EUthyroid scientists warn that widespread lack of iodine threatens brain development in children

On 18th April, the scientists investigating iodine deficiency disorders (IDD) as part of the Horizon2020 research and innovation action EUthyroid met in Poland to sign the ‘Kraków Declaration on Iodine.’

With very few exceptions, Europe is an iodine-deficient continent. Iodine deficiency during pregnancy and breastfeeding is widespread and adversely affects the development of the child. Even mild or moderate iodine deficiency in the mother may impair brain development and neurocognitive function, leading to lower I.Q. in children. Although these facts are well established, iodine deficiency disorders (IDD) prevention programs across Europe receive surprisingly little attention from policymakers, opinion leaders, and the public.

Estimations suggest that up to 50% of newborns in Europe are exposed to iodine deficiency.

The goal of the Declaration was to draw attention to the iodine situation in Europe in the hope that governments, health officials, and other policymakers realize that this important public health problem is impacting negatively on society but is capable of resolution.

**Salt iodization: a successful strategy to prevent IDD**

Iodine deficiency can be readily and inexpensively prevented by fortification of salt with iodine. To achieve sustainable optimal iodine intakes, iodized salt should replace non-iodized salt in nearly all food production. This approach will not increase total salt intake, making it compatible with current dietary recommendations.

The ‘Krakow Declaration on Iodine’ calls on policymakers, public health officials, scientists, and the public to join forces to ensure that effective strategies to prevent IDD are implemented across Europe to reach and secure a sufficient iodine status across Europe.

In particular it calls for action in the following areas:

1. **Methods of IDD Prevention:**
   Regulators and policymakers should harmonize obligatory Universal Salt Iodization to ensure free trade of fortified foodstuffs in Europe. Similarly, iodized animal feed requires regulatory approval to ensure free trade within the EU.

2. **Control of IDD Prevention:**
   National governments and public health authorities have to perform harmonized monitoring and evaluation of fortification programs at regular intervals to ensure optimal iodine supply to the population.

3. **Support for IDD Prevention:**
   Scientists, together with public-health care workers, patient organizations, industry and the public, should support measures necessary to ensure that IDD prevention programs are sustainable, as appropriate within a rapidly changing environment and further social awareness of the issue.
Euthyroid: making Europe smarter with iodine

Euthyroid is a three-year pan-European project designed to investigate iodine status and address barriers to achieving effective, harmonized IDD prevention across the EU and the wider continent. Launched in 2015, Euthyroid is scheduled to end on May 31, 2018.

Active in advocating for optimal iodine nutrition in the region for several decades, the Iodine Global Network has been one of Euthyroid’s key partners. IGN’s project work package, delivered by Prof. John Lazarus (Regional Coordinator for Western & Central Europe), was focused on dissemination activities, which included the planning and organization of the Kraków meeting with the support of Prof. Alicja Hubalewska-Dydejczyk (Jagiellonian University Medical College and IGN National Coordinator for Poland).

“The Iodine Global Network has been privileged to be part of Euthyroid. IGN endorses the findings of Euthyroid and urges governments and health care delivery officials to respond by not only advocating for adequate iodine nutrition but to initiate programs to achieve this,” said Prof. Lazarus.

Status of iodine nutrition and IDD prevention in Europe

As the project is entering its final stage, the results from all work packages are being analyzed and prepared for publication later this year. The findings show, firstly, that there is a lack of consistent monitoring of iodine status across Europe, and that the methods of monitoring themselves are very variable. Secondly, the project has confirmed that serum thyroglobulin is a promising biomarker to detect iodine deficiency. Thirdly, an analysis of three large mother and baby cohorts from the Netherlands, Spain, and the UK has shown that maternal iodine deficiency (which is common in many European countries) is associated with reduction in I.Q. in the children. Lastly, a sophisticated analysis of iodine deficiency data has shown adverse economic and health consequences.

Towards harmonized IDD prevention

To sustain the political momentum generated by the Kraków meeting, it is necessary to develop advocacy tools to be able to influence the EU and individual country health providers to recognize the iodine problem. Currently, activities are being planned along two tracks. The first one will focus on ensuring that the Euthyroid data and resources are available to shape IDD programs going forward, i.e., continue to provide tools and infrastructure to improve the standards and the quality of IDD monitoring studies, enable cross-laboratory comparisons of IDD-related biomarkers, maintain and extend databases to collect IDD-related registry and monitoring study data, continue efforts to inform the general public about the importance of IDD prevention and advocate the need of IDD prevention and monitoring to national governments and international health authorities. These activities will be supported by The University of Greifswald.

In parallel, an advocacy program directed mainly at EU officials in Brussels will be developed with the support of the World Iodine Association (WIA) with the aim to establish and coordinate a multi-stakeholder platform to implement a harmonized strategy to tackle IDD at European and then global level. This new EU advocacy strategy must be defined in the perspective of the new European Commission and the new European Parliament that will be appointed in 2019. The financial resources to carry out scientific, advocacy, and communication activities must also be secured. Low political priority in the EU and perception that iodine deficiency is not a problem have been identified as key barriers that must be overcome before a harmonized IDD prevention strategy can be effectively implemented in Europe.

Stressing the important role of the Kraków Declaration, Mr. Attilio Caligiari from WIA called it “the cornerstone of a multi-stakeholder approach […] to prevent and tackle IDD at a global level” and “a basis to develop effective measures for improving and optimizing iodine intake in Europe”.

The signatories of the ‘Kraków Declaration on Iodine’ ask for support from stakeholders across Europe and beyond to pool our resources and expertise to ensure that our future generations will be able to realize their full potential without any restrictions resulting from exposure to iodine deficiency. You can sign the Declaration as an individual or on behalf of an organization.

Join the Euthyroid scientists, and sign the Declaration: https://www.iodinedeclaration.eu/sign/