

A major report by WHO and IGN highlights a persistent, potentially costly, and likely re-emerging problem of iodine deficiency in Europe

Iodine deficiency, especially mild deficiency, is a widespread problem in Europe. And while it can be addressed easily and inexpensively through the consumption of iodized salt, a 1999 World Health Organization (WHO) survey showed Europe lagging behind Africa, Asia and South America, with the lowest salt iodization coverage of all the WHO regions at 28%. In 2018, the EUthyroid Project funded by Horizon Europe noted that due to lack of valid data, they were uncertain about the scale of the problem, but suggested that up to half of all newborns in Europe are at risk of iodine deficiency.

This concern was shared by IGN, as well as WHO's Regional Office for Europe, and Kiwanis International, the civil society organization that was part of successful global efforts to prevent iodine

deficiency. Following discussions with WHO and Kiwanis, IGN brought together a team of report authors whose work had already highlighted emerging problems as well as lack of data or progress on already acknowledged issues.

In 2022, Dr. Maria Andersson, Dr. Rodrigo Moreno-Reyes, IGN's Regional Coordinator for Western and Central Europe, Dr. Sarah Bath of the University of Surrey and IGN's Regional Coordinator for Eastern Europe, Dr. Gregory Gerasimov, began work on the report, a journey that took more than two years to complete. Their approach was to create something both comprehensive and unique, combining information sourced not only from scientific publications and public health reports but also animal husbandry science and reporting, and the food industry.

The report's findings were first brought to the region's attention at a side event of the 77th World Health Assembly in Geneva on May 29, sponsored by the governments of Switzerland and Germany. The launch was opened by Awilo Ochieng Pernet, of the Swiss Federal Food Safety and Veterinary Office, on behalf of the Government of Switzerland. It was co-chaired by Kremlin Wickramasinghe of WHO's Regional Office for Europe and Werner Schultink, Executive Director, IGN.

The event featured presentations by the report's authors and discussions among key stakeholders, including international organizations like UNICEF and the SUN Movement, and industry associations such as EUsalt. Participants included Filip Delanote (Kiwanis International), Dr. Maria Andersson (IGN), Dr. Rodrigo Moreno Reyes (IGN), Dr. Sarah Bath (University of Surrey), Jonah Goodman (Journalist), Karan Courtney Haag (UNICEF Europe and Central Asia Regional Office), Editha Giese (German Federal Ministry of Food and Agriculture), Irina Zodrow (SUN Movement Secretariat), and Martina Gonzalez from the Global Alliance for Prevention of Spina Bifida.

The event was successful, with lively dialogue between presenters, panelists and stakeholders. Reflecting on the discussions,



IGN Executive Director Werner Schultink © IGN



Partners and stakeholders attending the event © IGN

IGN Executive Director Werner Schultink commented: *“It is sad and shocking to see all the evidence that iodine deficiency still exists in Europe and that the problem is creeping ‘silently’ back in a region which invented one of the most effective nutrition and public health interventions more than 100 years ago: adding small amounts of iodine to salt. I am therefore very proud of the collaboration with WHO, and that we were able to launch this report at the sidelines of the World Health Assembly, one of the most significant yearly health meetings. It was also very encouraging to get the support from both Switzerland and Germany, as well as from a wide range of partners including UNICEF, GAIN, SUN, MNF, European Thyroid Federation. I am hopeful that this substantive report will be used to achieve improvement.”*

“The side event made us take a step back in time to understand where we come from with the fascinating story on the journey Switzerland went through that Jonah Goodman shared, and to where we stand today in Europe still with remaining iodine deficiency. The excellent report that was pulled together with expertise and energy by those involved showed the big challenges we still face in Europe. The audience was very engaged and interested in the topic. The interest and commitment from WHO, Kiwanis and the Swiss and

German governments gave me a feeling of hope that iodine still is on people’s radar screen and receives the attention it deserves. Continued dialogue and critical thinking to find solutions together with the mission IGN has to make sure that the story of success doesn’t get forgotten but also that we need to remain vigilant and focus on finding sustainable solutions” commented IGN Senior Advisor Arnold Timmer.

