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Current vitamin D levels not enough in pregnancy, study

By Clarisse Douaud, 28-Feb-2007

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Pregnant American women do not get enough vitamin D and prenatal multivitamins are not filling the gap, according to a University of Pittsburgh Schools of the Health Sciences study.

The study, which appears in the current issue of the *Journal of Nutrition*, evaluates data from 200 black women an 200 white women, randomly selected between 1997 and 2001. The study found 92.4 percent of African-American newborns and 66.1 percent of white babies had insufficient vitamin D levels at birth.

These findings support the argument that the upper limit on products containing vitamin D in the United States needs to be raised, along with daily recommended intake values for this nutrient - moves that would likely boost sales of the vitamin.

"Our study shows that current vitamin D dietary intake recommendations are not enough to meet the demands of pregnancy," said Lisa Bodnar, assistant professor of epidemiology at the University of Pittsburgh Graduate School o Public Health and lead author of the study. *"Improving vitamin D status has tremendous capacity to benefit public health."*

Experts have called for the current upper limit of 50 micrograms per day to be raised to 250 micrograms, as well a an increase of the dietary reference intake (DRI) from 10 micrograms per day to 25, or even 50, micrograms.

"A newborn's vitamin D stores are completely reliant on vitamin D from the mother," according to Bodnar. *"Not surprisingly, poor maternal vitamin D status during pregnancy is a major risk factor for infant rickets, which again becoming a major health problem."*

The vitamin has also been linked to lowering incidences of certain types of cancer, as well as reducing the risk of osteoporosis and fractures.

"In our study, more than 80 percent of African-American women and nearly half of white women tested at delivery had levels of vitamin D that were too low, even though more than 90 percent of them used prenatal vitamins durin pregnancy," said Bodnar.

The study reinforces the established racial and seasonal variations that affect levels of vitamin D, which is created the body as a reaction to sunlight exposure and is less prevalent among darker-skinned people in northern latitude

"In both groups, vitamin D concentrations were highest in summer and lowest in winter and spring," said fellow study author Dr. James Roberts. *"But differences were smaller between seasons for African-American mothers and babies, whose vitamin D deficiency remained more constant."*

The study participants were selected from the over 2,200 women enrolled in the university-affiliated Magee-Wome Research Institute's Pregnancy Exposures and Preeclampsia Prevention Study.

Samples of maternal blood were collected prior to 22 weeks pregnancy and again just before delivery. Samples of newborn umbilical cord blood also were tested for 25 hydroxyvitamin D, an indicator of vitamin D status.

Study reference:

Journal of Nutrition 2007 137: 447-452

Title: *"High Prevalence of Vitamin D Insufficiency in Black and White Pregnant Women Residing in the Northern United States and Their Neonates."*

Author: Bodnar, Lisa M. et al.