

The largest pan-European iodine study starts

Could a better iodine supply make Europe smarter?

Scientists from 27 European countries want, with the support of the EU, to declare war on iodine deficiency. With the EUthyroid network, a pan-European initiative takes on the challenge of scientifically measuring the iodine intake of the European population and developing appropriate measures to sustainably improve the iodine intake in Europe. The University Medicine Greifswald, Germany, will coordinate over three years this EU research project with a total investment amounting to three million Euros.

Iodine deficiency is the most important risk factor for thyroid disease in adults and children. Thyroid disorders are particularly frequently found in cases of iodine deficiency. Pregnant and nursing women in particular have an increased need for iodine in order to provide enough to ensure optimal development of the child. Even a slight iodine deficiency during pregnancy can lead to impaired brain development of the child and thus to reduced intelligence. In fact, iodine deficiency is the world's leading cause of preventable brain damage and for years the World Health Organization has warned that Europeans are increasingly affected by the consequences of iodine deficiency.

No data regarding iodine intake

In principle, iodine is absorbed naturally through the diet. Seafood is a natural source of the essential trace elements. However, most regions of Europe are iodine deficient areas. In addition to mountainous regions, such as the Alps, there are many countries across Europe, which due to their continental location and dietary habits represent typical areas of iodine deficiency, which has demonstrably negative health consequences. Prof. Henry Völzke, from the University Medicine Greifswald, is the coordinator of EUthyroid and has been instrumental in pushing the project forwards. "Currently in Europe there is no uniform dataset for iodine intake. Therefore, we can only speculate about the magnitude of health problems resulting from a deficient iodine intake. The fact is that even in Germany many children are born with intellectual disabilities. In this respect I am very pleased as an epidemiologist and physician to see that with EUthyroid the EU has now opened a new opportunity to change this unsatisfactory situation. I am convinced that an improved iodine intake can make Europe more intelligent."

Over the last century many European countries have introduced prevention programs using iodised salt, aimed at improving the iodine supply to the population, despite this, only 27 percent of European households use iodised salt. Consequently the World Health Organization has for years called for a review of the situation in Europe through uniform monitoring as a basis for improved preventive measures. "Europe has a lot of experience with the harmonisation of different processes across national borders, but in the prevention of iodine deficiency we are lagging behind significantly" said Professor John Lazarus from Cardiff University, regional coordinator of the "Iodine Global Network" in Western and Central -Europe and EUthyroid partner. "I trust that with EUthyroid a dynamic is created which leads to significantly more effective preventive measures."

30 partners from 27 countries are taking part in the European project EUthyroid. The EUthyroid network gathers for the first time uniform data on the iodine intake of the population in participating countries. It will compare national measures and dietary habits and work out appropriate measures to improve iodine intake in Europe.

Focus on iodine deficiency during pregnancy

Main tasks of the scientific work are to standardise data collection and to perform a cost-benefit analysis of existing prevention programs. "The iodisation of salt is very cheap, but we also need to invest in a suitable program for mapping iodine intake. Only then can we ensure that, in spite of

changing eating habits and large regional differences, no more children in Europe are exposed to iodine deficiency before birth" said Henry Völzke.

EUthyroid pays special attention to questioning the extent to which insufficient iodine intake in pregnant women affects the intellectual development of their children. Preliminary studies indicate that even a slight iodine deficiency during pregnancy negatively affects the IQ of the child. EUthyroid will examine this issue using three separate mother-child studies taken from regions of differing iodine intake. It is estimated that as many as 50 percent of all newborns in Germany were exposed to iodine deficiency during pregnancy, which could lead to adverse affects. However, reliable data is not available in Europe.

The European continent represents a complex patchwork of iodine prophylaxis. Due to regional differences in eating habits, the natural iodine intake is heterogeneous. In many countries, prevention programs utilising iodised salt exist, but they are not harmonised across Europe. Only a small number of countries carry out regular monitoring of iodine intake, and from these the amount of comparable data is very limited. "There is still much to be done before all European citizens can count on a good, harmonised iodine intake unrestricted by national boundaries," said Völzke.

With the establishment of central databases and structures for inter-laboratory comparison as well as the introduction of quality assurance measures for data collection, the conditions are already being created that, over the three year duration of the project, will lead to improvements in the iodine intake of the European population.

Background

About EUthyroid

EUthyroid comprises 30 partners from 27 countries and with a budget of € 3 million will make a significant contribution to analysing the status quo of iodine deficiency prevention measures in Europe. The research consortium "EUthyroid - Towards a EUthyroid Europe" (# 634453) was one of only 67 successfully funded research proposals, out of nearly 2,200 submitted, in the first call of the new Framework Programme of the European Commission: Horizon2020.

www.euthyroid.eu

About University Medicine Greifswald

Patient care, research and teaching are the three central pillars of the traditional University Medicine Greifswald. Today the modern University Medicine Greifswald includes a new campus hosting 21 clinics, 19 institutes and other facilities. More than 1,700 medical students receive their healthcare training at the University Medicine Greifswald.

www.medizin.uni-greifswald.de

About Iodine Global Network

The Iodine Global Network (IGN) comprises of more than 100 regional and national coordinators and partner agencies worldwide who are engaged in overcoming iodine deficiency. The IGN works closely with WHO and UNICEF and supports public, private, academic and civil sectors in the development and implementation of global and national programs for the prevention of thyroid disease.

<http://ign.org>

More photos: <http://euthyroid.eu/press-media>

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Prof. Henry Völzke coordinates the European study.