

# Clinical Update

## Insufficient vitamin D may boost asthma risk

Children with insufficient vitamin D levels may be at higher risk of developing asthma, suggests a new study from equatorial Costa Rica.

*(American Journal of Respiratory and Critical Care Medicine, May 2009)*

Vitamin D levels were also associated with increased frequency of hospitalization, according to a study with 616 Costa Rican children with asthma.

The researchers, led by John Brehm from Brigham and Women's Hospital and Harvard Medical School concluded: *"In these children, lower vitamin D levels are associated with increased markers of allergy and asthma severity."*

Brehm and his co-workers sought to build on previous evidence that low maternal vitamin D intake during pregnancy may adversely affect the respiratory health of their children and increase the prevalence of asthma symptoms in early childhood.

Vitamin D levels, calculated using serum concentrations of 25- hydroxyvitamin D (25(OH)D), the non-active 'storage' form of the vitamin in the body, were measured in 616 asthmatic children in Costa Rica aged between 6 and 14.

Vitamin D insufficiency, quantified as 25(OH)D levels below 30 ng/ml (or 75 nmol/L), was documented in 175 children. Vitamin D deficiency is when 25(OH)D levels are below 15 ng/ml (37.5 nmol/L).

25(OH)D levels were inversely associated with levels of immunoglobulin E (IgE), the predominant antibody associated with an allergic response, said the researchers. The results suggest that vitamin D insufficiency is relatively frequent in an equatorial population of children with asthma.

### The details on D

The study adds to an ever growing body of science supporting the benefits of maintaining healthy vitamin D levels. Vitamin D refers to two biologically inactive precursors - D3, also known as cholecalciferol, and D2, also known as ergocalciferol. The former, produced in the skin on exposure to UVB radiation (290 to 320 nm), is said to be more bioactive.

While our bodies do manufacture vitamin D on exposure to sunshine, the levels in some northern countries are so weak during the winter months that our body makes no vitamin D at all, meaning that dietary supplements and fortified foods are seen by many as the best way to boost intakes of vitamin D.

In adults, it is said vitamin D deficiency may precipitate or exacerbate osteopenia, osteoporosis, muscle weakness, fractures, common cancers, autoimmune diseases, infectious diseases and cardiovascular diseases. There is also some evidence that the vitamin may reduce the incidence of several types of cancer and type-1 diabetes.

Source: [www.nutraingredients.com](http://www.nutraingredients.com)

