

Bone & Joint, Cognitive, Immune

UNIQUE LIQUID VITAMIN D3 FORMULATION  
FOR HEALTH PROTECTION

# PERQUE® D3 Cell Guard™

VITAMIN D3 IN MCT  
FOR BRAIN AND BODY



## CUT YOUR RISK WITH PERQUE D3 CELL GUARD

**PERQUE D3 Cell Guard** provides Vitamin D3 in a liquid form for optimum uptake and absorption.\* Studies show Vitamin D3 may be the answer to many of our health issues today and in the future.

### THE SUNSHINE VITAMIN

Vitamin D3 is the only vitamin our bodies can make with sun exposure by using the energy of UVB to convert 7-dehydrocholesterol into Vitamin D3. A largely held opinion is that it is technically not a vitamin but a hormone. The fear of skin cancer and just being in sun-starved latitudes prevents many individuals from obtaining the benefits of sunlight, and we are today a society of millions deficient in this valuable nutrient. Furthermore, as we age, we are less equipped to produce sufficient quantities of this vital nutrient.

Good dietary sources of Vitamin D include fatty fish, like tuna, mackerel, and salmon, eggs and dairy. However, most Americans do not eat enough fish to get a healthy dose of Vitamin D, and fortified foods like milk and cereal simply do not provide enough of this important vitamin. **Therefore, Vitamin D supplementation by far seems to be the best option.**

### HOW MUCH IS REQUIRED?

From a conservative 10 mcg (400 IU)/day as being the required intake to prevent rickets and osteomalacia, researchers now believe that these amounts are simply not enough. A typical dose for children is now 10-25 mcg (400-1000 IU)/day, and for healthy adults, amounts of 50-125 mcg (2000-5000 IU)/day are more realistic. The biochemical parameter used to gauge the Vitamin D status of an individual is the blood concentration of 25-hydroxyvitamin D [25(OH)D], which is the circulating Vitamin D metabolite calcidiol. Healthy blood levels of this metabolite range between 50-80 ng/ml. It is estimated that one billion

people worldwide have deficiency or insufficiency, and up to half of U.S. adults and 30 percent of children and teenagers have Vitamin D deficiency, which is defined as a 25(OH)D level of <20ng/ml. Of the various forms of Vitamin D available, it is important to note that Vitamin D3 is most effective in increasing the blood levels of 25(OH)D.

**PERQUE D3 Cell Guard** provides this safe and natural form of Vitamin D3 in a liquid form with **Medium Chain Triglycerides (MCT)** for effective uptake and absorption.\* Additional protection to the D3 is provided by **mixed natural tocopherols and ascorbyl palmitate in a natural rosemary extract.**

### VITAMIN D3 FOR BONE HEALTH

Vitamin D deficiency causes osteopenia, osteoporosis, and osteomalacia, increasing the risk of fracture, which indicates that Vitamin D3 sufficiency is essential for maximizing bone health. Vitamin D enhances intestinal absorption of calcium and phosphorus. Use **PERQUE Bone Guard Forté** to obtain adequate bone support nutrition. Vitamin D deficiency causes muscle weakness, increasing the risk of falls and fractures, which can be corrected with adequate Vitamin D3 supplementation.

### VITAMIN D3 AFFECTS THE IMMUNE SYSTEM

Most organs and immune cells have a Vitamin D receptor, and some also have the capacity to metabolize 25-hydroxyvitamin D to the active form of Vitamin D: 1,25-dihydroxyvitamin D. 1,25-dihydroxyvitamin D is a potent immunomodulator that is responsible for the downregulation of Th1 and upregulation of Th2 cells. Rather than a simple downregulation of immune response, it blunts generalized over-proliferation of both lymphocytes and

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monocytes while sharpening the immune system's attack on specific targets. 1,25-dihydroxyvitamin D also inhibits the development of autoimmune diseases like multiple sclerosis and irritable bowel syndrome and enhances the production and secretion of several hormones, including insulin.

## VITAMIN D3 AND THE DIABETES CARDIOVASCULAR CONNECTION

Vitamin D deficiency has been associated with increased risk of type 1 diabetes in children by affecting beta-cell function. Since Vitamin D deficiency also alters hormone levels including insulin, this can increase the risk of diabetes, a major contributor to cardiovascular disease (CVD). Glycemic control and insulin resistance are also improved when Vitamin D deficiency is corrected. Low Vitamin D levels, especially below 30 ng/ml, activate the renin-angiotensin-aldosterone system and can lead to hypertension as well as stiffening and thickening of the heart and blood vessels. As a result, the risk of heart attacks is increased.

