29

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Assessment of dietary intake in Seychelles

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Background: Foods and nutrients may influence methylmercury (Me/Hg) absorption and / or metabolism; however studies of mercury exposure in fish eating populations have included only limited dietary assessment.

Hypothesis: Information collected on dietary intakes in Seychelles will aid in elucidating the complicated interrelationships among diet, MeHg exposure and neurodevelopment.

Methodology: Pregnant women (n=273), recruited in the Republic of Seychelles, were asked to complete four-day food diaries at 28 weeks gestation by nurses trained in nutritional assessment. Food intakes were converted to weights (g) and input into a dietary analysis package (WISP version 2.0). For foods consumed in Seychelles and not present in WISP, supplemental food composition data were added to the database.

Results: Fish, rice, fruit, vegetables, meat, milk and eggs were consumed during the assessment period by the majority of the population. Dietary intakes of energy and macronutrients (fat, protein and carbohydrate) met or exceeded guidelines for pregnant women. Dietary intakes of vitamins B1, B2, B6 and B12 exceeded reference intakes, as did intakes of calcium, zinc and selenium. Mean dietary intakes of iron and folate were lower than those recommended during pregnancy.

Implications: Overall, pregnant women in Seychelles consume a well balanced diet, but would perhaps benefit from supplementation with iron and folate. Detailed information on dietary intakes of food and of nutrients important in brain development, such as iodine, selenium and iron are important in studies assessing cognitive development in children, including those which focus on exposure to toxic metals, such as MeHg.