

THE BIG VITAMIN D MISTAKE

Dimitris T Papadimitriou
Athens Medical Center, Greece

Since 2006, T1D in Finland has been decreasing after an initial plateau preceded by an increase in serum-25OHD after the authorities' decision for fortification of dietary milk products with cholecalciferol. The role of vitamin-D in innate and adaptive immunity is critical. A statistical error in the estimation of the Recommended Dietary Allowance (RDA) for Vitamin-D was recently discovered, indicating that 8895 IU/day are needed for 97.5% of individuals to achieve values ≥ 50 nmol/l, analyzing correctly the same data used by the Institute of Medicine. These results were confirmed, showing that 6201 IU/day are needed to achieve 75 nmol/l and 9122 IU/day is needed to reach 100nmol/l. The largest meta-

analysis ever conducted on published studies between January 1966 and January 2013, showed that 25(OH) D < 75 nmol/l may be too low for safety, associated with higher all-cause mortality, demolishing the previously presumed U-shape. Since all-disease mortality is reduced to 1.0 with serum Vitamin-D ≥ 100 nmol/l, we call public health authorities to consider designating, as the RDA, at least 3/4 of the upper tolerable dose proposed by the Endocrine Society Expert Committee as safe upper tolerable daily intake doses: 2000 <1yr, 4000 1-18yrs and 10,000 IU > 18yrs. This could translate as i.e. 1000 IU for children <1yr on enriched formula and 1500 IU on breastfeeding older than 6 months; 3000 IU for children >1yr and around 8000 IU for young adults and thereafter. Actions are urgently needed to safely protect global health from vitamin-D deficiency.