

Conclusions

1. In many cases, quantitative nutrient goals based on epidemiological models for the reduction in chronic disease are at considerable variance to populations' prevailing intakes of the nutrients in question. If these epidemiologically based nutrient guidelines are used as the basis for establishing food-based dietary guidelines (FBDG), the outcome may be difficult to promote in public health nutrition programmes.
2. Whilst epidemiologically based nutrient goals must remain, it may be that a second set of nutrient goals needs to be established, based on more pragmatic and attainable targets. A number of possible approaches to deciding on interim attainable nutrient guidelines were discussed. One was to base nutrient guidelines on what had been achieved through public health nutrition programmes. A second was to examine prevailing nutrient intake distribution and consider the mean intakes of subjects in the lowest quartile or tertile for nutrients where the intakes need to be lowered. The mean intake at the upper quartile or tertile could be used for nutrients that need to be increased. A third possible option would be along similar lines, taking the mean value plus or minus one standard deviation to decide on interim attainable nutrient guidelines. Clearly, this is an area that requires further research and consultation.
3. By establishing a more attainable set of nutrient goals, the resultant FBDG will be more marketable to consumers. Patterns of food intakes of people with intakes of the nutrient in question above and below the attainable nutrient goal can be examined for (a) mean population intake, (b) % consumers, and (c) intakes among consumers only. The most appropriate strategies for food-based dietary guidelines can then be determined.
4. A major problem in examining food intake data to devise FBDG is that of selective under-reporting. Most dietary surveys encounter energy under-reporting. This can affect nutrient intake when expressed in absolute terms but, when adjusted for energy intake, the effects of under-reporting on nutrient intake are minimized. However, we know precious little about which foods tend to be under-reported or whether it is frequency of intake or serving size that is under-reported. This again should be an area for urgent research action.
5. Having derived FBDG based on the most recent food intake data for a population, it is necessary to conduct some attitudinal research to see how comprehensible and popular such strategies (to create the desired dietary changes) will be, as this will give some indication of how achievable they are. Qualitative attitudinal research may also give some indication of the level of change that can be anticipated. In the UK (MAFF – Ministry of Agriculture, Fisheries and Food) a considerable level of optimistic bias was observed from some attitudinal research: optimistic bias is where people consider that their diets are already healthy enough. This finding is corroborated by results of a pan-EU survey on consumer attitudes to food, nutrition and health in which 69% of the EU sample agreed that they did not need to make changes to their diet as their diets were already healthy enough. Such results suggest that this could represent a real barrier to the uptake of FBDG and that further attitudinal research is required in the aspect of people evaluating their own diets and seeing a need for change. Research by MAFF in the UK has found that people respond much better to personalized rather than impersonal advice, especially in a health care setting. This warrants further research to examine the value of a personalized self-assessment tool in the health care setting.
6. When deriving food-based dietary guidelines for a population it is important that they are appropriate in terms of the socio-demographic and geographic profile of that population. For this, it is necessary to examine the characteristics of compliers and non-compliers. If, for example, the guidelines are aimed at the total population and the compliers are almost all young educated females, then guidelines based on the compliers may not be acceptable and effective in the population as a whole. In other words, the cultural and socio-demographic context is an important consideration when deriving FBDG.
7. The results of this workshop show that whereas nutrition research is making rapid progress on many fronts, food–food, food–nutrient and nutrient–nutrient inter-relationships have been very poorly researched. Moreover, we know very little of meal compositions and meal patterns that differentiate between people with high or low nutrient intakes and there is really very limited data on the temporal distribution of foods and meal types. In the absence of these data, public health nutrition programmes will continue to be based on perceptions and, as clearly shown by the paper of Löwik *et al.* from this workshop, will continue to get it wrong. It is hoped that the outcome of this workshop will be to begin to address such issues.