Session 5: Advantages, Barriers, and Challenges to Global Harmonisation of Methodologies for Nutrient Intake Recommendations

Experiences from countries that have collaborated
EFSA reporting
European Food Safety Authority (EFSA)

- Set up in 2002, started work in 2003
- Independent scientific source of advice, information and risk communication on risks associated with the food chain
- EFSA’s Opinions and Advice are formulated by the Scientific Committee and Scientific Panels each within their own sphere of competence after first having been put out for public consultation
- Members of the Scientific Committee and Panels should be independent scientists recruited on the basis of an open application procedure
EFSA’s work on Dietary Reference Values (DRV) = equivalent to Nutrient Intake Values (NIV) (King and Garcia, 2007)

• 2005 Request from the European Commission to revise existing Population Reference Intakes from 1993 and add missing values

• 2010 Scientific Opinion on principles for deriving and applying Dietary Reference Values: decision to derive:
  • 1. Average requirement AR; 2. Population Reference Intake PRI; 3. Lower Threshold Intake LTI; 4. Adequate Intake AI; 5. Reference Intake Ranges for Macronutrients RI

• Work is done within working groups with external experts supported by EFSA’s scientific officers, statisticians and the data unit
• Similarities and differences:

the approach for setting reference values is similar in different regions of the world; the difference lies in the amount of money, personnel, knowledge, data collection and time available
• **Challenges and advantages:**
  finding experts with enough time and knowledge and readiness to travel;

  finding consensus in heterogenous groups of experts with different background and varying level of expertise in a particular field;

  protocols for literature search (nowadays often outsourced to external contractors) and appraisal of pertinent papers to permit a systematic review of the available evidence;

  backed-up by EFSA’s databases on food consumption and food composition (FoodEx2. In the consumption database, dietary surveys and food consumption data for each country are divided by category. These include: age, from infants to adults aged 75 years or older; food group (over 1,500) and type of consumption, covering both regular and high consumption thus allowing calculations to be tailored to each category of consumer. This allows age group specific intake assessment of nutrients and their distribution;

  anthropometry database for European children age 0 to 18 years (van Buren et al., 2010 )
• Mechanisms that could be considered for setting priorities for activities, e.g. systematic reviews, toolkits, technical briefs:

Are applied by EFSA according to adequacy or necessity - not in early years of EFSA’s existence but now as routine.

Start with a theory paper on how to derive DRVs and the means needed for assessment.

Between-country technical conferences to find out which DRVs are universally applicable and which are not
Potential for acceptance of methodological approaches across countries:

Exists in the EU, however several member states continue to do their own DRVs.

No doubt about methodology acceptance but some doubts about financial and personnel possibilities.

EFSA is expensive!
• Potential ways forward:

mutual recognition and respect and cooperation whenever feasible;
Identification of most urgent problems and tackling them first or selecting from available nutrient reference values those that need population/region specific re-assessment
Example of a NIV for Potassium based on observed intakes and association with chronic disease (2016)


- Occurrence, function, ADME, deficiency, excess
- Intake in the EU according to age group
- Evidence from RCTs and one observational cohort study on European adults for beneficial effect on blood pressure of 3500 mg K/d and for higher risk of stroke with K intake <3500 mg/d from observational cohort studies
- No data to determine average requirement
- AI adults, pregnant women 3500 mg/d; AI for children by extrapolation; AI for lactating women 4000 mg/d
Dietary Reference Values for nutrients Summary report
European Food Safety Authority (EFSA)