According to research, the hippocarmpus and cerebellum, which are the parts of the brain in charge of planning, processing and forming new memories, contain receptors for Vitamin D₃, which are important for their functioning.

SKIN HEALTH AND HAIR HEALTH Vitamin D₃ may activate a kind of white blood cells known as the macrophages. This means they get "hungrier" for acne bacteria, which they attack, directly rather than sending out inflammatory chemicals. This is a very useful characteristic for fighting acne bacteria. Macrophages activated by Vitamin D₃ don't send out inflammatory chemicals. Instead, they attack the bacteria head on and wipe them out without a trace, whether or not the bacteria send out decoy chemicals. People have a tendency to lose hairs as they grow old, commonly referred to as balding. According to the Hair Loss Research, Vitamin D₃ may play an important role in preventing this hair loss by retaining a healthy hair follicle, which ensures that the hair remains healthy and strong. Vitamin D₃ may also help in the absorption of Calcium, which helps in the secretion of hormones, such as biotin, that promote the growth of strong healthy hair.