

Vitamin D is crucial to the building and maintenance of healthy bones and teeth. Calcium, the primary component of bone, is only properly absorbed by your body when vitamin D is present. Vitamin D is created within the body when direct sunlight converts a chemical in your skin into an active form of the vitamin. There are not many foods that contain vitamin D, but you can find it in fortified milk, fortified cereals, and fatty fish like salmon, mackerel, and sardines. Unfortunately, most people do not get the necessary amount of vitamin D. Therefore, supplementation is needed.

Vitamin D can come in several forms. The two major forms are vitamin D2 (ergocalciferol) and vitamin D3 (cholecalciferol). The form of vitamin D most used for supplementation is cholecalciferol. Vitamin D3 is the perfect supplement as it is the natural form of vitamin D that your body makes from sunlight. Cholecalciferol is metabolized to its active form, calcitriol, which increases the body's absorption of calcium and phosphorus. Calcitriol may play a role in the immune system and may inhibit cancer growth and stimulate cell differentiation.

Receiving vitamin D3 shots can address and reduce the risk of symptoms of vitamin D deficiency, including fatigue and bone pain. Vitamin D deficiency has been associated with an increased risk of death from cardiovascular disease, cognitive impairment in the elderly, severe childhood asthma and cancer.

#### Precautions/Side Effects

Vitamin D3 may interact with many different medications. Certain conditions are contraindicated in the use of vitamin D3. These include sarcoidosis, high phosphate blood levels, high calcium blood levels, excessive vitamin D levels, arteriosclerosis with occlusion of the arteries, kidney stones, kidney disease with reduced kidney function, and allergies to vitamin D.

When taken in appropriate doses, vitamin D injections are generally well-tolerated with no side effects. However, it can be harmful when taken in excess amounts. Some of the side effects experienced when taking too much include:

- Nausea– Vomiting– Poor appetite– Constipation– Weakness– Weight loss– Confusion
- Disorientation– Heart rhythm problems– Kidney damage