

Press release

Critical micronutrients in pregnancy, lactation and infancy

International experts seek concerted action to answer open research questions on the supply of vitamin D, folates, and iron

Tutzing, Munich 21 May 2011 – The EUROpean micronutrient RECommendations Aligned (EURRECA) and the Early Nutrition Academy (ENA) organized an international scientific workshop with a specific mandate in cooperation with the Hauner Children's Hospital, University of Munich from 14 to 16 May 2011: A total of 35 renowned experts and researchers from universities, NGOs and industry discussed the current status of research on the supply of Vitamin D, folate and iron during pregnancy, lactation and early childhood, and the associated benefits for maternal and child health. The goal of this workshop was to outline future research needs and to propose a direction for future scientific activities.

In their opening speech, Prof. Berthold Koletzko (Hauner Children's Hospital, University of Munich) and Dr. Christophe Matthys (ILSI Europe, Brussels) emphasized the importance of these nutrients for the long-term health of pregnant women and their children. Among scientific bodies worldwide, the details of micronutrient supply during these critical periods of life is a subject of ongoing controversy and debate. Due to somewhat inconsistent data, harmonized evidence-based recommendations for the supply of vitamin D, folate and iron are still lacking, but data from WHO demonstrate that large proportions of newborns and children have micronutrient deficiencies.

Prof. Hans Biesalski (Stuttgart) highlighted the effects of vitamin D for a variety of metabolic processes and the function of the immune system. Based on observational studies and meta-analyses of controlled intervention trials, Prof. Heike Bischoff-Ferrari (Zürich) concluded a serum level of Vitamin D [25(OH)D] lower than 25nmol/L in pregnant women and children can have adverse effects on bone health, weight development, respiratory and chronic diseases. Dr. Elina Hyppönen (London) concluded from observational studies and clinical trials that an adequate vitamin D supply has benefits for immune modulation and may reduce the risk of later diabetes and allergy.

Prof. Andrew Czeizel (Budapest) presented convincing evidence that folic acid supplementation starting before conception and continuing through the first months of pregnancy is highly effective in preventing neural tube defects of the child. There are also some indications for particular strong preventive effects of multivitamins with folic acids, and for prevention of other anomalies such as congenital heart defects. More than 60 countries worldwide have enriched flour with folic acid, where this strategy has led to a marked reduction of congenital

defects. Prof. Helmut Heseker (Paderborn) discussed the practical implications of folate supplementation of foods and targeted supplementation of specific population groups.

Iron deficiency anaemia remains common among pregnant women worldwide, and hence iron supply before and during pregnancy deserves attention, as stated by Dr. Nils Milman (Copenhagen). He pointed out that controlled studies evaluating iron supplements of ≤ 100 mg/d did not document side effects. Prof. Richard Hurrell (Zürich) reviewed the effectiveness of iron supplements in malaria-infested regions and possible adverse effects of high iron supply under these specific conditions.

The workshop concluded that public health strategies on improving the supply with these micronutrients in pregnancy, lactation and infancy are urgently needed. Further research activities need to include adequately powered human intervention studies to obtain a stronger evidence base for the amounts of vitamin D, folic acid and iron that have optimal preventive effects.

Further background information is available at www.early-nutrition.org/.

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