

Suboptimal Vitamin D Levels in Pregnant Women Despite Supplement Use

Conclusion: Vitamin D insufficiency was not uncommon in this group of pregnant women. Season and ethnicity were determinants of 25OHD but the magnitude of their effect was not large. Most women took vitamin D-containing supplements but this did not provide much protection against insufficiency. Consideration should be given to increasing the amount of vitamin D in prenatal supplements.

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Objective: Obtaining adequate vitamin D during pregnancy is important for the health of mother and child. Low circulating 25-hydroxyvitamin D (25OHD) concentrations, a measure of vitamin D status, have been reported in pregnant women in several countries; yet, there are few studies of pregnant Canadian women. We measured 25OHD concentrations in a multi-ethnic group of pregnant women living in Vancouver (49°N) and explored the determinants of 25OHD.

Methods: 336 pregnant women (16-47 y) between 20 and 35 weeks gestation provided a blood sample and completed questionnaires.

Results: Mean 25OHD was 67 (95% CI 64-69) nmol/L. Only 1% of women had a 25OHD concentration indicative of severe deficiency (<25 nmol/L). However, 24% and 65% of women were vitamin D insufficient based on cut-offs of 50 and 75 nmol/L, respectively. In multivariate analysis, mean 25OHD concentrations were 12 nmol/L higher in the summer compared to in winter. Women of European (White) ethnicity had a 9-13 nmol/L higher mean 25OHD concentration than women from other ethnic groups. Almost 80% of women took vitamin D-containing supplements containing ³400 IU/d. However, 24% and 65% of these women had 25OHD <50 and <75 nmol/L, respectively.

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