

Correspondence

Reply

To the Editor:

We thank Dr Milner¹ for providing an alternative explanation for the observed north-south gradient in EpiPen (Dey L.P., Napa, Calif) prescribing. He cites a few epidemiologic studies and mice experiments to support his hypothesis that vitamin D excess is an important cause of asthma and allergies. Even if one were to overlook the limitations of the cited studies (eg, confounding by indication), one would still have to address a few basic facts²: (1) very few US children in northern latitudes (where asthma and allergies are more common) have high levels of vitamin D in their blood; (2) the amount of vitamin D in children's multivitamins (200 IU/d) is considerably lower than that recommended to prevent vitamin D deficiency (eg, 400-1000 IU/d); and (3) the vast majority of US children do not receive vitamin D supplementation, and therefore this practice cannot be a significant cause of the current asthma/allergy epidemic. Indeed, the number-one source of vitamin D in human subjects is exposure to sunlight, and numerous international studies do not provide any evidence that asthma/allergy rates are higher at the equator, where human subjects are most likely to have high vitamin D levels in their blood.

Given these facts, we find it very hard to believe that the current asthma/allergy epidemic is caused by an excess of vitamin D. Nevertheless, we acknowledge the possibility that consistent ingestion of very large amounts of this vitamin/hormone could indeed create health problems, including perhaps allergies. As scientists continue to explore the health effects of vitamin D, we need to remain open to this possibility. The goal of vitamin D

supplementation is repletion to a serum 25(OH)D value of perhaps 90 to 100 nmol/L.³ Clinicians should discourage patients from knowingly taking supraphysiologic daily doses in an attempt to gain extra health benefits. Just because one aspirin might be good for you does not mean that 10 are better!

We suspect that Dr Milner will join us in encouraging more research on vitamin D and its complex effects on the human immune system and related diseases. We will join him in encouraging other explanations for our EpiPen findings. Our ecologic analysis was meant to be hypothesis generating and we would welcome future research on this topic. Let us use this geographic clue to pursue new ideas about the potential causes of anaphylaxis.

Carlos A. Camargo, MD, DrPH^a

Robert A. Wood, MD^b

From ^athe EMNet Coordinating Center, Massachusetts General Hospital, Boston, Mass, and ^bthe Division of Pediatric Allergy and Immunology, Johns Hopkins Medical Center, Baltimore, Md. E-mail: ccamargo@partners.org.

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REFERENCES

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