

ODS Update

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ODS Update

A NEWSLETTER FOR
HEALTH PROFESSIONALS

Strengthening Knowledge
and Understanding of
Dietary Supplements

February 20, 2024

Recent Developments in Dietary Supplement Science



Our inaugural issue of *ODS Update: Recent Developments in Dietary Supplement Science* highlights three recent publications that advance our understanding of how dietary supplements can enhance nutritional status during pregnancy.

Omega-3 Fatty Acids: Preterm birth is a leading cause of morbidity and mortality among young children, although the etiology is often unknown. New clinical practice guidelines by Cetin and colleagues published in the February 2024 issue of the *American Journal of Obstetrics & Gynecology, Maternal-Fetal Medicine* set intake recommendations for long-chain omega-3s during pregnancy based on evidence that these fatty acids reduce the risk of preterm birth. For women of

childbearing age, the authors recommend at least 250 mg/day of docosahexaenoic and eicosapentaenoic acid (DHA + EPA) from foods such as fatty fish or supplements; and during pregnancy, an additional intake of at least 100 to 200 mg/day of DHA. For women with low DHA intake and/or status, 600 to 1,000 mg/day of DHA or DHA + EPA is recommended. These guidelines provide clinicians and patients with evidence-based methods to help reduce the risk of preterm birth.

Calcium: Preeclampsia is a serious condition that might be influenced by calcium intake. The World Health Organization recommends daily supplementation with 1,500 to 2,000 mg calcium in three divided doses during pregnancy for people who have low dietary calcium intake. However, poor adherence to this dosing schedule has limited its implementation. In the January 2024 issue of *The New England Journal of Medicine*, Dwarkanath and colleagues report findings from two randomized trials in India and Tanzania that assessed the noninferiority of a 500 mg/day calcium dose to a 1,500 mg/day dose on the incidence of preeclampsia and preterm birth in pregnant women. In both trials, the 500 mg calcium dose was noninferior to the 1,500 mg dose with respect to the incidence of preeclampsia. However, findings were mixed for preterm birth, with the trial in India finding that the 500 mg calcium dose was noninferior to the 1,500 mg dose and the trial in Tanzania finding that the 500 mg dose did not show noninferiority to the 1,500 mg dose. The results from these and similar trials can help identify optimal calcium doses during pregnancy for people with low calcium intake.

Vitamin B12: Vitamin B12 deficiency is associated with adverse pregnancy outcomes and is particularly common among pregnant people in low-income and middle-income countries. A January 2024 *Cochrane Review* by Finkelstein and colleagues evaluated the benefits and harms of vitamin B12 supplements during pregnancy on maternal and child health. Based on five trials in 984 pregnant women in India, Bangladesh, South Africa, and Croatia, the authors concluded that vitamin B12 supplements may improve maternal and infant B12 status, but their effects on clinical and functional health outcomes are unclear. The authors of this review suggest that additional research, including large rigorous trials, is warranted to better understand the potential effects of vitamin B12 supplementation on pregnancy outcomes.

Upcoming ODS Seminars (virtual meetings)



Wednesday, February 28, 2024, 11:00 a.m. (ET)

Immune System Microbiome Interactions and Health

June L. Round, Ph.D.—University of Utah School of Medicine, Salt Lake City, UT

Wednesday, March 13, 2024, 11:00 a.m. (ET)

Dietary Supplements: Interactions With Taste and Smell

Paule V. Joseph, Ph.D.—National Institute on Alcohol Abuse and Alcoholism, NIH



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