

## The Swedish Society for Orthomolecular Medicine Founded April 26, 2008



The photograph shows the dozen people present at this occasion. Back row, left to right: Tommy Lewander, MD, PhD, associate professor of neuroscience, special interest: polyunsaturated fats; Klas Cederwall, PhD, professor emeritus, Royal Institute of Technology; Bjorn Regland, MD, PhD, associate professor of neuropsychiatry; published in 1992 the hypothesis on a relationship between homocysteine and cognitive decline; Bo H. Jonsson, MD, PhD, Chairman; Bo Zackrisson, investigative medical journalist; Mats Humble, MD, special interest: vitamin D. Front row, left to right: Inger Hallqvist Lindvall, MD, Green Party politician; Birgitta Brunes, MD, special interest: MS; Ann Gardner, MD, PhD, special interest: mitochondrial medicine; Karin Munsterhjelm, MD, Vice-chairman, experienced in orthomolecular work in schizophrenia and thyroid disorder; Ulla Sandklef, former psychologist/psychotherapist, now organization analyst; Elisabet Carlsson, Master of Political Science, journalist

### Origin of the 'Vitamin D Toxicity' Myth

Currently, around the world, renowned scientists urge us to increase the daily intake of vitamin D, especially in countries with moderate climates. Leading vitamin D experts and also more general nutritional scientists, like Walter Willett of Harvard School of Public Health, undersigned the Call to Action Statement of Grassroots Health, a public promotion organization for vitamin D in the US. These scientists

state: "Any risks of vitamin D inadequacy considerably exceed any risks of taking 2000 IU/day of vitamin D3, which the NAS-IOM regards as having no adverse health effect." <http://www.grassrootshealth.org>

However, adequate measures are not put in place by the responsible authorities. In my country, the Netherlands (with a moderate climate), it is still forbidden to recommend a food supplement exceeding 200 IU per day.

Possibly the main obstacle of the supposed toxicity of vitamin D, which already exists for decades, has been described by Reinhold Vieth, in 1999, in an excellent paper on the safety of vitamin D.<sup>1</sup> Vieth is professor at the University of Toronto and specializes in vitamin D. In 2003 he gave a presentation on this subject at the Orthomolecular Medicine Today Conference in Toronto. Vieth is also one of the signatories of the mentioned Action Statement. Vieth reveals in his paper of 1999 the origin of the 'vitamin D toxicity' myth:

“Throughout my preparation of this review, I was amazed at the lack of evidence supporting statements about the toxicity of moderate doses of vitamin D. Consistently, literature citations to support them have been either inappropriate or without substance. The statement in the 1989 US nutrition guidelines that 5 times the RDA for vitamin D may be harmful<sup>2</sup> relates back to a 1963 expert committee report,<sup>3</sup> which then refers back to the primary reference, a 1938 report in which linear bone growth in infants was suppressed in those given 45–157.7 mg (1800–6300 IU) vitamin D/d<sup>4</sup> The citation is not related to adult nutrition and it does not form a scientific basis for a safe upper limit in adults. The same applies to the statement in the 1987 Council Report for the American Medical Association that “dosages of 10,000 IU/d for several months have resulted in marked disturbances in calcium metabolism...and, in some cases, death.” Two references were cited to substantiate this. One was a review article about vitamins in general, which gave no evidence for and cited no other reference to its claim of toxicity at vitamin D doses as low as 250 mg (10,000 IU)/d.<sup>5</sup> The other paper cited in the report that dealt with 10 patients with vitamin D toxicity reported in 1948, for whom the vitamin D dose was actually 3750–15 000 mg (150,000–600,000 IU)/d, and all patients recovered.<sup>6</sup> If there is published evidence of toxicity in adults

from an intake of 250 mg (10 000 IU)/d, and that is verified by the 25(OH)D concentration, I have yet to find it.”

The discussion about the efficacy and safety of vitamin D is poisoned by this myth, which arose already in 1938, and was scientifically ‘white washed’ in 1989 by the National Academy of Sciences.

–Gert Schuitemaker, Ph.D.

#### References

1. Vieth R. Vitamin D supplementation, 25-hydroxyvitamin D concentrations, and safety. *Am J Clin Nutr* 1999; 69(5):842-56
2. National Academy of Sciences. Recommended dietary allowances. 10th ed. Washington, DC: National Academy Press, 1989.
3. Blumberg RW, Forbes GB, Fraser D, et al. The prophylactic requirement and the toxicity of vitamin D. *Pediatrics* 1963;31:512–25.
4. Jeans PC, Stearns G. The effect of vitamin D on linear growth in infancy: II. The effect of intakes above 1,800 U.S.P. units daily. *J Pediatr* 1938;13:730–4.
5. Woolliscroft JO. Megavitamins: fact and fancy. *Dis Mon* 1983;29:1–56.
6. Eager JE, Meyran JC. Intoxication with vitamin D. *J Clin Endocrinol* 1948;8:895–910.

#### Action Statement on the internet:

[http://www.grassrootshealth.org/\\_download/scientists%27%20letter%20050508.pdf](http://www.grassrootshealth.org/_download/scientists%27%20letter%20050508.pdf)