



Iodine Status in Filipino Women of Childbearing Age (*Endocrinol Metab* 2018;33:372-9, Michael E. Serafico et al.)

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This communication is in response to the letter of Zheng Fei Ma regarding our recent publication titled “Iodine status in Filipino women of childbearing age.”

The objective of our cross-sectional study was to assess the iodine status of Filipino women of childbearing age based on urinary iodine concentration (UIC). UIC can reflect recent changes in iodine status and is considered to be a sensitive marker of current iodine intake [1]. Although UIC is known to show high intra- and inter-individual variation [2], these variations tend to even out within populations; thus, it provides a useful measure of the iodine status of the population [3]. In fact, a study conducted by Konig et al. [4] showed that variations in hydration among individuals and day-to-day variation in iodine intake generally even out if a large number of samples is collected. In addition, the median UIC in spot urine samples correlates closely with the median obtained from 24-hour samples and with the estimated urinary iodine excretion (UIE) from creatinine-corrected UICs [4]. Furthermore, the daily creatinine excretion in healthy well-nourished adults has been found to be fairly constant, at about 1 g; therefore, estimating the UIE from spot urine samples approximates the value that would be obtained from a 24-hour collection and reduces variation due to hydration status [5]. Moreover, urinary iodine/creatinine ratios are unreliable, particularly when protein intake is low, which results in low excretion of creatinine [3].

In this study, the median UIC was found to be positively correlated with the amount of iodine present in the salt that partici-

pants consumed, regardless of whether they lived along the coast. As presented in Fig. 1 of our original article, the median UIC level across the Philippine archipelago reflected an iodine status of either optimum iodine nutrition or mild iodine deficiency [6]. This further suggests that there are no specific geographic foci that can be assumed to be indicative of being low- or high-prevalence areas.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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REFERENCES

1. DeMaeyer EM, Lowenstein FW, Thilly CW. The control of endemic goitre. Geneva: World Health Organization; 1979.
2. Ma ZF, Venn BJ, Manning PJ, Cameron CM, Skeaff SA. The sensitivity and specificity of thyroglobulin concentration using repeated measures of urinary iodine excretion. *Eur J Nutr* 2018;57:1313-20.
3. International Council for Control of Iodine Deficiency Disorders; UNICEF; World Health Organization. Assessment

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- of iodine deficiency disorders and monitoring their elimination: a guide for programme managers. 3rd ed. Geneva: World Health Organization; 2007.
4. König F, Andersson M, Hotz K, Aeberli I, Zimmermann MB. Ten repeat collections for urinary iodine from spot samples or 24-hour samples are needed to reliably estimate individual iodine status in women. *J Nutr* 2011;141:2049-54.
 5. Vejbjerg P, Knudsen N, Perrild H, Laurberg P, Andersen S, Rasmussen LB, et al. Estimation of iodine intake from various urinary iodine measurements in population studies. *Thyroid* 2009;19:1281-6.
 6. Serafico ME, Ulanday JRC, Alibayan MV, Gironella GMP, Perlas LA. Iodine status in Filipino women of childbearing age. *Endocrinol Metab (Seoul)* 2018;33:372-9.