

Progress towards optimal iodine nutrition in Eastern Europe

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A regional update with a focus on Belarus, Moldova, Ukraine, and Russia.

Belarus: iodized salt in processed foods improves iodine status

Results of a national iodine survey, conducted in Belarus in 2017, have been recently published (1). The assessment covered a nationally representative cohort of 873 school-age children (SAC, 9–12 yrs) and 700 pregnant women (PW) at 16–36 weeks of gestation. The median urinary iodine concentration (mUIC) in SAC was 191 µg/L, which reflects optimal iodine nutrition in the general population. There were regional differences in the mUIC: the lowest value (117 µg/L) was recorded in the Brest region and the highest (287 µg/L) in the Mogilev region. Both of these medians lie within the optimal mUIC range. However, the design of the study and the relatively small number of schoolchildren recruited do not permit to draw definitive conclusions about the nature of these regional differences.

According to the survey, 81% of households in Belarus used iodized salt, including 75% of pregnant women. In

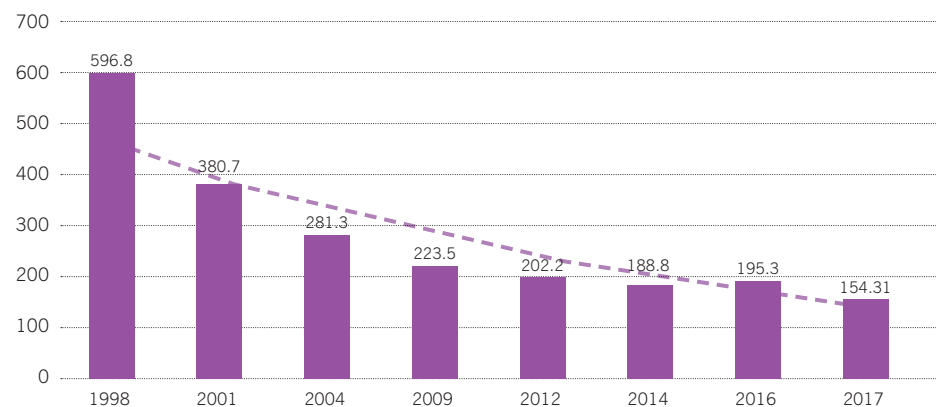
Belarus, both iodized and non-iodized (common) salt is permitted in retail. However, use of iodized salt is mandated in bakery products and other industrially processed foods (cheeses, sausages, cured meats, etc.). Despite this relatively high penetration of iodized salt, the mUIC in PW was only 121 µg/L, which suggests that iodine nutrition is suboptimal in this population. A higher mUIC in PW was found in the Brest region and the city of Minsk. However, as in the case of SAC, it is unclear whether these regional differences are significant.

According to Ministry of Health data, between 1998 and 2017, the incidence of new cases of goiter in children decreased almost four-fold (from 596.8 to 154.3 cases per 100,000). The fastest decrease occurred during the first 7–8 years after the launch of the salt iodization program in 2001 (Figure 1). The authors of this analysis concluded that “hidden” iodized salt, i.e. iodized salt contained in processed foods, has been an important contributor to the optimal iodine status sustained over the past 20 years.

Republic of Moldova: adults are iodine sufficient but salt intakes are too high

A recently published “Dietary salt intake survey in the Republic of Moldova, 2016” provides an update on the status of iodine nutrition. Urinary iodine concentration was assessed in 1307 adults (aged 18–69 yrs) of both sexes, who were randomly selected from all administrative districts of Moldova, with the exception of the semi-autonomous Republic of Transnistria. The median urinary iodine concentration was 196 µg/24h without a significant difference between men and women. More than a half (57.2%) of the households consumed adequately iodized salt (with >15 mg/kg of iodine), but almost a quarter (23%) consumed salt that was not iodized. The salt intake in adults was more than double the WHO recommended maximum of 5 g per day. The proportion of the population achieving the target of 5 g or less per day was only 11.3% with similar proportions among men and women.

FIGURE 1 Declining incidence of goiter (cases per 100,000) in children in Belarus between 1998 and 2017 (1).





If salt iodization becomes mandatory in Russia, it could provide sufficient iodine to pregnant women and prevent the loss of IQ points associated with iodine deficiency.

Russia by 2030". As part of the strategy, it is expected that salt iodization and milk fortification with vitamins A and D will be made mandatory. "Our task is to provide people with products enriched with the necessary vitamins and microelements," said Gordeev.

This is not the first attempt to introduce mandatory salt iodization in Russia. Previously, a bill was submitted by "United Russia" party faction to the State Duma in 2013. At that time, the bill received little support from the government.

References

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Ukraine is ready to adopt mandatory salt iodization

The Public Health Center (PHC) of the Ministry of Health of Ukraine has used legislative initiative to introduce mandatory universal salt iodization (USI). The initiative was discussed and supported by the participants of an expert Round Table meeting: "Legislative changes in Ukraine concerning the iodization of food salt," held in Kiev on December 14, 2018 (3).

"Iodine deficiency is widespread throughout Ukraine, and this problem requires an immediate solution. The most effective and at the same time most beneficial way to overcome iodine deficiency is USI, but today not every Ukrainian has access to iodized salt," said Vladislav Zbanatsky, Deputy Director General of the PHC. Ukraine remains one of few countries in the world that do not yet have a law on mandatory iodization of salt. Up to 382,000 children (80%) born each year in Ukraine could be at risk of iodine deficiency disorders and impaired development as a result.

Lyubov Loban, Chief Technologist of the major salt manufacturer "Artyomsil," reported that his enterprise had a capacity to produce 7 million tons of salt, including 1.5 million tons of iodized salt, per year. At present, "Artyomsil" has 16 salt iodization machines, and it is using only 4% of its total capacity. The commercial sector is ready for a nationwide salt iodization project; only relevant legislative norms are needed. Representatives of Ukrainian businesses stressed that, in the future, the total production of iodized salt in the country can be easily increased by ten, or even 20 times.

"Today we need political will to introduce legislation for USI", said Olga Dontsova, Head of the Department for Promotion of Healthy Nutrition and Physical Activity, Ministry of Health.

Russian government supports first ever iodization bill

The Ministry of Health, together with the endocrinological community, has recently developed a bill on iodization of edible salt. The ministry emphasized that salt iodization is the most effective and inexpensive way to prevent iodine deficiency disorders. Support for this bill was declared by Anna Popova, who is Head of the Russian Public Health Service (Rosпотребнадзор) during a meeting with deputies of the "United Russia" party faction in the State Duma (Russian Parliament) on January 23, 2019. "Today the Government and our supervising Deputy Prime Minister Tatiana Golikova absolutely support the bill that was developed by the Ministry of Health and, of course, we fully support it too," said Popova. She also expressed hope that mandatory use of iodized salt will come into effect, and the severity of iodine deficiency in the population will decrease (4).

The Russian Deputy Prime Minister Alexei Gordeyev, in charge of agriculture and the food industry, instructed the government departments and the scientific community to compile a list of products that would need to be fortified with vitamins and microelements (5). His instruction followed an interdepartmental meeting on the implementation of the new "Strategy for the Improvement of Food Products Quality in