

Vitamin D Levels in the Evaluation of Children with Asthma

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October 29, 2020

Abstract

A vitamin D level should be included in the initial evaluation of children with asthma.

Pediatric Pulmonology-C

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In their recent JAMA paper entitled “Effect of Vitamin D₃ Supplementation on Severe Asthma Exacerbations in Children With Asthma and Low Vitamin D Levels,” Forno et al.¹ reported that oral supplementation with vitamin D₃, in a dose of 4000 International Units per day, did not significantly improve the time to a severe asthmatic exacerbation when compared to placebo, as assessed in this double-blind, prospective study.

However, per their Figure 1, 43 of 376 Forno’s subjects (11.4%) were excluded for a vitamin D level less than 14 ng/mL. In addition, these investigators reported that 23% of their participants had vitamin D levels less than 20 ng/mL at the baseline visit.

The Global Consensus Recommendations² and the American Academy of Pediatrics^{3,4} state that a serum 25OHD level of [?] 20 ng/mL should be considered sufficient for bone health in children. Thus, 23% of Forno’s participants had 25OHD levels that were insufficient for pediatric bone health at the baseline visit.

Commercial assays for 25OHD are readily available, as are inexpensive dietary supplements with oral vitamin D. Given the above findings, a serum 25OHD level should be included in the initial evaluation of children with asthma, with subsequent correction of insufficient levels to a 25OHD level of at least 20 ng/mL, as part of the appropriate pediatric care of these children.

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3. Wagner CL, Greer FR. Prevention of rickets and vitamin D deficiency in infants, children, and adolescents. *Pediatrics*. 2008;122(5):1142-1152.
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Words: 321

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