

Frequently Asked Questions

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 iodine – 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 programmes (like adding iodine to salt or 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 Nutrient Reference Values (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) and Recommended Dietary Intake (RDI) are both 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.

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 iodine?

Iodine is an essential nutrient that the body needs to make thyroid hormones, which control metabolism, growth, and brain development. Getting enough iodine is especially important during pregnancy and early childhood to support normal brain and physical development. If someone doesn't get enough iodine, it can lead to thyroid problems, such as an underactive thyroid or goitre (a swelling in the neck), and in severe cases, can cause learning difficulties and growth problems in children.

However, having too much iodine can also be harmful, particularly for people who already have thyroid conditions. Excessive iodine intake can disrupt normal thyroid function and may lead to further thyroid problems. That's why it's important to have the right balance of iodine in the diet.

What changes are proposed under the revised recommendations?

The current (2006) iodine NRVs include:

- Two recommendations for achieving nutritional adequacy and preventing iodine deficiency – the Estimated Average Requirements (EAR) and Recommended Dietary Intake (RDI)
- Upper Levels (UL) that should not be exceeded to prevent harmful effects from excess iodine.

The main changes proposed relate to the UL, with the EAR and RDI unchanged. Changes include:

- lower Upper Level (UL) recommendations for most age groups
- updated rationale for EAR and RDI recommendations to reflect new evidence and current standards for how to calculate NRVs.

There are also additional age groups aligned with school levels. These can be used to report against usual intake reported in national surveys. The values for children are calculated from adult levels based on a proportion of weight, adjusting for additional needs for growth where required.

What are the new recommendations for preventing iodine deficiency?

The proposed recommendations for preventing deficiency are largely unchanged from current recommendations:

- for adults the RDI is 150 micrograms (μg) per day;
- during pregnancy, the RDI is 220 μg per day;

- for those who are breastfeeding, the RDI is 270 µg per day; and
- for children, the RDI depends on age (for example, 90 µg per day for 1 to under 9 years, 120 µg per day for 9 to under 14 years, and 150 µg per day for 14 years and over).

The draft recommendations also introduce additional 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 iodine Upper Levels (UL)? Why has the UL been reduced?

The draft recommendations introduce a lower Upper Level (UL) for iodine intake to better protect against the risks of consuming too much. For adults—including those who are pregnant or breastfeeding—the proposed UL is now 600 micrograms (µg) per day, down from the previous 1,100 µg per day. For children, the ULs have also been reduced for all age groups except 1 to under 4 years (which remains at 200 µg per day). The new proposed ULs are 300 µg per day for ages 4 to under 9 years; 450 µg per day for ages 9 to under 14 years; and 550 µg per day for ages 14 to under 18 years.

This reduction is based on new research showing that some people may develop mild thyroid issues at lower iodine intakes than previously recognised. The revised UL is set at a level intended to protect nearly everyone, including those who are more sensitive to higher amounts of iodine.

Why are there different recommendations during pregnancy or breastfeeding?

People who are pregnant or breastfeeding have unique nutritional needs because they must support both their own health and the growth and development of their baby. During these times, they or their babies may also be more sensitive to the effects of high nutrient intakes. The need for iodine increases in pregnancy and breastfeeding, as it is especially important for the baby's brain and overall development. That's why the recommended iodine intake is higher during pregnancy and breastfeeding—to make sure both the parent and baby get enough to meet their needs.

What do the new recommendations mean for iodine fortification in Australia and New Zealand?

The NRVs describe the amount of iodine needed to meet the nutritional requirements of the generally healthy population in Australia and New Zealand, but they do not directly recommend whether public health measures like fortification are necessary. When considering mandatory fortification, policy makers consider the NRVs alongside current population intakes, and the levels of iodine naturally present in the food supply. If there are concerns that people may not be able to get enough iodine from food and water alone, a fortification programme may be introduced.

In Australia, mandatory iodine fortification of bread was introduced in 2009. Decisions about whether to continue or adjust fortification programs are made independent of the NRVs, although these recommendations are one of the factors considered in decisions about fortification.

Although the proposed UL for iodine has been lowered - narrowing the gap between recommended intakes and the maximum safe level - this range is still expected to accommodate the typical variation in individual intakes in Australia and New Zealand. It is not expected that the combination of a lower UL and ongoing fortification will result in more people exceeding the UL, but ongoing monitoring is important.

What do the new recommendations say about taking iodine supplements during pregnancy or breastfeeding?

The NRVs describe the amount of iodine needed to meet the nutritional requirements of the generally healthy population in Australia and New Zealand.

Although the NRVs themselves do not make supplement recommendations, the current [NHMRC recommendation](#) is that women who are pregnant, breastfeeding, or planning a pregnancy should take a daily iodine supplement of 150 micrograms (µg) per day. This is because many women do not get enough iodine through their diet alone, and adequate intake is crucial for the baby's brain and nervous system development. Women with pre-existing thyroid conditions should consult their doctor before taking a supplement.