

References

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Vitamin D

Era or error?

Madam

The recent conclusions of the Institute of Medicine's Food and Nutrition Board (FNB)⁽¹⁾ will not damage the vitamin D juggernaut. People consistently take a supplement, first and foremost, because that supplement makes them feel better. True, a large minority of supplement users takes supplements to try to prevent disease, such as cancer, but my experience is that such users tend to fade over time. They tend to fade even faster if the supplement in question is shown to cause – not prevent – death, as was the case with vitamin A.

For years, many nutritionists believed retinol reduced the risk of cancer. However, later studies showed the opposite. In one randomized controlled trial (RCT), retinol actually increased – not decreased – death; the effect was so clear the RCT had to be stopped early because the retinol arm had a 46% increased risk of dying, mostly from cancer⁽²⁾. The dose of retinol used didn't seem like too much, equivalent to a couple of tablespoonfuls of cod-liver oil per day, but it appears it was enough to kill some of the volunteers taking it.

One can argue that the subjects (smokers) in the above study were at high risk of cancer, that the treatment arm included β -carotene along with retinol, and that another small epidemiological study found cod-liver oil reduced the risk of lung cancer, not increased it. However, hovering over all of this is the fact that a large RCT had to be stopped when it was found that retinol increased, not decreased, the risk of death.

Indeed, a recent Cochrane review found that retinol supplements increase total mortality rate by 16%⁽³⁾. Warnings about vitamin A began as early as 1933, when Alfred Hess *et al.*, who discovered that sunlight both prevented and cured rickets, wrote in the *Journal of the American Medical Association*, '...as to a requirement of thousands of units of vitamin A daily, the unquestionable answer is that this constitutes therapeutic absurdity, which, happily, will prove to be only a passing fad'⁽⁴⁾.

The authors of the recent FNB report on vitamin D appear to believe we are in the throes of another dangerous fad. The problem is that their attempt to convince

us that the vitamin D revolution is an error, and not an era, is so filled with logical errors that I have difficulty in taking the document seriously.

For example, they warn that 25-hydroxyvitamin D (25(OH)D) levels of 30–40 ng/ml may be dangerous (the U-shaped curve) and then turn around and contend that 100 μ g/d (the new Upper Limit) is safe. Earlier in the document they reported that intakes of 100 μ g/d will lead to 25(OH)D levels of 30–40 ng/ml. Such internal inconsistencies plague the document.

Another? Visualize the valiant pregnant woman pushing down and breathing hard, about to give birth. According to the FNB, the woman and her *in utero* infant require only 15 μ g/d. Pop and all of a sudden the requirement almost doubles. Now the mother still needs 15 μ g daily but the infant also requires 10 μ g. Simple logic leads to the conclusion the FNB believes the *in utero* infant required none but magically acquired the need the moment of that last push.

What about the 350 lb interior lineman playing for the New York Giants? 15 μ g/d replies the FNB. What about his one-year-old 20 lb son, how much does he need? The same 15 μ g/d, mumbles the FNB.

Perhaps the fear of making another mistake – similar to the vitamin A type mistake made a decade ago – loomed so large over the committee they were willing to forswear logic to protect the world. Perhaps they let their special adviser, Professor Hector DeLuca, make the tough decisions. In my experience, when one finds a committee making so many simple errors of logic, one usually finds a committee with an agenda.

As far as stopping the vitamin D juggernaut is concerned, the FNB report will not. Once you take 125 μ g/d for several months, most people notice a difference in how they feel, how they think and how they move. Not only do they buy another bottle (about \$US 2.00/month) at the pharmacy, they buy a bottle for a friend.

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