Omega-3, Vitamin D And Autoimmunity

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Recently, the British Medical Journal published this article on a prospective 5.3 year double-blind, placebo-controlled, randomized clinical trial of 1000mg EPA/DHA or 2000IU of D3 or placebo. https://pubmed.ncbi.nlm.nih.gov/35082139/ Rarely does a major medical journal publish an important supplement-based study; they usually allow it to slip to lesser-known publications, minimizing its impact.

Due to the well-known immunomodulatory effects of the steroid hormone "vitamin" D, as well as the anti-inflammatory and immunomodulatory effects of marine omega-3 fatty acids, a prospective trial was devised to evaluate whether these nutrients could help prevent the onset of autoimmune disease (AID). One arm of the trial tested almost 13,000 people, placebo vs 2000 IU D3, the other arm of the trial tested almost 13,000 people, placebo vs fish oil (460mg EPA/380 mg DHA), following them, on average, for 5.3 years.

Most importantly: they actually tested compliance through blood tests! In the active treatment arms **D3** levels increased from deficient (29.8 ng/ml) to insufficient (41.8 ng/ml), a 40% increase. In the fish oil arm the **omega 3 index** improved from woefully inadequate (2.65%) to inadequate (4.1%), a 54.7% increase. Thusly, even innocuous low doses of these supplements led to improvements in outcomes, despite people remaining at too low a level of these nutrients to reach optimal effect!

The results: D3 led to a ***22%*** reduction in AID, the EPA/DHA led to a ***15%*** reduction (not reaching statistical significance), but when looking at either active treatment arm vs placebo there was an overall ***31%*** reduction in chance of developing any AID. No subgroup of AIDs could be significantly concluded to have a specific treatment effect, but, interestingly, almost no benefit was seen in preventing AI Thyroid disease, whereas Rheumatoid Arthritis seemed most likely to be prevented. Unfortunately, there was no arm of the trial where a subject took both omega 3s and D3.

There certainly was a time delay between onset of supplement taking and clinical effect. When only the last 3 years of the study were analyzed, the D3 group had a **39% reduction** in AID! Interestingly as well, thinner people had more benefits than those with a higher BMI, something that has been observed in other trials.

I believe the current trial adds to the body of knowledge that helped create our **Basic Nutritional Protocol.** Please take D3 in conjunction with *K2-MK7 180 mcg per day*. The synergy allows for the prevention of ectopic (abnormal) calcification while promoting healthy bone density. That way we get the immunomodulatory as well as the cardiovascular benefits of *vitamin D3*, usual dosage 5,000-10,000 IU daily.

Furthermore, when you help normalize the microbiome (*probiotics*), correct age-related decline in immune function (*melatonin*), normalize mitochondrial function (*CoQ10*), correct elevated

homocysteine and micronutrient deficiencies (*good multivitamin*) in addition to the anti-inflammatory and brain health benefits of *marine omega-3 fatty acids,* you will have a supplement protocol for primary care that helps you overcome a stressful, toxic world!

Nothing about the current trial surprises those of you who have been following us. Step past those who wonder if you "believe" in supplements and into a world where you actively support this vital "line of intelligence" as part of your vibrant well-being, not just the prevention and treatment of disease!

Your Journey to Health and Healing,

Gary E Foresman MD