

## Tuesday Minute Transcript

This Week's Topic

# The Vitamin D Wars Have Begun

## Micellized vs Emulsified



**“Even though supplemented for shorter duration, Bio-D-Mulsion Forte® achieved superior results.”**

It looks like the vitamin D wars have begun. We live in a capitalistic culture and let's face it, if half the things the researchers are saying about vitamin D are true, and I believe they are, vitamin D will be the shining star in every company's nutrient line for a long time. That means that competitors will position themselves to distinguish which product is better. It's a good thing to compare products and try to have the best one available for the patient, but let's remember that vitamin D will have a profound effect on people's lives.

One researcher said we may be able to cut the healthcare costs worldwide by 25% if we get people's blood level to the 50-80 ng/ml level. Sometimes we get to be "Vitamin Snobs" looking for the better products. Better is a multidimensional word that carries a lot of subjectivity: better absorption, better compliance, better effectiveness, better price, and finally better from a safety perspective.

It's important for us as clinicians to know the story so that when



our patients come to us and say "I just heard on the radio that this form is better than the one you are giving me," you can smile and tell them the whole story. But before I get to discriminating which I guess is the professional way of saying "picky," keep in mind as long as it's vitamin D3 and we give them enough, we're golden.

The buzz comes from an unpublished study which compares an emulsion form of vitamin D3 and a micellized form of vitamin D3. The claim is that a particular form of micellized vitamin D is 5 times more absorbable than emul-

sified forms of vitamin D. Whooo! That's a pretty strong statement to make. In a minute I will get to another published study that refutes that claim but let's look at a few details first.

What is an emulsion? In nature we know that the oils in seeds, nuts, and mother's milk are in an emulsified state. Once in that emulsified state the oils can then get into the lymph system where every cell in the body is bathed. But the greatest misunderstanding comes from the fact that all emulsions are not created equal! I can add olive oil to water in a bottle, shake it up, and voil! I

have, by definition, created an emulsion. However, it only takes seconds for the oil and water to separate because it is a very poor quality emulsion. Often emulsions will separate easily because of poor processing.

Years ago Biotics Research was fascinated by the German research on high dose vitamin A and invested in the technology to create a consistent emulsified product that will not separate. I often put 5 or 6 drops of one of their emulsified products in a glass of water, stir and then let it sit on a table for days to demonstrate it WILL NOT separate.

Depending on the manufacturing process, there are many sizes of “emulsified particles.” To assure their vitamin A contained the smallest emulsion particles, Biotics went out and purchased all the available emulsified products on the professional market to check particle size. You can see by the pictures there is a big difference in particle size and consistency. The Biotics emulsion is consistent throughout the entire slide. This consistently small particle allows the emulsions to go directly into the lymph system where every cell is bathed.

One of the concerns with nano-sized particles is that if they are too small they can get into cellular areas that may not be prepared to handle large quantities of a concentrated substance. Biotics emulsions hover right around that ½ micron mark. This means the emulsified particles are small enough to go directly into the lymph system but not so small that they may create cellular disruption.

The emulsification technology Biotics has utilized for over 30 years has proven safe and effective. Micellized products on the other hand, are created by mixing oil with a detergent like substance which creates a nano-sized particle. This smaller than light sized particle is invisible to the eye and goes directly into the blood stream. This theoretically is a great way to raise blood levels. At this point however, no one knows if these micro particles ever get to the lymph system and bathe outlying tissue. Yes, they increase blood levels but do they raise them a factor of 5 over emulsified products.

Let’s compare the unpublished study that is causing so much controversy to a published study. The comparative study cited was conducted by a reputable lab that performs vitamin D testing. The unpublished study

often used with marketing graphs claims to have compared an emulsified vitamin D to a micellized vitamin D. The results of the unpublished study state the following: Patients used 3,000 IU per day of the micellized product for 60 days and achieved an average increase of 79.9% in serum 25 (OH) vitamin D. It’s worth noting, the lab that did the testing also sells the micellized product through their website. The product tested supplies 600 IU per drop.

On the surface that sounds pretty impressive. However, a clinical trial was conducted using Bio-D-Mulsion Forte® by Biotics Research. The peer reviewed results were published in 2008 by The Journal of Clinical Endocrinology & Metabolism, the world’s leading peer-reviewed journal for endocrine clinical research and cutting edge clinical practice reviews. Bio-D-Mulsion Forte® by Biotics Research was dosed at 2,000 IU daily for 42 days and achieved an average increase of (202% )in serum 25(OH) vitamin D levels.

In a nutshell, comparing the unpublished data supporting micellized vitamin D and peer reviewed published data, the micellized products used a 50% higher daily dose (3,000 IU vs 2,000 IU), the micellized product was taken for a significantly longer period of time (60 days vs 42 days), yet Bio-D-Mulsion Forte® achieved significantly superior results (202% increase in serum 25(HO) vitamin D vs 79.9% increase using the micellized forms of vitamin D).

This report supports clinical feedback that I have received for years that Bio-D-Mulsion® increases blood levels when other forms do not, especially with treatment resistant patients.

We discussed earlier about absorption, effectiveness, and safety. Let’s discuss price for a second. Each drop of the micellized product contains 600 IU. Bio-D-Mulsion Forte® contains 2,000 IU per drop. That means that drop per drop patients get about 330% more for their money.

The vitamin D wars will continue, but in my opinion absorption, safety, clinical experience, and cost make Bio-D-Mulsion Forte® from Biotics Research Corporation the leading choice for vitamin D supplementation!

Thanks for checking in. I’ll see you next Tuesday.