The Venezuelan iodized salt program provides just the right amount of iodine for both children and pregnant women in Trujillo state

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Iodized salt contributes to healthy babies in Venezuela

Historically, IDD was a severe public health problem in the mountains of Venezuela, as it was throughout the Andean Region (1). Venezuela has a centralized IDD Control Program that focuses on salt iodization, and includes activities of investigation and monitoring, control and vigilance, as well as communication and education (2).

Previous monitoring studies in the Andean Region of Venezuela had demonstrated an increase in the median urinary iodine (UI) in schoolchildren from 133 µg/L in 1993-1996 to 187 µg/L in 1999. During this same period, the proportion of children with a UI less than 50 µg/L fell from 16.5% to 2.4% (2). However, to date, there have been no studies of the iodine status of pregnant women.

Urinary iodine excretion is a useful and important indicator of the iodine status of a population. The World Health Organization (WHO) recommends that the median urinary iodine concentration in a population of pregnant women should range between 150 and 249 µg/L and in a population of school children it should range between 100 and 200 µg/L.

To determine the prevalence of iodine deficiency in school children and pregnant women of Trujillo State, in the Andean region of Venezuela, Dr. Caballero, the Coordinator of the Venezuelan IDD Control Program, did a cross-sectional survey of 400 school children aged 7-14 years and 300 pregnant women. Spot urine samples were collected and analyzed for urinary iodine by the Sandell-Kolthoff reaction. The criteria suggested by WHO/ICCIDD/UNICEF to indicate iodine deficiency were applied.

The results showed the median urinary iodine for school children was 175 µg/L and only 6% of children had urinary iodine concentrations below 50 µg/L. Importantly, the median urinary iodine for pregnant women was 228 µg/L (Figure 1) and only 25% in pregnant women had urinary iodine concentrations below 150 µg/L. The author concluded that on the basis of these findings, iodine intake in school children and pregnant women is optimal in Trujillo State, Venezuela.
For a complete report of this study (in Spanish) please see: Rev Argent Endocrinol Metab 48: 206-211, 2011.

Figure 1: Median urinary iodine concentration in pregnant women in Trujillo state, Venezuela, by trimester