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Low Vitamin D status is a common finding in a population of pregnant women enrolled in a nutrition intervention study in the Ukraine

Charles Rock Carlson[1], Janet Uriu-Adams[1], Christina Chambers[2], Lyubov Yevtushok[3], Natalya Zymak-Zakutnya[4], Wladimir Wertelecki[5] and Carl Keen[1]

[1] *Nutrition, University of California, Davis, Davis, CA*
[2] *University of California, San Diego, La Jolla, CA*
[3] *Rivne Oblast Medical Diagnostic Center and OMNI-Net, Rivne, Ukraine*
[4] *Khmelnytsky Perinatal Hospital and OMNI-Net, Khmelnytsky, Ukraine*
[5] *University of South Alabama, Mobile, AL*

While it is known that suboptimal maternal vitamin D status can be associated with adverse pregnancy outcomes, the frequency of low vitamin D status in many populations is a subject of debate. Our ongoing study investigates the nutrient status of alcohol-exposed Ukrainian pregnant women and whether micronutrient supplementation can reduce the risk of Fetal Alcohol Spectrum Disorder. Blood samples and alcohol consumption data are collected at the time of enrollment (mean gestational age, 20.4 ±7.0 wk). Here we present data on the baseline vitamin D status of these women. Mean plasma 25-hydroxyvitamin D concentrations [25(OH)D] of alcohol-exposed (n=180) and unexposed (n=180) women were 20.6 ng/mL and 21.8 ng/mL, respectively. Across both groups, 50.6% and 32.9% were classified as vitamin D deficient [25(OH)D <20ng/mL] or insufficient [25(OH)D ≥20 ng/mL and ≤30 ng/mL], respectively. When adjusted for solar radiation by month, pre-pregnancy BMI, gestation age at blood draw, smoking status, and age, regression analyses showed that each additional oz. of alcohol consumed per drinking day, in the 2 weeks prior to the time of enrollment, was associated with a 2.4 ng/mL decrease in 25(OH)D concentrations (P=0.03). These data suggest a very high prevalence of suboptimal vitamin D status in pregnant Ukrainian women and an adverse effect of alcohol consumption on vitamin D status.