International trends in revision of general nutrient reference values and their formulation for infants and toddlers

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Running title: Nutrient reference value trends

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ABSTRACT

Background and Objectives: Nutrient Reference Values play an important role in nutrition labeling and nutrition and health claims based on scientific data. This study, with a global perspective, reviewed recent trends in Nutrient Reference Values for adults and their establishment for infants and toddlers. **Methods and Study Design:** We searched for laws and regulations on official government websites for nutrition labeling in the United States, Canada, Australia, New Zealand, China, South Korea, Japan, the Codex Committee, and the European Union. **Results:** Nutrient Reference Value revisions have been made in the United States, Canada, and South Korea. In the United States and Canada, Nutrient Reference Values for most nutrients, including macronutrients, vitamins, and minerals, were revised in 2016, reflecting updated Dietary Reference Intakes and new scientific findings. Nutrient Reference Values for infants and toddlers have already been formulated in the United States, Canada, Australia, New Zealand, and South Korea and are used for nutrition labeling. However, concerns have been raised regarding the labeling of all foods with Nutrient Reference Values for infants and toddlers, which may result in challenges in distinguishing foods formulated under different standards as appropriate for infants and toddlers. **Conclusions:** This study highlights recent general Nutrient Reference Value revisions and formulation status for infants and toddlers. This provides useful information for determining the basis for future updates and the development of Nutrient Reference Values in various countries.

Key Words: food regulations, Dietary Reference Intakes, nutrition labeling, infants and toddlers, Nutrient Reference Values

INTRODUCTION

Obesity and other problems caused by inadequate nutritional intake and overnutrition have become global social issues.[1] Hence, several countries are considering strategies to establish healthy eating environments. Nutrition labeling helps consumers select healthy foods by stating the nutrients in them. In 2012, the Codex Committee on Nutrition and Food for Special Dietary Uses (CCNFSDU), which developed international food standards, announced that nutrient declaration should be mandatory for all prepackaged foods except where national circumstances would not support them.[2] Several countries have enforced mandatory nutrition labeling of packaged foods and are revising Nutrient Reference Values (NRVs),[3,4] which are the values used for nutrition labeling standards. NRVs play an important role in nutrition labeling and nutrition and health claims based on scientific data. A previous study compared

NRVs in each country up to 2016 with those of the Codex Committee for adults to clarify the differences in the names and reference values, as well as the methods used to formulate them.[5] In general, these are calculated based on Dietary Reference Intakes (DRIs). In South Korea and Japan, DRIs are updated every 5 years.[6,7] In other countries, such as the United States, Canada, and Australia, DRIs are revised only for nutrients deemed to require review.[8,9] Therefore, we investigated whether NRVs had been revised based on these recent updates.

A previous comparison revealed a difference in the age of the target population for NRVs in each country: the Codex Committee requires an age of 3 years and older, whereas Japanese NRVs require an age of 18 years and older.[5] Increasing attention is being paid to the nutrient intake of infants and toddlers. According to the World Health Organization, few children receive nutritionally adequate and safe complementary food. Fortified complementary foods and vitamin and mineral supplements are recommended as needed while promoting breastfeeding.[10] However, cases of hypercalcemia due to excessive intake of vitamin D have been reported as an example of vitamin overdose when supplements containing vitamins designed for adults are administered to minors, and alerts have been issued.[11] Additionally, infancy is characterized by rapid growth[12]; hence, nutritional requirements are expected to differ significantly between adults and children. Furthermore, these age groups rely on parents and other caregivers to make food choices; therefore, easy-to-understand nutritional labels are required, particularly when the nutrient requirements of food choosers and consumers are different. Consequently, the CCNFSDU has been working since 2015 to develop NRVs for infants and toddlers aged between 6 and 36 months.[13] Moreover, various countries are expected to actively develop NRVs for infants and toddlers rather than adults in the future.

This study aimed to compile and organize information on recent NRV revisions in each country and compare the status of NRVs in infants and toddlers.