Filip Delanote, of Kiwanis International, who supported the publication of the report, spoke about the history of the civil society organization’s work over a period spanning more than 30 years, and pledged that their campaign for sustained IDD elimination would continue, mobilizing public support where Kiwanis has members and engaging corporations,

foundations and NGOs to join Kiwanis in this important work.

Further discussions emphasized key points such as the importance of addressing changing dietary trends to ensure sustained adequate iodine intake. The economic impact of iodine deficiency, even in its mild forms, on public health and productivity was highlighted as well as the potential of increasing iodine intake through iodization of salt used in food staples. Additionally, the rise in mild iodine deficiency disorders (IDD) in Europe was explored, as well as concerns that similar problems may be hampering progress – or indeed causing it to decline – in countries around the world.

The launch of this report at WHA77 underscored the urgent need for coordinated efforts to combat iodine deficiency in Europe and amplified the call for member states to strengthen and expand large-scale food fortification programs, including salt iodization, to prevent micronutrient deficiencies and related health issues.

The full report can be accessed on iris.who.int/handle/10665/376863. IGN has also distilled key messages from the report which we share below. More information can also be accessed on the [IGN website](#).



Awilo Ochieng Pernet, of the Swiss Federal Food Safety and Veterinary Office, speaking on behalf of the Government of Switzerland, who sponsored the event © IGN

Prevention and control of iodine deficiency in the WHO European Region

Adapting to changes in diet and lifestyle

Produced by the WHO Regional Office for Europe and the Iodine Global Network
Supported by Kiwanis International

Emerging trends in iodine nutrition: Key messages from the report

About the report:

Iodine deficiency, especially mild deficiency, is a widespread problem in the WHO European Region. Since the last WHO report on iodine deficiency in the Region was published 15 years ago, a wealth of new data on iodine status has become available, particularly concerning vulnerable population groups. This report is unique as it combines information sourced not only from scientific publications and public health reports, but also animal husbandry science and reporting, and the food industry.

nodules, multinodular goiter, and hyperthyroidism, particularly in adults and older people. Untreated hyperthyroidism increases the risk of cardiac arrhythmia, heart failure, osteoporosis, adverse pregnancy outcomes and cognitive impairment in older people.

Severe iodine deficiency during pregnancy can lead to low blood levels of thyroid hormones, increasing the risk of lasting intellectual impairment that reduces a child's IQ.

Adding tiny amounts of iodine to salt for human and animal

consumption to address the problem is simple and very inexpensive – a recent German study estimated it at 11 cent per person per year – and has been carried out in most countries around the world for the past three decades.

Over time, less attention has been paid to the prevention of iodine deficiency and progress is being eroded in some countries, increasing the risk of endangered brain development of children and re-emergence of thyroid diseases, including goiter.

The problem of iodine deficiency

The human body needs constant, small amounts of iodine in the diet for the synthesis of thyroid hormones that maintain numerous basic physiological functions, including metabolism and brain development. Normal diets in most countries do not contain enough iodine.

Insufficient intake results in iodine deficiency, a problem in rich and poor countries. Beyond the visible sign of goiter, it also increases the frequency of preventable thyroid disorders, such as thyroid





Salt iodization remains the main strategy to ensure adequate iodine intake in the European Region.

Lifestyle choices and dietary trends, including increasing use of processed foods and the switch to plant-based diets and dairy alternatives, are contributing to persistent, and in some countries increased, insufficient iodine intakes.



Milk and dairy products are important sources of iodine

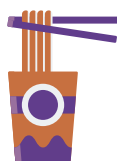
in many western and central European countries, especially for children. Many animal feeds and supplements are enriched with iodine to improve farm animals' health and milk yields. Yet consumption of dairy products is declining among adolescents and adults, increasing their risk of iodine deficiency.



Iodine status in adults and pregnant women is less than optimal in several countries with voluntary or no salt iodization.

Iodine intake and status should be optimized prior to pregnancy. The shift towards plant-based dairy alternatives, particularly among women, who already bear a higher risk of iodine deficiency and thyroid diseases than men, is concerning for their iodine nutrition, especially in

countries relying on milk as a source of iodine, as most dairy alternatives do not contain it.



