

Iodine status in early pregnancy: ethnic variations

¹MA Hamrosi, ²EM Wallace, ¹MD Riley

¹Nutrition & Dietetics Unit, Department of Medicine and

²Department of Obstetrics and Gynaecology, Monash University, VIC 3168

Background – Iodine deficiency is re-emerging as a potential public health problem in Australia (1-3). Poor iodine status in pregnancy is associated with impaired fetal development, both mental and physical. Furthermore, there may be significant ethnic variation in maternal iodine status.

Objective - To describe maternal iodine status in a multiethnic Australian population.

Design – Cross-sectional. Urinary iodine (UI) concentration was measured in spot urine samples, collected in early pregnancy, from Vietnamese, Indian/Sri Lankan and Caucasian women who participated in a Down's Syndrome Screening Program over 1999-2001 in Melbourne.

Outcomes -

Ethnic Group	Median UI µg/L	% UI below 50µg/L	WHO Iodine Status
Caucasian (n=178)	49.0	50.6	Moderate Deficiency
Vietnamese (n=200)	56.5 ¹	38.5	Mild Deficiency
Indian/Sri Lankan (n=181)	53.0 ²	47.0	Mild Deficiency

¹ P=0.003 cf Caucasian; ² P=0.15 cf Caucasian

Conclusion - Consistent with recent studies in non-pregnant individuals, these women were mildly to moderately iodine deficient according to World Health Organisation (WHO) criteria. The findings may have implications for fetal development and for public health advice.

1. Gunton JE, Hams G, Fiegert M, McElduff A. Iodine deficiency in ambulatory participants at a Sydney teaching hospital: is Australia truly iodine replete? *Med J Aust* 1999;171(9):467-470.
2. Li M, Ma G, Boyages SC, Eastman CJ. Re-emergence of iodine deficiency in Australia. *Asia Pac J Clin Nutr* 2001;10(3):200-203.
3. McDonnell CM, Harris M, Zacharin MR. Iodine deficiency and goitre in schoolchildren in Melbourne, 2001. *Med J Aust* 2003;178(4):159-162.