MATERIALS AND METHODS

Research participants

We selected seven countries for this study: the United States, Canada, Australia, New Zealand, China, South Korea, and Japan, and two organizations: the Codex Committee and the European Union (EU). More than 5 years, during which periodic DRI revisions have been made, have elapsed since the previous study that compared the setting statuses of NRVs in 2016 in each country.[5] Therefore, we determined whether there had been any revisions in them.

Additionally, we investigated whether NRVs existed in infants and toddlers under 3 years of age in these regions, focusing on NRVs in children. If they had been formulated, we investigated the nutrients with NRVs and their nutrition labeling requirements.

Research methods

We searched the laws and regulations for nutrition labeling on the official government websites of these countries, such as the Electronic Code of Federal Regulations and the Federal Register of Legislation,14,15 to determine whether there have been any revisions to NRVs. If there was a revision, the DRIs on which the formulation was based in each country, the guidelines for NRVs were reviewed, and the reasons for revision were investigated. We also searched for laws and regulations for nutrition labeling in each country to confirm whether NRVs were provided for infants and toddlers younger than 3 years. Additionally, we investigated how these NRVs are applied in nutrition labeling to provide context and real-world applications for the revised values.

RESULTS AND DISCUSSION

NRV revisions

Table 1 shows the NRVs for each country and the results of the revision survey. The countries that revised their NRVs since the previous survey in 2016 were the United States,16 Canada,[17] and South Korea.[18] In the United States and Canada, extensive standard revisions were made in 2016.

First, the NRVs for vitamins A, D, K, and C, potassium, calcium, phosphorus, magnesium, and manganese increased. In contrast, those for vitamin E, B-1, B-2, B-6, and B-12, niacin, biotin, pantothenic acid, copper, selenium, zinc, chromium, molybdenum, and chloride decreased in the United States following the recent Recommended Dietary Allowance (RDA) or Adequate Intake (AI) updates. The RDA represents the average daily intake sufficient to meet the nutrient requirements of nearly all healthy individuals (97% to 98%), whereas the AI is established to ensure nutritional adequacy when evidence is insufficient to develop an RDA for setting these values. The NRVs for folate, iron, and iodine remained unchanged, whereas those for choline were added. For macronutrients, the NRVs of added sugars were newly established; those of carbohydrates were reduced from 300 g to 275 g, and those of fat increased from 65 g to 78 g. Moreover, the NRVs of dietary fiber and sodium reflected the latest AI and Tolerable Upper Intake Level (UI), respectively. These revisions of macronutrients were based on the results of a 2015 Dietary Guidelines Advisory Committee

survey.[19] The increase in obesity due to sugar-sweetened beverages has become an issue in the United States.[20] Therefore, the NRV for added sugars was set at 50 g to limit them to a maximum of 10% of total daily caloric intake based on scientific evidence regarding added sugars and the risk of chronic disease. It has been indicated that fat is often replaced by carbohydrates in low-fat diets. Such diets are associated with changes in blood cholesterol levels related to an increased risk of disease. There is no concrete evidence that 35% of the energy from fat is detrimental to health compared to 30% of the energy, and the type of fatty acid is more related to health status. The acceptable macronutrient distribution range (AMDR) of fat was increased to 35% energy.[21] The NRVs of carbohydrates exceeded the RDA of adults aged ≥19 years, reducing the intake of carbohydrates from 60% to 55% of calories.[21]

Second, revisions to the NRVs of most vitamins and minerals in Canada are consistent with those in the United States. However, the values for potassium were different due to an update of the DRI by the National Academies of Sciences, Engineering, and Medicine (NASEM) in 2019.[8] The values for potassium were lowered from the revised 2016 value of 4700 to 3400 mg, reflecting the updated AI recommendations. The AI was updated to account for changes in the target population, with a focus on individuals with normal blood pressure and no history of cardiovascular disease. The NASEM established new standards, such as the Chronic Disease Risk Reduction Intake (CDRR), which consists of the lowest values expected to reduce chronic diseases. The values for sodium were also updated based on CDRR, but values were unchanged from the 2016 update. For macronutrients, Canada established new NRVs for sugars as a substitute for carbohydrates, set at 100 g or 20% of 2000 kcal, close to the average consumption, and fat was revised to 75 g, corresponding to the upper level of the AMDR of 35% per 2000 kcal.[22]

