LEADING ARTICLE

A new Australian food selection guide: Future challenges and opportunities

(See paper by Shrapnel and Baghurst, pages 78–85)

In 2006, the new Nutrient Reference Values (NRVs) for Australia and New Zealand were released.¹ This was the first review of the recommended dietary intakes (RDIs) for 15 years and will have a number of significant implications for dietitians and health professionals. The NRVs represent significant advances in nutrient recommendations in Australia, with a range of values now provided, an increase in the number of nutrients covered and important changes to the RDIs for a number of nutrients.

One of the most significant changes was the inclusion of a separate set of recommended values for key nutrients aimed at prevention of chronic disease. This represents a fundamental shift in the role of nutrient recommendations from the prevention of nutrient deficiency to the development of optimal health. These recommendations, known as suggested dietary targets (SDTs), were made for vitamin A, carotenoids, vitamin D, vitamin E, folate, sodium and potassium, dietary fibre and long-chain n-3 fats and are based on the evidence primarily surrounding prevention of cardiovascular disease and cancer. In addition, acceptable macronutrient distribution ranges (AMDRs) are provided based on evidence surrounding cardiovascular disease, certain cancers, diabetes and risk of obesity and dietary modelling aimed at meeting the estimated average requirement or 83% of the adequate intake where appropriate.¹

There are obvious implications of the new NRVs such as the need for a review of the core food groups (CFGs)² and the Australian Guide to Healthy Eating (AGHE),³ as the CFG recommendations were based on the old RDI targets and these, along with the previous dietary guidelines, informed the development of the AGHE.⁴ Surprisingly, no coordinated or integrated plan of action seems to have been put in place for these reviews. The article by Shrapnel and Baghurst focuses on the provision of fats and fat-soluble nutrients by the existing CFGs in relation to the new NRVs.⁵ Specifically, it evaluates the contribution of fat spreads and vegetable oils to the Australia diet in terms of linoleic acid, α-linolenic acid, vitamin D and vitamin E using data from the 1995 National Nutrition Survey and dietary modelling of the CFGs.

In their dietary modelling exercise, the diets were based on the CFG recommendations, that is, the minimum number of serves to meet 70% of the old RDIs (rather than the increased food allocations modelled in the AGHE tables) and did not include the fats and oils allocation for cereal serves. The CFGs and the AGHE placed fats and oils in the ‘Extras’ group, both graphically and in the accompanying descriptions. However, in the background information for nutrition professionals, an allowance of one teaspoon of fat spread or oil per CFG cereal serve for 60% of breads and cereals was made in order to meet energy requirements. By leaving out this allowance, the analysis by Shrapnel and Baghurst may seem to unfairly position the CFGs, but it does highlight the complexities of the current food grouping system and food guide.⁵

The authors chose not to use a weighted food group approach to determine the nutrient profile of the food groups that was used for meats, fruits and vegetables in the CFG development. Their modelling of individual fat spreads or oils is analogous to the modelling for milk and cereals that was used, which modelled specific food choices within these groups. However, fat spreads and oils often serve different culinary purposes and people may use a combination rather than one or the other.⁶

Shrapnel and Baghurst modelled only the effect of adding either a fat spread or a vegetable oil to the CFGs.⁵ Nuts and seeds, an alternative source of these nutrients,⁶ are already considered core foods¹ (albeit as part of the meat alternatives group), and their addition to the baseline diets would have made a useful comparison. Consumption of nuts and seeds may be low,⁷ but if they represent an optimal dietary choice, then promoting their consumption could be considered.

