

Use of micronutrient supplements among pregnant women in Alberta: results from the Alberta Pregnancy Outcomes and Nutrition (APrON) cohort

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Abstract

Maternal nutrient intake in the prenatal period is an important determinant of fetal growth and development and supports maternal health. Many women, however, fail to meet their prenatal nutrient requirements through diet alone and are therefore advised to consume nutrient supplements. The purpose of this study was to describe the use of natural health products (NHP) by pregnant women in each trimester of pregnancy. Women ($n = 599$) participating in the first cohort of the Alberta Pregnancy Outcomes and Nutrition (APrON) study completed an interviewer-administered supplement intake questionnaire during each trimester of pregnancy. NHP use was high, with >90% taking multivitamin/mineral supplements, and nearly half taking at least one

additional singlenutrient supplement. Compliance with supplementation guidelines was high for folic acid (>90%), vitamin D (~70%) and calcium (~80%), but low for iron (<30%) and for all four nutrients together (~11%). On average, women met or exceeded the recommended dietary allowance for folic acid, vitamin D and iron from NHPs alone, with median daily intakes of 1000 mg, 400 IU and 27 mg, respectively. The median calcium intake was 250 mg d⁻¹. Up to 26% of women exceeded the tolerable upper intake level for folic acid and up to 19% did so for iron at some point of their pregnancy. Findings highlight the need to consider both dietary and supplemental sources of micronutrients when assessing the nutrient intakes of pregnant women.

Keywords: dietary supplements, pregnancy, vitamin D, folic acid, iron, calcium.