## VITAMIN D3 IMPROVES COGNITIVE HEALTH AND DECREASES STROKE RISK\*

Short-term and smaller clinical studies have indicated that serum 25(OH)D concentration may be associated with dementia and cognitive function. Recent results from a large clinical study involving 1,766 adults aged 65 years and older show that those with normal cognitive function had higher levels of serum Vitamin D3 than those who were cognitively impaired, further strengthening the neuroprotective role of Vitamin D3. Research also indicates that Vitamin D levels can predict risk of fatal stroke, and supplementation could even prevent stroke. Risk of stroke usually increases with age, and since very low Vitamin D levels are common in the elderly, this is an important connection.

## VITAMIN D3 FOR OVERALL PROTECTION

Vitamin D deficiency is associated with obesity, hypertension, glucose intolerance, and metabolic syndrome (insulin resistance). It has also been associated with other chronic illnesses including fibromyalgia, chronic fatigue, colon and prostate health, autoimmune disorders, inflammation and repair and polycystic ovarian disease. Research about its connection with other conditions is ongoing. In essence, Vitamin D3 provides valuable and complete health support. **Consider PERQUE D3 Cell Guard for your overall health protection and insurance.\***

## REFERENCES

1. Holick MF. Optimal Vitamin D status for the prevention and treatment of osteoporosis. *Drugs Aging* 2007; 24(12):1017-29.
2. Holick MF. Diabetes and the Vitamin D connection. *Curr Diab Rep* 2008 Oct;8(5):393-8.
3. Zepitis CS, Akobeng AK. Vitamin D supplementation in early childhood and risk of type 1 diabetes: A systematic review and meta-analysis. *Arch Dis Child* 2008 Jun; 93(6): 512-7.
4. Cantorna MT, Zhu Y, Froicu M, Wittke A. Vitamin D status, 1,25-dihydroxyvitamin D3, and the immune system. *Am J Clin Nutr* 2004 Dec; 80 (6): 1717S-1720S.
5. Massey P. Vitamin D supplements may stave off a stroke. *Daily Herald Columnist* 2008 Nov 4.
6. Llewellyn DJ, Langa K, Lang I. Serum 25-Hydroxyvitamin D Concentration and Cognitive Impairment. *J Geriatr Psychiatry Neurol* 2008 Dec 10 (EPub).

Full Disclosure Label (no hidden ingredients)

**Directions:** Take one (1) drop per day or as directed by health professional. **Note:** Drop directly on to spoon or toast. May be directly administered to others as appropriate.

## SUPPLEMENT FACTS

Serving size: 1 drop (12.5 mcg.)

Servings per container: 850 drops

Energized Nutrients	Amount per serving	% Daily Value
Vitamin D3 (as cholecalciferol)	12.5 mcg.	62.5
Vitamins E (as mixed natural tocopherols)	7.3 mcg.	<1
Ascorbyl Palmitate	2 mcg.	*
MCT oil (medium chain triglycerides)	34 mg.	*
Rosemary Oil	0.33 mcg.	*

\* Daily value not established

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## THE PERQUE GUARANTEE

Like every other **PERQUE** product, **PERQUE D3 Cell Guard** comes with a 100%, unconditional, money-back guarantee – the strongest guarantee in the natural health industry. This unique guarantee provides the assurance that:

- Every **PERQUE** product provides 100% potency and activity for its entire shelf life.
- Every ingredient used in a **PERQUE** product is pharmaceutical-grade or better.
- All **PERQUE** products dissolve rapidly (usually within 20 minutes), eliminating digestive irritation often found with other brands.
- Full label disclosure is provided for all **PERQUE** products — no hidden ingredients.
- Every **PERQUE** product is activated with the same transporters that are used by nature and in food to ensure full bioavailability. The biologically preferred form of an ingredient is always used for enhanced activity.
- Free of citrus, MSG, wheat/gluten, corn/zein/starch, dairy/casein/whey/milk derivatives, yeast, soy, sulfate, phosphates (other than coenzymes), and preservatives.
- No genetically modified organisms (GMOs).
- Unique post-production assays and clinical bioassays assure product integrity.

## YOUR QUALITY ASSURANCE

Every **PERQUE** product is produced following or exceeding the FDA's pharmaceutical GMP (Good Manufacturing Practices) regulations.



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\*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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