In South Korea, the NRVs for sugars are newly established, those for carbohydrates are reduced, and those for fat and vitamin D are increased. These changes were similar to those in the countries mentioned above and were attributed to the revision of DRIs in 2015.[23] Thus, the NRVs need to be reviewed in the future when the DRIs are revised.

NRVs for infants and toddlers

Availability of NRVs for infants and toddlers

The survey of target ages in each country revealed that in the Codex Committee,[24] United States,[16] Canada,[17] Australia, New Zealand,[25,26] China,[27] and South Korea,[18] the target age of basic NRVs was ≥3-4 years, and consistent values were applied from adults to children. Conversely, in the EU28 and Japan,[29] basic NRVs are only for adults. At the same time, there

are large differences in the DRI values for individuals older and younger than 18 years; the differences between the genders and age groups tend to be small for people aged >18 years in Japan.[30]

Table 2 compares the setting statuses of NRVs for infants and toddlers in each country and the results of the survey on NRVs for infants and toddlers. The countries that established these values were the United States, Canada, Australia, New Zealand, and South Korea. They have already set NRVs for older children in transitional stages between infancy/toddlerhood and adulthood/older, consistent with those for adults. Therefore, when setting NRVs for infants and toddlers, it seems necessary to initially set them for older children and consider them in order.

For countries with NRVs for infants and toddlers, we compared the differences in the nutrients for which they were set (Table 2). In the United States, NRVs were established separately for infants aged ≤12 months and children aged 12-36 months, and most nutrient settings were the same as those for adults. However, the NRVs for macronutrients for infants aged ≤12 months were only established for fat and carbohydrates.16 In Canada, NRVs were defined for infants aged between 6 months and less than 4 years, with separate NRVs for vitamins and minerals, even for infants aged 6 months to less than 1 year. As in the United States, most of the nutrients for which NRVs were set were consistent with those for adults; however, no NRVs were established for macronutrients for children younger than 1 year.[17] In Australia and New Zealand, NRVs were separately established for infants aged ≤1 year and for children aged between 1 and 3 years.[25] In these countries, the NRVs for macronutrients have not been defined for infants and toddlers.

A survey of the nutrients for which NRVs were set for infants and toddlers revealed that countries mainly set NRVs for vitamins and minerals. The Codex was also planning to prioritize NRVs for vitamins and minerals in infants and toddlers.[31] Therefore, it may be necessary to prioritize the setting of NRVs for micronutrients, such as vitamins and minerals, in infants and toddlers.

Labeling of daily values for infants and toddlers

In the United States, labeling of calories, total fat, saturated fatty acids, trans fatty acids, cholesterol, sodium, total carbohydrates, dietary fiber, total sugars, added sugars, protein, vitamin D, calcium, iron, and potassium is mandatory. Moreover, the labeling of % Daily Value (DV), or the percentage of NRV, of these nutrients, excluding trans fatty acids and total sugars, is mandatory, and the % DV of protein is voluntary.[16] Labeling nutrient content is

similarly mandatory for infants and toddlers; however, % DV requires only fat, carbohydrates, vitamin D, calcium, iron, and potassium to be mandatorily labeled in foods intended for infants aged ≤12 months. In Canada, foods intended solely for infants aged 6 months to less than 1 year are distinguished from food-labeling methods for other ages. The nutrition facts table of foods for these ages allows for the omission of saturated fatty acids, trans fatty acids and cholesterol, and % DV is listed only for potassium, calcium, and iron.[32] In Australia and New Zealand, the labeling of % recommended dietary intake for nutrients is voluntary for infants.[26]

