CLINICAL INSIGHTS

BLUE CROSS Division of Blue Cross Laboratories

BLUVIT D3 DROPS ***Issue VI, No.16, 2026***

Vitamin D status and response to supplementation in very preterm infants: A prospective cohort study

Wasuanankun S, et al. Eur J Clin Nutr (2026).

- Very pre-term infants are at high risk of vitamin D deficiency (VDD), which contributes to metabolic bone disease (MBD) and other morbidities. Recommendations for vitamin D supplementation in very preterm infants vary widely, ranging from a fixed dose of 200–400 IU/day to weight-based 400–700 IU/kg/day.
- A prospective cohort enrolled infants born at <32 weeks' gestation or birth weight <1500 g. Vitamin D supplementation followed institutional policy. Serum 25(OH)D was measured at birth, 4, and 8 weeks. Biochemical markers and MBD screening were performed. VDD was defined as 25(OH)D < 20 ng/mL and excess (VDE) as >100 ng/mL.
- Among 126 infants 94.3% had VDD at birth. At 4 weeks, VDD persisted in 17.8% receiving <400 IU/kg/day and 6.5% receiving 400–700 IU/kg/day; vitamin D excess (VDE) occurred in 3.3% and 3.2%, respectively.
- At 8 weeks, normal 25(OH)D was achieved in 90.1% receiving <400 IU/kg/day and 77.4% receiving 400–700 IU/kg/day, while VDE increased to 8.6% and 22.6%, respectively.

VDD is highly prevalent at birth in very preterm infants. Daily intake <400 IU/kg generally normalizes vitamin D status by 8 weeks while minimizing risk of excessive vitamin D.

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