ALLERGY, VITAMINS

A STEP FORWARD IN ALLERGY RESEARCH

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The most recent paper of my Australian collaborators is a relevant step forward: Polymorphisms affecting vitamin D-binding protein modify the relationship between serum vitamin D (25[OH]D3) and food allergy. Basically they show an

> … association between serum 25-hydroxyvitamin D3 (25[OH]D3) levels and food allergy at age 1 year (338 challenge-proven food-allergic and 269 control participants) and age 2 years (55 participants with persistent and 50 participants with resolved food allergy)… Analyses were stratified by genotype at rs7041 as a proxy marker of DBP levels… Low serum 25(OH)D3 level (<50 nM/L) at age 1 years was associated with food allergy, particularly among infants with the GG genotype (odds ratio [OR], 6.0; 95% CI, 0.9-38.9) … Maternal antenatal vitamin D supplementation was associated with less food allergy, particularly in infants with the GT/TT genotype (OR, 0.10; 95% CI, 0.03-0.41)… This increases the biological plausibility of a role for vitamin D in the development of food allergy.

Maybe it would be helpful to have also “real” DBP levels for estimating bioavailability (and even data of supplement use) but already the reported results are another strong argument for the vitamin D – allergy axis. This is also largely in line with what I predicted back in 2012

> Both vitamin D insufficiency and vitamin D supplementation have been linked to allergy and asthma. This apparent paradox is explained by epigenetic programming in pregnancy by low vitamin D levels and the excessive high supplementation in the newborn period.

Maybe I should have emphasized that genetic variants in the vitamin D pathway are also important for biological effects.