Knowledge of dietary iodine and iodate concentration in household iodized salt in rural and urban Jalisco, Mexico

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Introduction

• Iodine is one of the 4 major nutritional deficiencies worldwide, and is the most common cause of preventable mental retardation & brain damage
• Mexico dramatically reduced goiter incidence by after implementing salt iodization
• However, in the last year the incidence of goiter tripled in the state of Jalisco.

Methods

• IRB approval was granted for this cross-sectional study
• 50 individuals, men and women older than 18, were selected from a rural and urban locality of Jalisco
  -Knowledge survey (50 from each locality)
  -Salt analysis for iodate concentration (50 from each locality, and 30 freshly purchased samples)
• Iodate concentration was measured by titration method, using “Kit para la determinación de yodatos en sal” supplied by Boiteccsa Laboratorios in Sonora, Mexico.
• SPSS was used to conduct T-tests

Results

Purpose

To assess iodine knowledge of residents, and iodate concentration in salt samples in rural and urban areas of Jalisco, Mexico to explain the increase in goiter incidence

Additional Results

• Only 53% of rural and 56% of urban residents know that a lack of iodine can cause goiter
• 88.1% of rural and 81.6% of urban residents did not know that pregnant women have higher iodine needs
• Education levels varied between rural and urban areas, but did not determine iodine knowledge (p value ≥ 0.5)
• 78% of urban residents consume iodized sea salt, and 48% of urban residents

Conclusions

• Mexico mandates the iodization of salt, but most salt samples did not meet the recommended iodate concentration.
• Uniodized sea salt was preferred by rural and urban residents based on price or habit
• Trends to decrease sodium intake and to consume non-iodized sea salt, may explain these recent increase in goiter incidence.

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