Vitamin and mineral intake recommendations for Europeans: Which ones are in most need of review?

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The European Food Safety Authority is currently in the process of reviewing the recommendations for intake of all micro-nutrients (vitamins and minerals). Within the European Community national recommendations are published for at least 28 micronutrients. The EURRECA (EUropean micronutrient RECommendations Aligned) Network of Excellence funded by the European Commission, has developed a rationale for deciding which ones need reviewing most urgently.

Why do we need European recommendations for daily vitamin and mineral intakes?

Most European countries, or groups of countries, have set their own recommendations for the amounts of each nutrient their population should be consuming in an average day to avoid any deficiencies and to promote good health. Published values (known by terms such as recommended daily allowances (RDA), recommended intakes or dietary reference values) often vary widely between countries, sometimes more than two fold, even though the physiological requirements of the different populations are very similar. The recommendation for adult men for vitamin A, for example, may be 700, 800, 900 or 1000 micrograms per day depending on which country you are in.

The reason for this variation is not always clear. Possible explanations include differences in the nutritional status indicators and/or health indicators used by scientific experts to decide what level of intake is an adequate intake, the types of studies and references used, and ways of interpreting and weighing scientific data on requirements.

Variations in recommendations within Europe cause confusion among those who use them, such as policy makers, health professionals and the food industry. They are also confusing for consumers, who are now multicultural and more mobile.

How can we bring all European micronutrient recommendations into line?

If similar scientific methodologies and concepts to analyse data in transparent ways are adopted, differences will be minimised and should only be due to acknowledged local environmental factors, such as climate. To help achieve this goal, EURRECA is developing robust scientific methods for assessing all the scientific data available. One example is the use of systematic reviews and meta-analyses of data to estimate relationships between the amounts of a micronutrient consumed and various nutritional status and health outcomes.

The importance of prioritisation
Developing recommendations using a robust scientific process takes a considerable amount of time. If all micronutrients for all population groups were reviewed at the same time it would take several years before the results were published, by which time some might already be out of date. So it is important to prioritise and decide which micronutrient should be tackled first.4

A three pronged approach to identifying priority nutrients

The EURRECA team concluded that three criteria are important:

1. There should have been a large amount of new evidence published since any previous review and this should be based on the best evidence available, especially randomised controlled human trials.
2. Nutrients which have high public health relevance should be looked at more urgently than others. This is where current intakes are considered inadequate either relative to recommended intakes or due to poor status, and the evidence demonstrates an association with a high burden of common conditions such as heart disease, diabetes, cancer or osteoporosis.
3. Priority should be given to those nutrients whose current recommendations vary widely.

For each of the three criteria quantifiable indicators were developed so that they could be measured easily and reliably.4

EURRECA’s top 10 nutrients for review of their recommended intake

This process was applied by the EURRECA team across several population groups – infants, children and adolescents, adults, pregnant and lactating women, elderly, people with low income and immigrants – and led to the ranking of micronutrients for review. The 10 nutrients identified as being in most urgent need of review are: vitamin D, iron, folate, vitamin B\textsubscript{12}, zinc, calcium, vitamin C, selenium, iodine and copper.4

Further information

1. Food Today article n°60 “Addressing the variation in micronutrient recommendations in Europe”
2. EURRECA Network of Excellence
3. EURRECA – EURopean micronutrient RECommendations Aligned Network of Excellence is funded by the European Commission (2007-2011), contract number FP6 036196-2 (FOOD) and co-ordinated by ILSI Europe.

References