

Low vitamin D levels may be common in otherwise healthy children

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Many otherwise healthy children and adolescents have low vitamin D levels, which may put them at risk for bone diseases such as rickets. African American children, children above age nine and with low dietary vitamin D intake were the most likely to have low levels of vitamin D in their blood, according to researchers from The Children's Hospital of Philadelphia.

A study in the current issue of the *American Journal of Clinical Nutrition* measured blood levels of vitamin D in 382 healthy children between six years and 21 years of age living in the northeastern U.S. Researchers assessed dietary and supplemental vitamin D intake, as well as body mass, and found that more than half of the children had low blood levels of vitamin D. Of the subjects, 55 percent of the children had inadequate vitamin D blood levels and 68 percent overall had low blood levels of the vitamin in the wintertime.

“The best indicator of a person's vitamin D status is the blood level of a vitamin D compound called 25-hydroxyvitamin D,” said Babette Zemel, Ph.D., a nutritional anthropologist at Children's Hospital and primary investigator of this study. “Vitamin D deficiency remains an under-recognized problem overall, and is not well studied in children.”

Vitamin D is crucial for musculoskeletal health. The primary dietary source of the vitamin is fortified milk, but the best way to increase vitamin D levels is from exposure to sunshine. Severe deficits in vitamin

D may lead to muscle weakness, defective bone mineralization and rickets. In addition to musculoskeletal effects, vitamin D is important for immune function, and low blood levels of the vitamin may contribute to diseases such as hypertension, cancer, multiple sclerosis and type 1 diabetes. Decreased blood levels of vitamin D have also been linked to obesity.

Further study is needed to determine the appropriate blood levels of vitamin D in children, said Dr. Zemel, who added that a review of the current recommendations for vitamin D intake is needed.

Source: Children's Hospital of Philadelphia

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