

## Richard Read Memorial Plenary

### Nutrient reference values for Australia and New Zealand: process and outcomes

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**Background** - In 2002, under the auspices of the Australian and New Zealand government departments of health, the NHMRC established a Working Party to develop a set of Nutrient Reference Values for Australia and New Zealand. The working party's brief was to ensure that the recommendations were based on best available scientific evidence. Given the limited resources available for de novo assessment, the development of the reference values was to be based on the processes and recommendations that the United States:Canadian Governments used to develop their Dietary Reference Intakes. However, the Working Party was to take into account any unique aspects of the populations in Australia and New Zealand including environmental, geographical, physiological, ethnic and cultural factors of both countries; to consider new scientific evidence and other recent recommendations from countries such as the UK, the European Union countries or FAO:WHO and to follow processes and standards acceptable to the Australian and New Zealand governments

**Review** - The first step in establishing the Nutrient Reference Values was to elicit expert reviews from specialist reviewers in Australia and New Zealand for each of the nutrients that had been identified in earlier joint meetings of Australian and New Zealand researchers and practitioners, as being of importance. These reviews were then assessed by the Working Party resulting in draft Nutrient Reference Values for all ages and lifestages being set for 35 nutrients. For infants an additional two recommendations were set for total fat and total carbohydrate. A further six nutrients were considered but no recommendations were made for any age of lifestage group as essentiality could not be clearly established. As well as establishing a set of reference values for nutrients which were adequate for physiological needs and which would prevent deficiency states (Estimated Average Requirements; Recommended Dietary Intakes or Adequate Intakes) or prevent toxicity (Upper Level of Intake), additional ranges (Acceptable Macronutrient Distribution Ranges) or targets (Suggested Dietary Targets) were set for some nutrients implicated in chronic disease etiology at levels that might prevent or alleviate the chronic disease burden. After setting the draft Reference Values a modelling process was undertaken to ensure that the recommendations were feasible. The draft Nutrient Reference Values were then sent out for public consultation in both Australia and New Zealand for a period of three months with just over 60 submissions being made. Issues which received the greatest prominence in submissions related to the feasibility of attaining intakes in various population groups in line with some of the recommendations (eg sodium, folate) and the need for updating population intake data, as well as nutrient and food intake guidelines to account for proposed changes. These submissions were then considered by the Working Party, the document and recommendations amended as necessary and sent for final process review. They were considered by the Health Advisory Committee of the NHMRC and then the Council itself for approval as well as to the Australian and New Zealand Government Departments of Health.

**Conclusions** - The NRV review process highlighted the limited data available for many nutrients and the need for ongoing research in this area. The data are often scant or drawn from studies that have substantial limitations. Apart from studies of frank deficiency disease, there are few studies that address the effects of inadequate intake on specific health indicators. The process also highlighted the need for current information on population intake data particularly in setting Adequate Intake figures which in the absence of reliable experimental data are based on median population intakes. The new reference values will require food and dietary guidelines as well as food labelling requirements in Australia and New Zealand to be updated.

#### References

National Health & Medical Research Council. Nutrient Reference Values for Australia and New Zealand including Recommended Dietary Intakes. Canberra: NHMRC, 2005.