scotmann's

PRO

Each softgel contains

MK-7 Vitamin K2 as Menaquinone-7 USP (from Natto Extract) : 100 mcg

Vitamin D<sub>3</sub> (Cholecalciferol ) USP: 2000 IU

HEART HEALTH: Calcium has the ability to embed itself into the walls of blood vessels, and it can cause two problems. One is calcification of the vascular wall that can cause arteries to harden. The other is the build up and formation of plaques. These plaques can cause eventual blockages and lead to heart attacks or stroke. The way Vitamin K<sub>2</sub> (MK-7) prevents calcification is by interacting with other proteins to modify a protein called Matrix Gla Protein (MGP). MGP inhibits calcium from hardening and building up on arterial walls. Matrix Gla Protein (MGP) is a key inhibitor of soft vascular tissue calcification. In collaboration with other soluble factors and cells, MGP thus helps remove calcium from the arteries, and thereby keep them elastic and flexible. Vitamin D<sub>3</sub> supplements appear to lower risk of death from ailments like cardiomyopathy, high blood pressure and heart attack in certain at - risk populations. Vitamin D<sub>3</sub> modulates such risks via the inhibition of the renin-angiotensin-aldosterone system. Vitamin D<sub>3</sub> has antihypertrophic effects on cardiac cells that regulate calcium and myosin, decrease natriuretic peptide and also play an important role in different cardiac infections.
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**BONE HEALTH:** Osteoblasts (cells that build up bone tissue) produce the Vitamin K-dependent protein osteocalcin. This protein binds calcium to the bone matrix and builds healthy bones. Osteocalcin is a Vitamin K-dependent protein, which means it needs natural Vitamin K<sub>2</sub> to function properly. Thus, long-term Vitamin K-deficiency may lead to loss of calcium in the bone and reduced quality of bone. Vitamin D<sub>3</sub>'s most conclusively demonstrated effects are in maintaining healthy bones. Vitamin D<sub>3</sub> 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 D<sub>3</sub> deficiency can result in thin, brittle, or misshapen bones, as well as rickets in children and osteomalacia in adults. Together with calcium, Vitamin D<sub>3</sub> also helps prevent osteoporosis in older individuals.

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.

IMMUNE HEALTH: Vitamin K acts as a cofactor for some plasma proteins, thereby affecting immune and inflammatory responses particularly mediated by T cells. Studies have found links between vitamin K levels and diseases, including inflammatory diseases and cancer. Vitamin D<sub>3</sub> has been defined as natural immune modulator, and upon activation of Vitamin D<sub>3</sub> receptors (VDRs), it regulates Calcium metabolism, cellular growth, proliferation and apoptosis, and other immunological functions. Epidemiological data underline a strong correlation between poor Vitamin D<sub>3</sub> status and higher risk for chronic inflammatory illnesses of various etiologies, including autoimmune diseases.

**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.

KIDNEY HEALTH: When your kidneys begin to lose function (from pathogens, injury, toxins, etc.) this is called kidney disease. One of the first causes of death in kidney disease is due to cardiovascular ossification (calcium build up in the arteries). Researchers suggested that Vitamin K2 could play an important role in kidney disease because it converts specific proteins that inhibit calcium build up in the arteries and maintains proper mineralization processes.

WEIGHT LOSS: High Vitamin K2 intake may support reducing body weight, abdominal and visceral fat. The "American Journal of Clinical Nutrition" says that consuming Vitamin D3 can help lose abdominal fat and prevent weight gain. A high Vitamin D3 intake increases the leptin levels, a hormone that alerts the body to stop eating.

**CANCERS:** Vitamin K<sub>2</sub>, or menaquinones have received increasing attention in recent years for their impact on cancer. Various reports have shown that VK<sub>2</sub> inhibits cancer cell growth and causes apoptosis in various cancer cell lines, and in some cancers, increases survival rate. It exhibit an antiproliferative action towards a variety of cancer cells including lung cancer, ovarian cancer and acute myeloid leukemia cells. Higher intake of Vitamin D<sub>3</sub> and Calcium may be associated with lower risk of pre-menopausal breast cancer. Vitamin D<sub>3</sub> may have this anti-cancerous effect by modulating anti proliferative and pro-differentiating ability of human cells expressing Vitamin D<sub>3</sub> receptor (VDR). Although there is a list of cancers showing relation to low levels of Vitamin D<sub>3</sub>, the most prominently addressed in research so far are cancers of the breast, colon and prostate.

**SKIN HEALTH:** Vitamin K<sub>2</sub> is found to be involved in tissue renewal and cell growth control. It reduces visible signs of skin aging, addresses dark circles under the eyes, helps in clearing of bruising, expedites wound healing and soothes inflammation. Vitamin D<sub>3</sub> may activate a kind of white blood cells known as the macrophages. Macrophages activated by Vitamin D<sub>3</sub> 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.

**DOSAGE:** One to two softgel(s) daily or as directed by a qualified healthcare practitioner. (It is advised to have serum Vitamin D<sub>3</sub> level checked, prior to taking scotmann's SunnyD PRO softgels).

**PRECAUTIONS:** Store away from heat, light and moisture at room temperature. Refrigeration is recommended in hot climates. Keep out of reach of children. Sealed for your protection. Do not use if the seal under the cap of the jar is missing or tempered. Shake jar before opening.

**خواک:** ایک سے دوساف جیلز روزانہ یامتند معالی کی ہدایت کے مطابق استعال کریں۔ (تجویز کیاجاتا ہے کہ سکاٹ مینز سنی ڈی پر وسافٹ جیلز لینے سے پیشتر خون میں دٹامن ڈی ڈی کی مقد ارکا تعین کر والیس)۔ **احتیاط:** دحوب ، نمی اور گرمی۔ دور کر سے کہ درجہ حر ارت پر محفو ظ کریں۔ گر م موسم میں ریفر بیز میں محفوظ کر ناتجویز کیاجا تاہے۔ بچوں کی پنجن سے دورر کھیں۔ آپ کی حفاظت کے پیش نظر اس جارکو سک کیا گیاہے۔ اگر جارکی ایپ کے پنچے سیل موجو دنہ ہویا خراب ہوتوا ستعال نہ کریں۔ جارکو کھو لنے سے پیلے ہالا کیں۔



6

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