Mother's Vitamin D Supplementation May Benefit Infant

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CHARLESTON, S.C. – Give breast-feeding women enough vitamin D and you may supplement their babies, too, according to the results of a small but promising pilot study presented at a pediatrics meeting by the American Academy of Pediatrics in Charleston.

“Our question was: ‘Would direct vitamin D supplementation meet the needs of both the mother and her nursing infant?’” said Dr. Carol L. Wagner, the department of pediatrics at the university in Charleston.

Insufficient vitamin D causes many problems, primarily a lack of calcium absorption that can lead to bone loss. In addition, recent research suggests a link between vitamin D deficiency and immune system disorders such as diabetes, Dr. Wagner said.

People in developed world are at risk for vitamin D deficiency because of a primarily indoor lifestyle that has limited adequate vitamin D intake from sunlight, she added.

Data from several recent studies suggest that doses of vitamin D that are significantly higher than the current recommended daily allowance will not cause toxicity and are in fact needed for adequate circulating 25-hydroxyvitamin D concentrations (25(OH)D).

To determine whether giving mothers high doses of vitamin D provides adequate 25(OH)D for both mothers and infants without toxicity to either, Dr. Wagner and colleagues randomized 18 breast-feeding women to receive 400 IU or 600 IU of vitamin D₃ as a daily pill for 6 months starting at 1 month post partum.

The infants who were randomized to mothers who took 400 IU received their own supplement of 300 IU daily, while the infants whose mothers took 600 IU received a placebo supplement.

“What we found was a wonderful increase,” in infant 25(OH)D levels from breast milk alone, Dr. Wagner said.

After 6 months, the average 25(OH)D level was 38 ng/mL in the mothers who received 6,400 IU and 46 ng/mL in their babies.

There were no adverse events in either mother or infant related to vitamin D toxicity.

Supplementing the mothers with high-dose vitamin D is still considered unproven. “We think it is safe, but we have to study it in large numbers.”

For now, Dr. Wagner encourages physicians to recommend vitamin D supplementation for breast-feeding infants, but if the circulating vitamin D levels in the mothers are 50 ng/mL or higher, the infants are probably getting enough, too. Stive for circulating 25(OH)D levels at least 30 ng/mL in all patients, she emphasized.

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