Topic Area: Dietary Assessment

Abstract Title

Food sources of choline for Canadian women of childbearing age. Is it enough?

B. Hartman[1], D. O'Connor[2]; [1]Brescia University College London ON, [2]The Hospital for Sick Children Toronto ON

Abstract

Introduction. The nutrient choline is considered to play an important role in reproductive health. It is essential during the early neonatal period to reduce the risk of neural tube defects but is critical for fetal neuronal and brain development. There is limited Canadian evidence of choline intakes during pregnancy but none looking at women of childbearing years (WCBY) in general. What evidence that does exist suggests that the majority of women, pregnant or otherwise, do not meet the recommendations. The AI for WCBY is 425 mg per day.

Objectives. This study was designed to examine choline intakes nationally in WCBY and determine what food choices contribute to those intakes.

Methods. Diet recall data was collected for all non-pregnant and non-lactating women 18-45 yr age (N= 4308) using the Canadian Community Health Survey 2.2 (CCHS) data. Nutrient information for choline was imported from the Canadian Nutrient File (2010 version) and matched to the foods in the CCHS 2.2 dietary recall data. Choline intakes and percent contributions were then estimated for all food sources in the CCHS for WCBY. Distributions of usual intakes for total choline were estimated using PC Side (version 1.11).

Results. For WCBY, the top 5 foods contributing to choline intake are: eggs, 1 and 2% milk, chicken and ground beef which contribute ~32% of intake. Mean choline intake was 297 mg/d with ~ 85% having intakes below the AI.

Conclusions. Food sources for choline are primarily animal in origin but the majority of WCBY are not meeting the AI for choline. Next steps are to examine choline intakes using the more recent 2015 CCHS Nutrition data to examine choline intakes and trends in choline food consumption patterns.

Significance to the field of dietetics. Dietitians need to focus not only on folate consumption in WCBY but choline as well.