If all Italian food salt is iodized, lowering salt intake is unlikely to affect iodine nutrition

The native iodine content of most foods and beverages is low and highly variable. As a result, iodine intakes vary across regions and countries according to local eating habits and national strategies for IDD control. Universal salt iodization has been remarkably successful in eliminating IDD in many countries. But to prevent the rise of non-communicable diseases, WHO recommends limiting salt intake to 5 g/day in adults and even less in children. In Italy, universal salt iodization was implemented in 2005. Iodine is added to coarse and table salt at 30 mg/kg as potassium iodate, and the use of iodized salt is permitted in the food industry and in communal eating areas. Nationwide monitoring of the USI program is led by the Italian National Observatory for Monitoring Iodine Prophylaxis (OSNAMI), which was established in 2009 at the National Institute of Health.

**Estimating daily intake of iodine from food and iodized salt**

The authors used food consumption data from a recent nationwide survey (1) to estimate the iodine content of around 300 foods highly representative of Italian eating habits. They used their estimates to calculate the total daily iodine intake in the Italian population, and the contribution of various foods with and without iodized salt to this total intake. For technical reasons, they assumed iodine bioavailability to be 100%.

Not including salt, the biggest sources of daily iodine were fish and seafood products. Fish and seafood products (across all age groups) closely followed by milk (in children, adolescents, and women) or dairy products (in men). But even when taken together, these top three sources provided iodine in quantities considerably below the recommended intakes (RDA=150 μg/day in adults and adolescents and 120 μg/day in children, Figure 1). This highlights the importance of iodine provided through iodized salt. The consumption of milk and dairy products, two well-known sources of dietary iodine, was much higher in children and adolescents, which supports earlier evidence that this food group contributes to higher urinary iodine levels in Italian children (2).

**Iodized salt helps to achieve optimal iodine nutrition**

As shown in Figure 1, consuming 5 g of salt iodized at 30 mg/kg would ensure optimal daily iodine intake in all age groups (3). In children, the recommended intake would be achieved with just 3 g of iodized salt. The study also reports that substituting iodine-enriched (biofortified) vegetables for non-biofortified ones could significantly increase iodine intake when combined with iodized salt (to 204 μg/day in adults; 209 μg/day in adolescents males; 200 μg/day in adolescent females; and 152 μg/day in children with 3 g of iodized salt).

Overall, these findings strongly suggest that the WHO-recommended quantities of salt, if iodized at 30 mg/kg, may be sufficient to achieve adequate iodine status in the Italian population. But in light of the higher iodine requirement during pregnancy and lactation (250 μg/day), the estimated iodine intake in adult women may be of some concern.

In Italy, only 3–8% of salt used by the food industry is currently iodized. While this implies that household salt is still a major contributor to iodine intake in Italy, convincing the food industry to use more iodized salt should be an important next step.

**References**


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**The motto of the iodized salt program in Italy is:**

POCO SALE, MA IODATE! *Little salt, but iodized!*

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**FIGURE 1** Projected median iodine by age and gender, from daily consumption of 0, 3 and 5 g of salt iodized at 30 mg/kg. 3 g of salt/day would provide adequate daily iodine to children (120 μg/day) and 5 g to adults and adolescents (150 μg/day).