

Pregnant women in iodine-sufficient Iran are at risk of low iodine intakes

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Iodine is particularly important during preconception and the first 16 weeks of pregnancy, when the developing fetus is entirely dependent on the mother for its supply of iodine and the thyroid hormone.

Research conducted in 12 provinces by the Institute of Endocrinology and Metabolism, affiliated with the Shahid Beheshti University of Medical Sciences in Tehran, indicates that pregnant women in Iran may be suffering from mild to moderate iodine deficiency.

“The average urinary concentration of iodine in pregnant women should be at least 150 $\mu\text{g/L}$; however the research results indicate the [median] was 95 $\mu\text{g/L}$ in pregnant women screened in the 12 provinces,” said Dr Hossein Delshad, Head of the Institute.

This study suggests that consumption of salt fortified with iodine may not be enough to meet the dietary needs of mothers-to-be and women who are breastfeeding. They should take iodine supplements to make up for the deficiency, said Delshad. He urged all women to start using iodine-folic acid capsules three months before planning a pregnancy. Last year, the institute launched its first product, iodine-folic acid supplements (iodofolic), on the domestic market. The cost of 4 packages of the supplement (each containing 30 capsules) is \$1.

“Expectant mothers should take one capsule per day which contains 150 micrograms of iodine and 500 micrograms of folic acid,” Delshad said.

The institute promotes the importance of minerals in the diet and aims to ensure that mineral deficiencies are eliminated across the country. “Iodine boosts brain development in the womb, and iodine deficiency can cause learning disability in the child.

Iodine is also essential for the production of thyroid hormones, which are important for healthy metabolism, growth, and development,” the institute’s researchers were quoted as saying.



Expectant mother in Iran should take iodine-containing supplements.

References

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IDD Prevention in Iran

Iodine deficiency was historically endemic in many provinces of Iran. A nationwide survey in 1989 showed that between 30% and 80% of school-age children had goiter, and an estimated 20 million people were at risk of iodine deficiency (1). The upshot of these findings was political commitment to eliminate IDD through salt iodization, and a robust national USI program, with emphasis on regular surveillance. Thanks to mandatory salt iodization, surveys of school-age children in 1996, 2001, and 2006 repeatedly reported a median UIC in the optimal range (232, 190, and 140 $\mu\text{g/L}$, respectively) (2-4). In the most recent national survey in 2014, the median UIC of 18,000 school-age children was 161 $\mu\text{g/L}$, which confirms that iodine sufficiency has been successfully sustained (unpublished data) (5).

It is estimated that, since the adoption of mandatory salt iodization in Iran, 20,000 goiter cases have been prevented, leading to an average 6 point increase in child IQ. However, it is clear that the problem of iodine deficiency persists among pregnant and breastfeeding women, who have a higher dietary requirement, and prenatal iodine supplements may be advisable.