



*Joyfully growing with Allergies!*  
 Idonette van Zyl – Registered Dietician – Practice nr 0352896

## **The role of Vitamin D in Allergic Disease –**

*Presented by Dianne E Campbell (Children’s Hospital Westmead & University of Sydney)*

Vitamin D has been studied for its role in many diseases and conditions. Most studies on vitamin D and allergic disease however, are only based on observational studies or clinical trials. More RDBPCT are required.

Disease associations related to varying sunlight exposure cannot be assumed to be all Vitamin D related, as UV immunomodulatory effects, lifestyle, and reverse causation disease modifying behaviour which modifies sunlight exposure, all play a role.

There is no consistent association between maternal vitamin D status and infant/child allergic disease susceptibility. Most studies are heterogeneous. It is however recommended to supplement vitamin D in the mother with a medically proven vitamin D deficiency. Some consideration should be taken as to possible prenatal vitamin D status testing amongst females in South Africa (as this is already done in Australia).

There is also no convincing evidence for the use of vitamin D in atopic eczema treatment, as well as asthma treatment. There are however two studies in the horizon:

1. VDAART (NCT00920621) UK which is a RDBPCT of vitamin D supplementation in pregnant women to determine whether prenatal supplementation can prevent the development of asthma and allergies in women’s offspring.
2. ABCvitaminD (NCT00856947) Denmark – Vitamin D supplementation during pregnancy for prevention of asthma in childhood. n = 600

Vitamin D and allergies in summary:

|   |                                     |
|---|-------------------------------------|
| Vitamin D sufficiency in pregnancy                                    | Yes, but not for allergy prevention |
| Vitamin D supplementation in pregnancy as primary prevention strategy | NO                                  |
| Infant supplementation for primary prevention                         | NO                                  |
| Treatment of established allergy                                      | NO                                  |

**Resources as provided by Dianne Campbell:**

1. Geographical latitude and asthma prevalence US and Australia. Krstic. PLoS One, 2011
2. Regional differences in EpiPen prescriptions in the US: The potential role of vitamin D. Camargo, 2007m JACI
3. Maternal vitamin D status and infant/child disease susceptibility. Nurmatov, JACI 2011 (no RCT)
4. Primary prevention by maternal and/or infant supplementation. 2004, Northern Finland Birth Cohort 1966. Hypponen E, Ann N Y Acad Sci
5. 2006, Sweden – Early life supplementation of vitamins A and D. Kull I, J Allergy Clin Immunol
6. 2014, RCT, Norizoe, Ped Int
7. Asthma treatment, 2014 May – JAMA VIDA RCT
8. Asthma treatment, 2014 July – Pediatr Pulmonol, Yoseph et al