Based on the results of the survey, we do not recommend labeling % DV, which is calculated based on the NRVs of macronutrients in foods for infants under 1 year of age. There are controversies regarding the setting of NRVs for infants and toddlers for all foods because consumers cannot differentiate between regulated and non-regulated foods determined by the Codex Alimentarius International Food Standards and national or regional legislations of food for infants and toddlers, such as infant formula.31 Nutrients that must be included in infant formula are specified by the regulations of each country. In addition to the nutrients listed in Table 2, some countries allow the addition of oligosaccharides and fatty acids, such as DHA and EPA, which are substances normally found in breast milk.[33-35] Furthermore, maximum and minimum values are set for these nutrients to meet the nutritional requirements of infants.[33-36] Therefore, consumer knowledge needs to be considered when setting NRVs for infants and toddlers to avoid misleading them.

A limitation of this study is the small number of countries covered. This study focused on developed countries in the West and Asia. Still, it is possible that the methods of setting NRVs and the status of their formulation may differ in developing countries. In the future, it will be necessary to investigate the formulation and revision of NRVs not only in developed countries but also in developing countries and other countries. However, this study is the first to provide detailed data on the revised values and reasons for revision in a country that has already formulated NRVs as an advanced example. This study also provides examples of the use of NRVs for infants and young children, which the Codex Alimentarius Commission has discussed in countries that have already formulated NRVs, as well as a summary of issues to be addressed. This study may provide useful information for countries that develop or revise NRVs in the future.

Conclusion

This study reviewed recent NRV revisions and examined whether those for infants and toddlers have been established in various countries. The NRVs for several countries were revised based on updates to the DRIs and new scientific evidence. NRVs for infants and toddlers have been developed and utilized in some countries; however, concerns have been raised. NRVs may need to be revised in the future as new scientific knowledge is updated. Therefore, it may be necessary to consider NRVs in infants and toddlers carefully.

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CONFLICT OF INTEREST AND FUNDING DISCLOSURE

CO declares no competing interests. HA declares that she is employed by NISSIN FOODS HOLDINGS CO., LTD, and has no competing interests. This did not alter the authors' adherence to the journal's policies on sharing data and materials. We have read and understood your journal's policies and believe that neither the manuscript nor the study violates any of these.

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Table 1. The NRVs for each country and the results of the revision survey

	Codex committee	The United States	Canada	Australia/ New Zealand	EU
Energy	N/A	2000 kcal	2000 kcal	2100 kcal‡	2000 kcal
Protein	50 g	50 g	N/A	50 g	50 g
Fat	N/A	78 g†	75 g†	70 g	70 g
Saturated fatty acids	20 g/2000 kcal	20 g	20 g†§	24 g	20 g
Trans fatty acids	N/A	N/A	N/A†§	N/A	N/A
Carbohydrate	N/A	275 g†	N/A†	310 g	260 g
Sodium	2000 mg	2300 mg†	2300 mg†	2300 mg	6 g (salt)
Potassium	3500 mg	4700 mg†	3400 mg†	N/A	2000 mg
Sugars	N/A	50 g†	100 g†	90 g	90 g
Dietary fiber	N/A	28 g†	28 g†	30 g	N/A
Cholesterol	N/A	300 mg	300 mg	N/A	N/A
Vitamin A	800 μg¶	900 μg†¶	900 μg†¶	750 μg¶	800 μg
Vitamin D	5-15 μg††	20 μg†	20 μg†	10 μg	5 μg
Vitamin E	9 mg	15 mg†	15 mg†	10 mg‡‡	12 mg

	China	South Korea	Japan
Energy	2000 kcal‡	N/A	2200 kcal
Protein	60 g	55 g	81 g
Fat	≤60 g	54 g†	62 g
Saturated fatty acids	≤20 g	15 g	16 g
Trans fatty acids	N/A	N/A	N/A
Carbohydrate	300 g	324 g†	320 g
Sodium	2000 mg	2000 mg	2900 mg
Potassium	2000 mg	3500 mg	2800 mg
Sugars	N/A	100 g†	N/A
Dietary fiber	25 g	25 g	19 g
Cholesterol	≤300 mg	300 mg	N/A
Vitamin A	800 μg¶	700 μg¶	770 μg¶
Vitamin D	5 μg	10 μg†	5.5 μg
Vitamin E	14 mg‡‡	11 mg‡‡	6.3 mg

