

High prevalence of Vitamin D deficiency in large population of kids with type 1 diabetes

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During the past two decades, vitamin D status, defined as serum concentration of 25-hydroxyvitamin D, has emerged as a predictor of key clinical outcomes including bone health, glucose metabolism, cardiovascular health, immune health and survival. Now, a University of Pennsylvania School of Nursing (Penn Nursing) team, including senior author Terri Lipman, PhD, CRNP, FAAN, the Miriam Stirl Endowed Term Professor of Nutrition, Professor of Nursing of Children and Assistant Dean for Community Engagement, has examined the association between 25-hydroxyvitamin D and diabetes control in children and adolescents with type 1 diabetes.

The results demonstrate the high prevalence of patients with low levels of 25-hydroxyvitamin D, specifically in healthy weight and Caucasian children and adolescents with type 1 diabetes— patients previously considered at no or low risk of having low levels of vitamin D. These data underscore the importance of vitamin D screening in all children and adolescents with type 1 diabetes. The team's findings have been published in *Diabetes Research and Clinical Practice*.

"To our knowledge this is the first study that has been adequately-powered to examine the association between 25-hydroxyvitamin D and HbA1c (a measure of [diabetes control](#)) in children and adolescents with type 1 diabetes," said Lipman and colleagues. "These data suggest the need for monitoring of vitamin D in all youth with this disorder."

The study included about 200 children and adolescents from the

Diabetes Center for Children at the Children's Hospital of Philadelphia, who were recruited during regular follow up visits. Non-fasting blood samples were collected from the participants to measure 25-hydroxyvitamin D and [blood glucose levels](#). HbA1c and other key variables were abstracted from patients' medical records.

Provided by University of Pennsylvania School of Nursing

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