Foods produced or cooked outside the home, such as bread, processed meats, or ready-to-eat meals, are now the **main sources of salt in a Western diet (70–80% of total)**.

Yet recent market surveys found just 9% of salt in processed food products in Germany and 34% in Switzerland was iodized. In 24 countries with voluntary or no iodization, **commonly consumed foods are often produced with non-iodized salt.**



Poor knowledge of the consequences of iodine deficiency among the public, health authorities, health professionals and food producers is a **barrier to improving iodine intake.**

There is little understanding that advice to reduce salt intake for health reasons is compatible with using iodized salt.

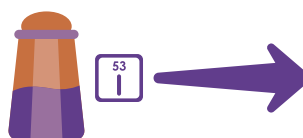


Because of dietary and lifestyle changes, variation in national salt iodization regulations, and lack of understanding of iodine nutrition in the European Region context, **progress toward optimizing iodine intake may be stalling** or even declining in some countries. If adequate iodine intake in the Region is not maintained, iodine deficiency disorders will return, resulting in economic loss.



Mild iodine deficiency exists throughout the European Region,

with a major impact on population health and the economy.

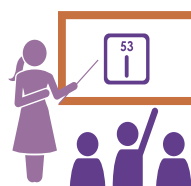


At current iodine levels in salt in the European Region, there is **no risk for iodine excess.**



Salt iodization, implemented in 43 of 53 Member States, plus Kosovo,¹ (n=54) has prevented

the most detrimental health consequences of severe iodine deficiency. Iodization is mandatory in 30 of these and voluntary in 13.



Iodine status in school-age children is adequate in 26 of 28 European Region Member States, plus Kosovo,

with data on urinary iodine concentration, largely due to salt iodization and dietary iodine from milk and dairy products. Recent studies indicate iodine intakes in some countries with voluntary salt iodization are decreasing.

1 All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).



Routine iodine status surveillance using nationally representative population-based studies is lacking in most countries and in many the most recent data is more than 10 years old. Data frequently comes from universities, medical experts, and research centres, often with little support or recognition from health authorities. Only Switzerland and the United Kingdom publicly fund regular population iodine status monitoring. In eastern European and central Asian countries (except Kazakhstan and the Russian Federation) surveys have only been conducted with external support from donor agencies, making future monitoring unsustainable.

Emerging trends: Ways forward

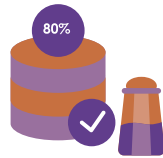


Because of **the importance of dairy to iodine sufficiency** in the Region, regulations for animal feeds and milk-iodine concentrations should be part of iodine deficiency prevention programmes. The dairy industry needs to be involved in efforts to ensure iodine adequacy in many countries.



As the trend for plant-based diets grows, with the increased popularity and availability of plant-based alternatives to key sources of iodine (milk, dairy,

fish), coordinated action is needed to ensure appropriate fortification of alternative milk and dairy products with iodine.



Data shows that in countries where the use of **iodized foodgrade salt in households and processed foods is mandatory**, particularly in domestic products such as bread, bakery goods and processed meats, **population iodine status is generally adequate**. In countries with over 80% use of iodized salt in the bakery industry (Armenia, Belarus, Georgia, Republic of Moldova, others) population iodine intake is adequate.



Food businesses trading across borders in the European Region must comply with salt iodization regulations in each country, increasing complexity in the supply chain, which has led to the use of non-iodized salt. Mutual recognition of different national legislation and acceptance of products following the rules of another country may provide more legal certainty for food business operators and remove barriers to intra-community or international trade.



Salt reduction and salt iodization policies and programmes must be integrated.



More research is needed on the association between iodine status and thyroid disorders, as well as on the cost-effectiveness of salt iodization versus treatment of thyroid disorders.

Alternative methods to provide more regular information on national iodine status are needed and monitoring should include the adult population (particularly women of reproductive age), adolescents and/or pregnant women. **Political commitment, funding allocation and new strategies for population monitoring of iodine status are needed.**



Countries should take advantage of national health and nutrition surveys and surveillance systems, including those for sodium intake, as well as using health facilities (such as maternity centres) to measure urinary iodine concentration.

Read the report on iris.who.int/handle/10665/376863