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Essential vitamins for an effective T cell response

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Abstract

Effective adaptive immune responses rely upon appropriate activation of T cells by antigenic peptide-MHC complexes on the surface of antigen presenting cells (APCs). Activation relies on additional signals including co-stimulatory molecules on the surface of the APCs that promote T cell expansion. The immune response is further sculpted by the cytokine environment. However, T cells also respond to other environmental signals including hormones, neurotransmitters, and vitamins. In this review, we summarize the mechanisms through which vitamins A and D impact immune responses, particularly in the context of T cell responses.

Key words: Vitamin D, retinoic acid, T helper cells, cytokines, transcription factors, allergy, autoimmune diseases

Core tip: Vitamins are organic compounds that are required in small quantities as nutrients. When used as dietary supplements vitamins can be used to treat diseases

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In contrast, **cell-mediated immunity** is carried out by T cells, lymphocytes that develop in Deficiencies in select micronutrients (**vitamins** and nutritionally **essential** Iron is required by the host in order to mount **effective** immune responses to ...



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Here we review the most **important** effects of **vitamins** on the immune system, with
Vitamin A deficiency correlates with decreased TH2-cell **responses** and, In the lymphoid microenvironment, DCs are **essential** for **efficient T-cell** activation.

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The idea of boosting your **immunity** is enticing, but the ability to do so has proved ... But how many **T cells** is comfortably enough, and beyond that point, is more better? ... vaccine **effectiveness** was 23%, whereas for healthy children (over age 2), ... in which a person is deficient in some **essential vitamins** and trace minerals ...

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In contrast, cell-mediated **immunity** is carried out by **T cells**, lymphocytes that ... **T cells** and decreases the **effectiveness** of the memory **response** to antigens (21, 24).
Deficiencies in select micronutrients (**vitamins** and nutritionally **essential** ...

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Protein and your immune system; The **essential vitamins** for healthy immune function ...
The inflammatory **response** at a site of infection is one way your body in **T-cells** and can result in reduced **effectiveness** of the soluble factors as well.

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