The authors have suggested that a ‘healthy fats and oils’ group could be constructed combining healthy fat spreads, oils, nuts and seeds. This is one option; however, it could also be argued that nuts and seeds provide additional nutrients to fat spreads and oils (such as fibre and folate), and therefore could play an additional role in the diet. This is analogous to the separation of the fruit and vegetable groups in the CFG development on the basis that they were not interchangeable because of varying levels of vitamins C, A and folate. Coupled with evidence of the wider health benefits of nuts,⁸ it is possible there is a larger role for nuts and seeds in the Australian diet. It is important to note that neither the inclusion of fat spreads and oils as modelled, nor the inclusion of nuts and seeds would increase the vitamin D intake to adequate levels and therefore alternative strategies will be required.⁹

The inclusion of a healthy fats and oils group is likely to be consistent with the AMDRs that suggest that fat intakes up to 35% of energy intake are acceptable, and existing guidelines and recommendations from key organisations that focus on fat quality rather than total fat.⁶,¹⁰ However, substantial investment into research in communication and translation will be required as focus groups during the
leading phase of the AGHE indicated that messages on healthy fats were confusing to consumers.11

An issue in the consideration of a healthy fats and oils group is the presence of industrially produced trans-fatty acids. There is convincing evidence that higher trans-fat intakes are associated with increased risk of cardiovascular disease and the WHO recommends intakes below 1% of total energy intake.8 Although there are a number of fat spreads on the market with a low content of industrially produced trans-fatty acids, this is not consistent across products12 and currently consumers cannot systematically identify the trans-fatty acid content of fat spreads (or any other food products) as their disclosure is not required on food labels.13

The paper by Shrapnel and Baghurst highlights that a revision of the CFGs will be necessary;5 however, a much wider range of issues than solely fats and fat-soluble vitamins will need to be considered, and these will provide a range of challenges and opportunities. When the CFGs were developed there was a range of other nutrients for which RDIs existed that were not included in the modelling because of a lack of food composition data (e.g. vitamin B6, vitamin E, phosphorus).3 Modelling of diets will need to take into account a wider range of nutrients (where food composition data are available) and will need to account for higher requirements for some nutrients that were previously met by the CFGs. In addition, greater levels of food fortification will increase the complexity of the issues, and it has already been suggested that the core foods concept may become less relevant.14 These issues highlight the need for an ongoing food composition program in order to provide the data on which to base any modelling. However, it should also be recognised that dietary modelling may not be able to address all issues, particularly for nutrients where food composition is highly variable (e.g. iodine). In these circumstances, a comprehensive approach to nutrition monitoring and surveillance, which includes functional markers of nutritional status, is required.

The revision of the CFGs will be a complex process. In the development of the NRVs, each nutrient is considered separately (except for sodium and potassium in setting the SDTs). However, development of CFGs and food guide must consider the implications of increasing or decreasing particular food groups on the total diet.

An important consideration in the revision of the food selection guide will be the SDTs. The Dietary Guidelines for Australian Adults are aimed at reducing the risk of diet-related disease and improving the health and wellbeing of Australians and through the NRVs we now have nutrient-focused benchmarks for chronic disease prevention as well as for preventing deficiency. A key concern should be achieving the balance between recommendations based around nutrients and recommendations concerning whole foods with dietary modelling designed to take into consideration other diet–disease links concerning consumption of vegetables, fruits, wholegrains, meat, fish and nuts.6,8,15–17 For example, dietary modelling around the NRVs suggested that the recommended nutrient intakes could not be met without protein intakes that were higher than actual requirements that influenced the AMDR for protein (15–25% of energy intakes).1 Although protein intakes modelled in the AGHE (15–21% of energy intake) are already at the lower end of the AMDR, future dietary modelling should aim to balance potentially higher protein intakes with other chronic disease recommendations.5,15–17 While food-based dietary guidelines support the cliché, ‘we eat foods, not nutrients’, they are also supported by science. The health benefits of whole foods have been shown in many cases and not all constituents have been identified or their actions fully understood.18

The review of the RDIs was based on the best available evidence. Similarly, translation of these recommendations into an Australian food selection guide will need to be evidence-based. Currently, we lack up-to-date evidence on many important issues including national food consumption patterns and comprehensive food composition data and we will need significant investment in these areas in the future. Furthermore, we will need to invest in research to develop a more thorough understanding of the intrapersonal, social and environmental influences on eating in order to assist in effective nutrition promotion and improve the diets and health of all Australians.

Sarah McNaughton, PhD, MHSc
NHMRC Public Research Fellow, Centre for Physical Activity and Nutrition Research
School of Exercise and Nutrition Sciences, Deakin University
Melbourne, Victoria, Australia

REFERENCES