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## Vitamin D Supplementation

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While breastfeeding is the recommended method of infant feeding and provides infants with necessary nutrients and immune factors, breast milk alone does not provide infants with an adequate intake of vitamin D. Most breastfed infants are able to synthesize additional vitamin D through routine sunlight exposure. However, published reports of cases of vitamin D deficiency rickets among breastfed infants in the United States caused researchers to take another look at whether all breastfed infants were getting adequate vitamin D.

**A supplement of 400 IU per day of vitamin D is recommended for all breastfed infants.**

American Academy of Pediatrics, November 2008

Vitamin D deficiency rickets among breastfed infants is rare, but it can occur if an infant does not receive additional vitamin D from a vitamin supplement or from adequate exposure to sunlight. A number of factors decrease the amount of vitamin D a person will synthesize from sunlight. These factors include

- Living at high latitudes (closer to the polar regions), particularly during winter months
- Air quality conditions: high levels of air pollution
- Weather conditions: dense cloud covering
- The degree to which clothing covers the skin
- Use of sunscreen
- Skin pigmentation: darker skin types

Furthermore, there exists a major public health effort to decrease the risk of skin cancer by encouraging people to limit their sunlight exposure (visit: [Skin Cancer](#).)

As a result, in April 2003, the American Academy of Pediatrics (AAP) published guidelines for vitamin D intake, recommending that all infants have a minimum intake of 200 IU of vitamin D per day, beginning during the first 2 months of life. In November 2008, the AAP published a new statement to replace their 2003 guidelines. The 2008 report recommends a daily intake of vitamin D of 400 IU/day for all infants and children beginning in the first few days of life.

Human milk typically contains a vitamin D concentration of 25 IU per liter or less. Therefore, a supplement of 400 IU per day of vitamin D is recommended for all breastfed infants. Adequate amounts of vitamin D can be achieved by currently available multivitamin products containing 400 IU of vitamin D per mL or the newly available preparations that contain 400 IU/mL vitamin D alone without other vitamins. These products are available over the counter. Prescription preparations of vitamin D have very high vitamin D concentration and are not for routine home use.

If an infant is weaned to vitamin-D fortified infant formula (consuming at least 1000 mL per day) or a child one year of age or older is weaned to vitamin-D fortified milk, then further supplementation is not necessary.

To review the new AAP clinical report on vitamin D intake published in *Pediatrics* November 2008, 122(4):908–910, visit

<http://aappolicy.aappublications.org/cgi/content/full/pediatrics;122/5/1142> 

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