N/A, not applicable
†Revised values
‡Conversion value calculated assuming 4.18 kJ = 1 kcal and rounded up to the tens place
§Sum of saturated fatty acids and trans fatty acids
¶Retinol activity equivalents (RAE) or retinol equivalents (RE)
††Accounts for population sunlight exposure and other relevant factors
‡‡α-tocopherol equivalents (α-TE)
§§Niacin equivalents (NE)
¶¶Dietary folate equivalents (DFE)
†††14 mg for 15% dietary absorption or 22 mg for 10% dietary absorption
‡‡‡11 mg for 30% dietary absorption or 14 mg for 22% dietary absorption

Table 1. The NRVs for each country and the results of the revision survey (cont.)

	Codex committee	The United States	Canada	Australia/ New Zealand	EU
Vitamin K	60 μg	120 μg†	120 μg†	80 μg	75 μg
Vitamin B-1	1.2 mg	1.2 mg†	1.2 mg†	1.1 mg	1.1 mg
Vitamin B-2	1.2 mg	1.3 mg†	1.3 mg†	1.7 mg	1.4 mg
Niacin	15 mg§§	16 mg†§§	16 mg†§§	10 mg	16 mg
Vitamin B-6	1.3 mg	1.7 mg†	1.7 mg†	1.6 mg	1.4 mg
Folate	400 μg¶¶	400 μg¶¶	400 μg†¶¶	200 μg	200 μg
Vitamin B-12	2.4 μg	2.4 μg†	2.4 μg†	2.0 μg	2.5 μg
Biotin	30 μg	30 μg†	30 μg	30 μg	50 μg
Pantothenic acid	5 mg	5 mg†	5 mg†	5 mg	6 mg
Vitamin C	100 mg	90 mg†	90 mg†	40 mg	80 mg
Calcium	1000 mg	1300 mg†	1300 mg†	800 mg	800 mg
Iron	14 mg or 22 mg†††	18 mg	18 mg†	12 mg	14 mg
Phosphorous	700 mg	1250 mg†	1250 mg†	1000 mg	700 mg
Magnesium	310 mg	420 mg†	420 mg†	320 mg	375 mg

	China	South Korea	Japan
Vitamin K	80 μg	70 μg	150 μg
Vitamin B-1	1.4 mg	1.2 mg	1.2 mg
Vitamin B-2	1.4 mg	1.4 mg	1.4 mg
Niacin	14 mg	15 mg§§	13 mg§§
Vitamin B-6	1.4 mg	1.5 mg	1.3 mg
Folate	400 μg¶¶	400 μg¶¶	240 μg
Vitamin B-12	2.4 μg	2.4 μg	2.4 μg
Biotin	30 μg	30 μg	50 μg
Pantothenic acid	5 mg	5 mg	4.8 mg
Vitamin C	100 mg	100 mg	100 mg
Calcium	800 mg	700 mg	680 mg
Iron	15 mg	12 mg	6.8 mg
Phosphorous	700 mg	700 mg	900 mg
Magnesium	300 mg	315 mg	320 mg

N/A, not applicable
†Revised values
‡Conversion value calculated assuming 4.18 kJ = 1 kcal and rounded up to the tens place
§Sum of saturated fatty acids and trans fatty acids
¶Retinol activity equivalents (RAE) or retinol equivalents (RE)
††Accounts for population sunlight exposure and other relevant factors
‡‡α-tocopherol equivalents (α-TE)
§§Niacin equivalents (NE)
¶¶Dietary folate equivalents (DFE)
†††14 mg for 15% dietary absorption or 22 mg for 10% dietary absorption
‡‡‡11 mg for 30% dietary absorption or 14 mg for 22% dietary absorption

Table 1. The NRVs for each country and the results of the revision survey (cont.)

