



Vitamin D supplementation, lung function and asthma control in children with asthma and low vitamin D levels

Yueh-Ying Han ¹, Erick Forno ¹, Leonard B. Bacharier², Wanda Phipatanakul³, Theresa W. Guilbert⁴, Michael D. Cabana⁵, Kristie Ross⁶, Joshua Blatter⁷, Franziska J. Rosser¹, Sandy Durrani⁴, James Luther⁸, Stephen R. Wisniewski⁸ and Juan C. Celedón¹

¹Division of Pulmonary Medicine, Dept of Pediatrics, UPMC Children's Hospital of Pittsburgh, University of Pittsburgh, Pittsburgh, PA, USA. ²Division of Allergy, Immunology, and Pulmonary Medicine, Dept of Pediatrics, Monroe Carell Jr Children's Hospital at Vanderbilt, Nashville, TN, USA. ³Division of Allergy and Immunology, Dept of Pediatrics, Boston Children's Hospital, Harvard Medical School, Boston, MA, USA. ⁴Division of Pulmonary Medicine, Dept of Pediatrics, Cincinnati Children's Hospital, University of Cincinnati College of Medicine, Cincinnati, OH, USA. ⁵Dept of Pediatrics, Albert Einstein College of Medicine, Bronx, NY, USA. ⁶Division of Pediatric Pulmonology, UH Rainbow Babies and Children's Hospital, Case Western Reserve University, Cleveland, OH, USA. ⁷Division of Allergy, Immunology, and Pulmonary Medicine, Dept of Pediatrics, Saint Louis Children's Hospital, Washington University at Saint Louis, Saint Louis, MO, USA. ⁸Dept of Epidemiology, University of Pittsburgh, Pittsburgh, PA, USA.

Corresponding author: Juan C. Celedón (juan.celedon@chp.edu)



Shareable abstract (@ERSpublications)

Vitamin D supplementation, compared with placebo, had no significant effect on percent predicted lung function measures (FEV1, FVC or FEV1/FVC), asthma control, or asthma-related quality of life in children with asthma and low vitamin D levels <https://bit.ly/3ibbT4u>

Cite this article as: Han Y-Y, Forno E, Bacharier LB, *et al.* Vitamin D supplementation, lung function and asthma control in children with asthma and low vitamin D levels. *Eur Respir J* 2021; 58: 2100989 [DOI: 10.1183/13993003.00989-2021].

This single-page version can be shared freely online.

Copyright ©The authors 2021. For reproduction rights and permissions contact permissions@ersnet.org

Received: 4 April 2021
Accepted: 6 July 2021

To the Editor:

Observational studies have shown that low vitamin D levels are associated with decreased lung function, worse asthma control, and lower quality of life in children with asthma [1–3]. Moreover, a small randomised imbalanced placebo-controlled trial reported that vitamin D supplementation improved asthma control, but not lung function measures, after 2 months of treatment. In that trial, children were not selected based on low vitamin D levels, asthma management was not standardised across treatment arms, and a low dose of vitamin D (800 IU per day) was used in the treatment arm [4].