

MICELLIZED VITAMIN D₃

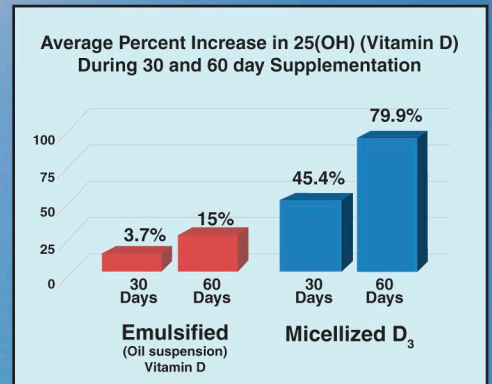


Study Conducted By:
The Great Plains Laboratory, Inc.

Recent Study Shows Approximately 5 Times More Absorption Than Emulsified D.

A recent double blind study by The Great Plains Laboratory, Inc. showed Micellized D₃ had approximately 5 times greater increase in serum 25(OH) Vitamin D levels versus emulsified vitamin D. Micellized D₃ is far superior in reaching and maintaining optimal levels of vitamin D₃ over other forms of Vitamin D.

Studies have been conducted on micelle vitamin preparations to determine the effectiveness of this new delivery system when compared with both standard oil forms and other emulsified forms. The studies were conducted with normal healthy individuals varying in sex and age. The data shows that these micellized forms of fat-soluble micronutrients increased plasma levels greater than the oil forms and emulsified forms.



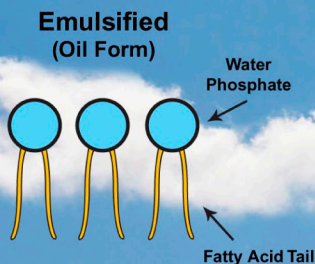
This Study Showed Micellized D₃ Absorption Was Clinically Significant compared to Emulsified Vitamin D.*

* Each participant received 3,000 I.U. by mouth once a day

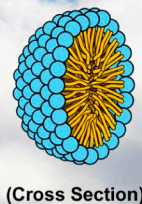
See Reverse For More Information on Micellized D₃

Average Increase in 25(OH) Vitamin D		
	30 days	60 days
Micellized Vitamin D ₃	10 ng/ml	18.5 ng/ml
Emulsified Oil Suspension Vitamin D	0.4 ng/ml	3.4 ng/ml

*25(OH) measured in nanograms per milliliter.



Micellization (Ball-like, Water Soluble Structures)



Micellization is the process of creating easily assimilated, completely water-soluble clusters out of fat soluble nutrients.



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Micellized D₃ - 600 I.U. per Drop

Micellized D₃ is a natural form of Vitamin D provided in a water-soluble micellized form. The micellization process produces tiny droplets (micelles) that are then formed into highly absorbable aggregate structures. Micellization greatly increases the solubility, absorption and bioavailability of our vitamin D₃ over oil or emulsified forms.

Vitamin D, considered both a hormone and a vitamin, is manufactured in response to skin's exposure to sunlight and is essential to the body's absorption of calcium. Natural vitamin D₃ (cholecalciferol) is four times more potent than synthetic vitamin D₂. Calciferol in Latin means "calcium carrier."

Strong evidence suggests that vitamin D is beneficial when combined with calcium and have a significant impact on overall bone health. Additionally, vitamin D has been the subject of numerous studies for its effect on the immune system.

Fats and fat-soluble micronutrients are insoluble in the water medium of the small intestine, so they must first be broken down through the normal digestive process to become water-soluble (aqueous) and be absorbed. The body's manufacture of water-soluble fat is also called micellization. It is caused by the action of lipase, bicarbonate and, most importantly, bile. Bile interacts with fat in a unique way. A bile molecule has a specific chemical structure in which one end is fat-soluble (non-polar), the other is water-soluble (polar).

Recently a process has been developed that renders fat-soluble nutrients totally water-soluble and smaller in molecular size (less than 0.1 microns referred to as "micelles."). These micelles are capable of direct transport into the "unstirred water layer" bordering the microvilli of the small intestine. Gaining entrance into the "still water layer" and immediate access to the intestinal lining are essential to the efficient and rapid absorption of fat-soluble nutrients. Micellized supplements require little digestive effort and result in minimal fecal loss.

Once nutrients become water-soluble through Micellization they are now up to 5 times more absorbable through the gastrointestinal lining. Micellization produces a very tiny and completely water-soluble cluster of fat molecules normally produced in the small intestine. Micelles are the body's basic unit of absorption for vitamins A, D, E, and K, as well as beta-carotene, essential fatty acids and lecithin. These nutrients are not adequately absorbed in humans unless they are micellized.

What contributes to poor absorption and metabolism of fat-soluble nutrients?

- Stress
- Restricted fat intake
- Allergies
- Dieting
- High fat and sugar diet
- Lack of aerobic exercise
- Illness
- Alcohol Consumption
- Aging
- Environmental toxins
- Drugs
- Processed and Fried foods
- Digestive disorders

Supplement Facts

Serving Size: 1 drop (0.05 ml)
Servings Per Container: 600

	Amount	%DV*
Vitamin D ₃ (as cholecalciferol)	600 IU	150%

* Percent Daily Value based on a 2,000 calorie diet.

Other ingredients: Deionized water, ethoxylated castor oil, glycerine, citric acid, grapefruit seed extract and potassium sorbate.

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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.