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## RC8.1 - ECE_3487 - High salt intake does not guarantee adequate iodine status: evidence from the lithuanian NATRIJOD study

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**Background:** Despite established policies for salt iodization, iodine deficiency remains a public health issue in Europe. High salt consumption persists, yet it is unclear whether excessive salt intake ensures adequate iodine intake in everyday diets. Changes in dietary patterns, inconsistent use of iodized salt, and reduced consumption of iodine-rich foods may undermine the effectiveness of iodine fortification efforts. This study investigated the association between salt intake and iodine status in a nationally representative sample of adults.

**Methods:** The NATRIJOD study is a cross-sectional, population-based study conducted in Lithuania. The study assessed sodium, potassium, and iodine intake using 24-hour urine collections, the gold standard for evaluating population-level dietary intake. Urinary iodine concentration (UIC) was measured to classify iodine status according to WHO criteria. Salt intake was estimated from 24-hour urinary sodium excretion. Information on iodized salt use, dietary patterns, and iodine-containing supplements was collected via questionnaires. Multivariable logistic regression was used to identify factors independently associated with iodine sufficiency. A two-sided $P$-value $<.05$ was considered statistically significant.

**Results:** A total of 662 adults (52.0% men) with a mean age of $47.3 \pm 12.0$ years were included. The median UIC was 96.6 µg/L (IQR 54.4-159.5), indicating borderline iodine sufficiency at the population level. Overall, 51.7% of participants had iodine insufficiency, including 10.6% with severe deficiency.

Median salt intake was 9.08 g/24 h (IQR 6.46-12.19); 40.8% of participants consumed ≥10 g/24 h of salt. UIC increased across salt intake categories, yet iodine insufficiency remained common even among high salt consumers. Participants consuming ≥10 g/24 h of salt had a higher median UIC than those consuming 5-9.99 g/24 h (112.7 vs 91.4 μg/L, $P = .005$) and a lower prevalence of iodine insufficiency (44.1% vs 55.7%, $P = .005$).

In multivariable analysis, salt intake category was independently associated with iodine status ($P = .005$). Compared with participants consuming <5 g/24 h of salt, those consuming ≥10 g/24 h had higher odds of iodine sufficiency (OR 2.03, 95% CI 1.20-3.43; $P = .008$). Dietary factors, including bread, milk, and cheese consumption, were not independently associated with iodine sufficiency.

**Conclusions:** More than half of adults in Lithuania had iodine insufficiency despite high salt intake. These findings show that excessive salt consumption does not ensure adequate iodine status, highlighting the need for improved practices in using iodized salt and incorporating dietary iodine sources. To ensure sufficient iodine levels without increasing salt consumption, it is essential to strengthen iodization strategies and continue monitoring the population's iodine status.

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