

Pregnant women in Vancouver may not be getting enough vitamin D

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Pregnant women taking prenatal supplements may not be getting enough vitamin D, shows a new Vancouver-based study led by the Child & Family Research Institute at BC Children's Hospital that was published in the *Canadian Journal of Public Health*.

The study found that while almost 80 per cent of [pregnant women](#) reported taking supplements containing [vitamin D](#), many were vitamin D insufficient. Insufficient means that blood levels of the specific vitamin are below national recommendations. The study of 336 women who were 20-35 weeks pregnant found that:

- 65 per cent of pregnant women have vitamin D levels lower than recommended by the Canadian Paediatric Society for pregnant and breastfeeding women.
- 24 per cent of pregnant women have vitamin D levels lower than recommended by Health Canada for women of all ages including those who are pregnant and breastfeeding.

"We know vitamin D is vital to the health of women and their babies, but there is currently little consensus on how much vitamin D pregnant women need for optimum health." says Dr. Timothy Green, who led the research. Dr. Green is a scientist at the Child & Family Research Institute (CFRI) and an associate professor, Faculty of Land & Food Systems, University of British Columbia (UBC). "This research shows that, regardless of the recommendation you use, a significant number of women are not getting enough vitamin D."

Vitamin D is essential for bone growth and development in the fetus. Low levels of vitamin D at birth have been associated with lower birth weight and can lead to rickets. In addition, newborns with low levels of vitamin D may have increased risk of developing type 1 diabetes,

asthma and low bone mass in later life. Low levels of vitamin D may also increase a woman's risk of preeclampsia. Preeclampsia is the sudden onset of high blood pressure in pregnancy and the leading cause of maternal death in Canada.

Women were recruited for this study at BC Women's Hospital & Health Centre, an agency of the Provincial Health Services Authority; Douglas College prenatal programs; and community health centres. Participants gave a blood sample and completed a questionnaire on pre-pregnancy weight, age, smoking status, ethnicity, annual income, education and diet. The research found factors with the greatest impact on vitamin D levels included average sun exposure at the time of participation in the study, vitamin D intake from food and supplements, and skin colour.

"We can obtain vitamin D from the sun, but in our climate we see little sunlight five to seven months a year," says Dr. Green. "There are few good natural sources of vitamin D and fortified foods do not contain enough vitamin D on their own."

"That's why research into supplements, how much pregnant women should be taking and how effective they are, is so important," says Dr. Green. Dr. Green's current research focuses on vitamin D intake in pregnant and breastfeeding women to determine how much of the vitamin women need to consume to meet national recommendations.

Provided by Child & Family Research Institute

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