



NRV Adult Age Range Review

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Position: Policy and Advocacy Officer
Organisation: Dietitians Association of Australia
Address: 1/8 Phipps Close, Deakin ACT 2600
Telephone: 02 6189 1202
Facsimile: 02 6282 9888
Email: pao@daa.asn.au

DAA interest in the Review

As the peak body for the dietetic profession, the Dietitians Association of Australia (DAA) has an interest in the health and wellbeing of all Australians. DAA appreciates the opportunity to provide feedback on the work being done by the NHMRC established 'Steering Group Advisory Committee' and nutrient specific 'Expert Working Groups' on the nutrient reference values (NRVs), given it has implications for the nutritional health of the Australian population. Here follows feedback from DAA on the consultation regarding the NRV adult age range review.

DAA feedback re: the NRV adult age range

DAA supports keeping the 'adult' age range for the NRVs at 19 years and over, for the following reasons:

- 1. There is a wide variation in the age of maturation, with physical development typically still ongoing at age 18. So the nutritional needs of an 18 year old may be more like that of a growing 'adolescent' than a grown 'adult'.**
 - a. Physiologically, early adolescence is dominated by puberty and sexual development. Late adolescence (15–19 years) is also characterized by pubertal maturation, but less obviously than early adolescence¹.
 - b. While puberty usually takes place between the ages defined during adolescence, it can begin as early as 8 years of age and can extend beyond 19 years of age. Pubertal sex hormones and growth hormones generally increase together and are responsible for the enhanced skeletal growth and sexual maturation. During normal puberty, height and body weight increase (50% of adult body weight is gained during adolescence), bone mass and muscle mass increase, blood volume expands, and the heart, brain, lungs, liver, and kidney all increase in size². The high rate of growth during puberty is second to that in infancy, but is greater in duration, and therefore total nutritional requirements during puberty may be greater than during any other period in life³.
 - c. Protein requirements per unit of height are highest for females in the 11- to 14-year age range and for males in the 15- to 18-year age range, corresponding to the usual timing of peak height velocity³.

2. Key organisations/references include age 18 in the definition of ‘adolescence’, which lends support to keep the ‘adult’ age range for NRVs at 19+ years (and not change it to 18+ years):

- a. The World Health Organization (WHO) defines an ‘adolescent’ as a person between 10 and 19 years of age⁴.
- b. The recent Lancet commission on adolescent health and well-being further divided this time in the life cycle into three 5-year age categories: early adolescence (10–14 years), late adolescence (15–19 years), and young adulthood (20–24 years)¹.
- c. The Dietary Reference Intakes (DRIs) established and used in the United States and Canada apply an age range for adults starting at 19 years⁵.
- d. The Estimated Average Requirements (EARs) for nutrients and Reference Nutrient Intakes (RNIs) used in the United Kingdom apply an age range for adults starting 19 years of age⁶.
- e. PubMed (which comprises more than 28 million citations for biomedical literature from MEDLINE) defines an ‘adult’ as person having attained full growth or maturity. Adults are of age 19 through to 44 years, and a ‘young adult’ is a person between 19 and 24 years of age⁷. These definitions are used when conducting online searches of the literature.

3. The adult age range of 19 years and over is consistent existing NRVs and other related Australian material, including:

- a. the Australian Health Survey data, which is 19 years and over for adults.
- b. the Australian Dietary Guidelines and the New Zealand Eating and Activity Guidelines, both of which consider an adult to be 19 years and over.

Consultation Questions

1. Has the current age range of 19 years and over raised any issues before this point in time? If so, what are these?

DAA is not aware of any issues that have been raised before this point in time with the NRV age range for adults starting at 19 years and over.

2. What impact (positive or negative) would changing the adult age range to 18 years and over have on the work of your organisation?

DAA members working in clinical settings, in public health, in food industry and in research use the NRVs and the defined age ranges in a number of ways. As an example, members involved in nutrition research or nutritional epidemiology usually analyse dietary intake data according to the age ranges used in the NRVs to allow comparison.

Changing the adult age range to 18 years and over would have the following impact on work carried out by DAA members:

Positive impact:

Changing the NRVs for adults to 18+ years would mean:

- public health messages relating to adults and dietary intakes would align more closely with some social and cultural milestones for adulthood in Australia (e.g. the legal age for drinking alcohol or voting), but not leaving school or driving.

Negative impact:

Changing the NRVs for adults to 18+ years would mean:

- malalignment with the Australian Health Survey data, which is 19 years and over for adults. Changing the NRVs to 18+ years for adults would present difficulties with historical comparison of data.
- a disparity would arise with the Australian Dietary Guidelines and the New Zealand Eating and Activity Guidelines, both of which consider an adult to be 19 years and over.
- lack of research comparability internationally given that:
 - Dietary Reference Intakes (DRIs) established and used in the United States and Canada apply an age range for adults starting at 19 years; and
 - The Estimated Average Requirements (EARs) for nutrients and Reference Nutrient Intakes (RNIs) used in the United Kingdom apply an age range for adults starting 19 years of age); and
 - PubMed (biomedical literature from MEDLINE) defines an 'adult' as 19 to 44 years of age.

- databases used in nutritional analysis software such as Foodworks are based on current NRV age ranges, so these software package would need to be updated and comparisons with older analyses would be difficult.

3. If changing the adult age range to 18 years and over did have an impact on the work of your organisation, briefly describe what costs, time and resources would be involved in implementing the change?

DAA uses NRVs from time to time in material on its website or in publications, but it would be difficult to estimate the cost in time or resources to change this. We would likely implement any changes prospectively.

References:

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3. Das JK, Salam RA, Thornburg KL, et al. 2017. Nutrition in adolescents: physiology, metabolism, and nutritional needs. *Ann N Y Acad Sci.* Apr;1393(1):21-33. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28436102>
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