

UNIVERSITY OF WYOMING

Cooperative Extension Service

New Vitamin D Recommendations

On October 13, 2008, the American Academy of Pediatrics (AAP) doubled its vitamin D recommendations for infants, children, and adolescents. While many experts herald this as a long-awaited policy change, some say it may not be enough. This article will discuss *what* vitamin D does for the body, *how much* is now recommended, and *why* this may be important for you or your child.

Vitamin D was initially identified as essential because of its positive effects on bone health, i.e. the prevention of rickets and osteoporosis. However, it is now recognized that the effects of vitamin D in the body are widespread. In fact, inadequate vitamin D status has been linked to many conditions such as diabetes, multiple sclerosis, arthritis, certain types of cancers, and immune system function.

Interestingly, vitamin D is not really a vitamin at all, but a hormone that signals for increases or decreases in many activities within the body. Though originally designated a vitamin because of a perceived dietary need, it was eventually discovered that we have the ability to make all of the vitamin D we need through reactions that take place when sunlight strikes our skin. However, recommendations to decrease sun exposure, especially in infants and children, inhibit our natural ability to make our own vitamin D. Furthermore, even those getting ample sun exposure in the summer are at risk for deficiencies in the late winter months because of the lack of strength in the sun's rays. This effect increases with latitude, putting those of us in northern Wyoming at much greater risk for deficiency than people in the southern U.S.

Unfortunately, low vitamin D status, as with many other traits, is passed directly from mother to child—and milk from deficient mothers is similarly deficient. This is reflected by the fact that the greatest risk for rickets is in exclusively breastfed infants who are not supplemented with 400 IU of vitamin D/day. Keep in mind that this is not an inherent downfall of breastmilk, but a direct result of the deficiency passed from mother to child, and the inadequacy in that mother's milk. Regardless of vitamin D status it is unquestionable that human milk is the best nutritive substance for infants during the first year of life.

The AAP now recommends that infants, children, and adolescents obtain 400 IU of vitamin D/day, a practice that has been in place in Canada since 2004. This is in light of very strong evidence backing the safety and clinical efficacy of this dose, and the severe consequences of vitamin D deficiency. Because of inherent deficiencies, as well as sun-avoiding practices in mother and child, vitamin D supplements during infancy, childhood, and adolescence are often necessary to meet these guidelines. High-dose supplementation in lactating women is being investigated as a possible alternative, but further research is necessary to determine the safety and effectiveness of this practice. Please visit with your doctor about possible needs for supplementation, or for information on how you can be tested to determine your vitamin D status. *Kentz Willis, M.S., is the University Extension Educator in Nutrition and Food Safety for Sheridan and Johnson counties. He can be reached via email at kwillis3@uwyo.edu.*

