## Vitamin D and Milk

The Food and Drug Administration (FDA) states that, "Vitamin D is a fat-soluble vitamin that is essential for human health. It comes in many forms. The two major forms are vitamin D2 and vitamin D3. Vitamin D without a number represents either vitamin D2 or vitamin D3 or both. The major function of vitamin D is to help with the absorption of calcium and phosphorus in the small intestine. Vitamin D deficiency can lead to abnormalities in bone metabolism, such as rickets in children or osteomalacia in adults."

Because Vit. D is a nutrient of concern in many major studies showing a lack of D in children especially, FDA has long decided what foods can or must fortify with Vit. D.

Milk contains natural Vit. D in the milkfat. FDA standards of identity require Vit. D to be added to milk when the milkfat is removed to make fat-free, 1% low-fat or 2% reduced fat milk. This is done in order to restore the Vit. D levels through fortification after the milkfat is removed.

Even Whole Milk, being standardized to be consistent at 3.25% fat, has some milkfat removed; however, many Whole Milk brands are called Vit. D Milk and contain only the natural Vit. D that is still in the milkfat remaining in the milk and thus the only ingredient is: Milk.

Some brands of Whole Milk add a little Vit. D to bring the combined natural and supplemented D levels to the FDA-approved total level.

All 2%, 1% and fat-free brands of milk MUST add Vit. D, per the FDA, to make up for the natural Vit. D that is removed when the fat is removed from the milk.

Researchers studying 2700 children aged 3 to 5 in Canada found that, "A child consuming 1 cup of Whole Milk had the same Vitamin D levels as another child consuming 2.9 cups of 1% low-fat milk — which is actually a pretty big difference." This was attributed to the fat-soluble nature of Vit. D and the natural content of D in Whole Milk fat. (Research Summary here: <a href="https://nationalpost.com/health/kids-who-drink-whole-fat-milk-are-leaner-have-higher-vitamin-d-levels-study-finds">https://nationalpost.com/health/kids-who-drink-whole-fat-milk-are-leaner-have-higher-vitamin-d-levels-study-finds</a>)

Since Vit. D is the natural standard for Milk -- and all varieties with fat removed must add the "D" back in -- the plant-based non-dairy competing beverages asked FDA to allow them to add Vit. D along with the Calcium to be more like Milk.

In July of 2016, the FDA "approved the addition of Vitamin D to beverages made from edible plants intended as milk alternatives, such as beverages made from soy, almond, and coconut, and edible plant-based yogurt alternatives. Vitamin D was already authorized for use in soy beverages, but the approval increases the authorized amount for such beverages that are intended as milk alternatives."

According to the FDA, "FDA allow manufacturers to voluntarily add up to 84 IU/100g of Vitamin D3 to milk, 84 IU/100g of vitamin D2 to plant-based beverages intended as milk alternatives, and 89 IU/100g of vitamin D2 to plant-based yogurt alternatives."

However, as shown with the study comparing Whole Milk and 1% low-fat milk, it is obvious that the milkfat helps make the Vit. D more biologically available and absorbed by the body and the fact that Whole Milk contains natural D in the milkfat is a real plus for Real Whole Milk over all low-fat and non-dairy competitors.

Vitamin D2 and D3 are the two most important forms for health. Vitamin D2 is produced by plants, and Vitamin D3 is the one made by our skin when we get enough sunlight. Fortified foods -- like Milk -- can contain either form. Studies show that Vitamin D3 is far more important for our health than Vitamin D2 because it is more biologically active like that made by our skin when we are in the sunshine.

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