

Effects of iodine supplements on maternal thyroid function studied

February 24 2010



Common salt is iodized to meet the nutrient deficiencies of this element in some diets. Credit: Parl (Creative Commons, Attribution, Noncommercial, No derivatives).

Iodine is an essential element for synthesising thyroid hormones. A team of researchers from the Childhood and Environment Project (INMA) has studied the consequences of pregnant women consuming it in their diet and in supplements. The results suggest the need to evaluate their iodine nutritional status before systematically recommending taking it during pregnancy.

"Good iodine nutritional status at the start of and during pregnancy is essential for maintaining proper thyroid function in the mother and encouraging healthy [brain development](#) in the foetus and psycho-motor

development in the child", Marisa Rebagliato, lead author of the study and a researcher at the INMA Project, a research network of Spanish groups studying the effects of environmental contaminants during pregnancy and the start of life, tells SINC.

"When women begin pregnancy with sufficient levels of iodine through having previously taken iodine in their diet and iodised salt, the iodine reserves in their thyroid glands are sufficient to ensure proper synthesis of thyroid hormones, and pharmacological supplements are not recommended", says the scientist.

The research, published recently in the journal *Epidemiology*, evaluated the consumption of iodine in foodstuffs, iodised salt and vitamin supplements, as well as ioduria (iodine content in urine) of 1,844 [pregnant women](#) in the Spanish provinces of Guipúzcoa, Valencia, and the city of Sabadell, between 2004 and 2008. The objective was to study the relationship between their iodine nutritional status and [thyroid function](#) during the first half of pregnancy.

Contrary to what the authors had expected, pregnant women who consumed 200 µg or more in iodine supplements each day "were at greater risk of having high levels of thyroid stimulating hormones (TSH), indicators of possible thyroid dysfunction".

Out of all the pregnant women, 44% ate iodised salt and 49% took multivitamins containing iodine or specific iodine supplements containing at least 100 µg of iodine. The overall results show that the 'median ioduria, an indicator used to assess iodine nutritional status, was 137 µg/litre, and was within the correct limits for the population at large, although "slightly" below the levels recommended by the World Health Organisation (WHO) for pregnancy (150-249µg/l).

Various studies on the general population have shown a link between

high iodine consumption and hypothyroidism. "However, data for pregnant woman are scarce and inconclusive. There is consensus, though, that the risks stemming from iodine deficiency, for the health of both mother and child, are greater than those from risks due to excessive iodine consumption", points out the researcher.

The team stresses a basic message. "Epidemiological monitoring of nutritional iodine status should be carried out on this population before making any automatic recommendations about taking iodine supplements during pregnancy. And above all, people should be encouraged to take iodised salt to ensure they have sufficient iodine levels long before [pregnancy](#)".

More information: Rebagliato M., Murcia M., Espada M., Álvarez-Pedrerol M., Bolúmar F., Vioque J., Basterrechea M., Blarduni E., Ramón R., Guxens M., Foradada C. M., Ballester F., Ibarluzea J., y Sunyer J. "Iodine intake and supplementation and its effect on maternal thyroid function during pregnancy". *Epidemiology* 2010;21: 62.

Provided by FECYT - Spanish Foundation for Science and Technology

Citation: Effects of iodine supplements on maternal thyroid function studied (2010, February 24) retrieved 5 May 2024 from <https://medicalxpress.com/news/2010-02-effects-iodine-supplements-maternal-thyroid.html>

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