



Frequently Asked Questions – Vitamin B6

What is the purpose of the NRVs and why are they important?

The Nutrient Reference Values (NRVs) are guidelines that describe how much of each nutrient – like vitamin B6 – people need to stay healthy. They are used by health professionals to assess and plan diets for individuals and groups, ensuring that people get enough nutrients for normal growth, development, and functioning, while also avoiding excessive intakes that could be harmful. NRVs are tailored to different life stages and physiological needs, such as childhood, pregnancy and older age, making them a practical tool for targeted nutrition advice.

NRVs play a crucial role in informing public policy and population health strategies. They underpin national dietary guidelines, food fortification programs (like adding iodine or folic acid to bread), food labelling, and nutrition education campaigns. Policymakers use NRVs to monitor the nutritional status of the population, identify at-risk groups, and develop interventions to address public health issues related to nutrition. By providing a scientific foundation for both individual nutrition and public health decision making, NRVs help to improve the overall health of the population and reduce the burden of diet-related diseases in Australia and New Zealand.

Do the NRVs describe individual nutritional requirements?

The NRVs are developed based on averages for groups, and therefore they describe population-level recommendations. Although they provide a guide for assessing the likelihood that a person's nutritional needs are being met, the NRVs are not a precise measure of individual needs, which may be higher or lower than the values shown. Individual requirements vary depending on genetics, health status, activity level, developmental stage and other factors.

What do the different NRV recommendations represent, and how are they calculated?

The NRVs include several different types of recommendations, each with a specific purpose. These values are calculated by reviewing scientific studies on how much of a nutrient is needed to maintain health, prevent deficiency, and avoid harmful effects from excess (toxicity).

The Estimated Average Requirement (EAR), Recommended Dietary Intake (RDI) and Adequate Intake (AI) are designed to ensure people get enough of a nutrient to support normal growth and health, but they serve slightly different purposes. Because people's nutritional needs can differ due to factors like age, sex, health status, and activity level, the NRVs include both an EAR and an RDI to account for this natural variation within the population.

The EAR is the daily amount of a nutrient estimated to meet the needs of half of the healthy people in the Australian and New Zealand population. The RDI is set higher than the EAR, at a level that is sufficient for nearly everyone (97–98% of healthy people) in the population.

By providing both values, the NRVs allow health professionals to assess the likelihood of deficiency in groups (using the EAR) and to set a safe target for individuals (using the RDI). This approach helps ensure that dietary recommendations are both practical for population health and flexible enough to guide individual dietary planning.

An AI is used as a recommended nutrient intake level when there is not enough evidence to establish an EAR and RDI.

The Upper Level (UL) aims to prevent harmful effects that may occur when too much of a nutrient is consumed. It represents the highest intake of a nutrient that is likely to pose no adverse health effects for almost all people within the population.

These values are determined by reviewing scientific research on how much of a nutrient is needed to maintain good health, as well as how much could be excessive. In situations where there isn't enough data for a particular group (such as children), recommendations may be adapted from another group (such as adults). This adaptation uses mathematical formulas that account for the differences in nutritional needs between the groups, ensuring the values are as appropriate as possible for each population.

What happens if you consume too much or too little vitamin B6?

Vitamin B6 is a water-soluble vitamin that our bodies need in small amounts to stay healthy. It is naturally present in many foods. It is also added to some foods, and available in dietary supplements. It helps the body use nutrients from food, supports the brain and nervous system, helps make red blood cells, and supports normal immune function.

Not getting enough vitamin B6 is rare. It can lead to skin problems, anaemia, seizures and problems with mood, memory and thinking.

Having too much vitamin B6, usually from supplements rather than food, can damage the nerves and cause symptoms such as tingling, numbness, pain, balance problems and difficulty walking. That's why it's important to have the right balance of vitamin B6 in the diet.

Why are the vitamin B6 NRVs being revised?

NRVs for vitamin B6 were last reviewed in 2006. Since that time, concerns have been raised over people developing a nerve condition (peripheral neuropathy) from taking too much vitamin B6 through supplements. Rules are changing about warning labels needed for supplements containing higher levels of vitamin B6, and where they can be sold. Also, some international NRVs for vitamin B6 have been recently updated, lowering the level of vitamin B6 intake considered safe. This highlights the need to reassess the existing Upper Level (UL) for vitamin B6 for Australia and New Zealand.

What changes are proposed under the revised recommendations?

The main change proposed is to lower the Upper Levels (UL) for vitamin B6 from 50mg/day to 14 mg/day for adults. The values for children are calculated from adult levels based on a proportion of weight, adjusting for additional needs for growth where required.

Estimated Average Requirements (EAR) and Recommended Dietary Intake (RDI) were not reviewed in this update. AIs for infants were not reviewed in this update.

There are also additional categories of age groups aligned with school levels. These can be used to report against usual intake estimated in national surveys.

What are the new recommendations for preventing vitamin B6 deficiency?

The proposed recommendations for preventing deficiency are largely unchanged from current recommendations as they were not reviewed in this update.

The draft recommendations introduce additional categories of age groupings for children, including categories that align with school level, and a slight adjustment to adult age groups.

What are the new recommendations for vitamin B6 Upper Levels (UL)?

The draft recommendations introduce a lower Upper Level (UL) for vitamin B6, consistent with recent international vitamin B6 guideline updates. The revised UL recommendations are as follows.

Age	UL (mg/day)
Infants	
0–12 months	Not possible to establish; source of intake should be breast milk, formula or food only.
Children & Adolescents	
Males	
1 to under 4 years	4.5
4 to under 9 years	6.5
9 to under 14 years	10.0
14 to under 18 years	14.0
Females	
1 to under 4 years	4.0
4 to under 9 years	6.5
9 to under 14 years	10.0
14 to under 18 years	12.5
Adults	
18 years and older	14.0
Pregnancy & Lactation	
Pregnancy (all ages)	14.0
Lactation (all ages)	14.0

Why has the UL been reduced?

The Upper Levels (UL) have been lowered across population groups from 50mg/day to 14mg/day for adults, based on recently updated international guidance. The UL was revised in response to concerns about nerve damage from high supplemental vitamin B6 intakes.

Changes to rules around warning labels needed for supplements containing higher levels of vitamin B6, and where they can be sold are being introduced in response to these issues.

Why are there additional age groups for children?

New UL, EAR and RDI recommendations for additional age groupings have been added to align with school levels. These levels can be used for reporting against usual dietary intake by Australian Bureau of Statistics.