	Codex committee	The United States	Canada	Australia/ New Zealand	EU
Copper	900 μg	0.9 mg†	0.9 mg†	3.0 mg	1 mg
Iodine	150 μg	150 μg	150 μg†	150 μg	150 μg
Manganese	3 mg	2.3 mg†	2.3 mg†	5.0 mg	2 mg
Selenium	60 μg	55 μg†	55 μg†	70 μg	55 μg
Zinc	11 mg or 14mg‡‡‡	11 mg†	11 mg†	12 mg	10 mg
Chromium	N/A	35 μg†	35 μg†	200 μg	40 μg
Molybdenum	45 μg	45 μg†	45 μg†	250 μg	50 μg
Chloride	N/A	2300 mg†	2300 mg†	N/A	800 mg
Fluoride	N/A	N/A	N/A	N/A	3.5 mg
Choline	N/A	550 mg†	550 mg†	N/A	N/A

	China	South Korea	Japan
Copper	1.5 mg	0.8 mg	0.9 mg
Iodine	150 μg	150 μg	130 μg
Manganese	3.0 mg	3.0 mg	3.8 mg
Selenium	50 μg	55 μg	28 μg
Zinc	15 mg	8.5 mg	8.8 mg
Chromium	N/A	30 μg†	10 μg
Molybdenum	N/A	25 μg	25 μg
Chloride	N/A	N/A	N/A
Fluoride	1 mg	N/A	N/A
Choline	450 mg	N/A	N/A

N/A, not applicable
†Revised values
‡Conversion value calculated assuming 4.18 kJ = 1 kcal and rounded up to the tens place
§Sum of saturated fatty acids and trans fatty acids
¶Retinol activity equivalents (RAE) or retinol equivalents (RE)
††Accounts for population sunlight exposure and other relevant factors
‡‡α-tocopherol equivalents (α-TE)
§§Niacin equivalents (NE)
¶¶Dietary folate equivalents (DFE)
†††14 mg for 15% dietary absorption or 22 mg for 10% dietary absorption
‡‡‡11 mg for 30% dietary absorption or 14 mg for 22% dietary absorption

Table 2. The comparison of the setting status of NRVs for infants and toddlers in each country

Target age	The United States		Canada		Australia/New Zealand	
	Infant through 12 months of age	Children for 12 months to 36 months of age	Infant solely for six months to less than 1 years of age	Children for six months to less than 4 years of age	Infants	Children for 1 year to 3 years of age
Energy	1000 kcal	1000 kcal	N/A	N/A	N/A	N/A
Protein	N/A	13 g	N/A	N/A	N/A	N/A
Fat	30 g	39 g	N/A	44 g†	N/A	N/A
Saturated fatty acids	N/A	10 g	N/A	10 g†‡	N/A	N/A
Trans fatty acids	N/A	N/A	N/A	N/A‡	N/A	N/A
Carbohydrate	95 g	150 g	N/A	N/A	N/A	N/A
Sodium	N/A	1500 mg	N/A	1200 mg†	N/A	N/A
Potassium	700 mg	3000 mg	860 mg	2000 mg	N/A	N/A
Sugars	N/A	25 g	N/A	50 g†	N/A	N/A
Dietary fiber	N/A	14 g	N/A	14 g†	N/A	N/A
Cholesterol	N/A	300 mg	N/A	300 mg†	N/A	N/A
Vitamin A	500 μg§	300 μg§	500 μg§	300 μg§	300 μg§	300 μg§
Vitamin D	10 μg	15 μg	10 μg	15 μg	5 μg	5 μg
Vitamin E	5 mg	6 mg	5 mg	6 mg	4 mg¶	5 mg¶
Vitamin K	2.5 μg	30 μg	2.5 μg	30 μg	10 μg	15 μg
Vitamin B-1	0.3 mg	0.5 mg	0.3 mg	0.5 mg	0.35 mg	0.5 mg
Vitamin B-2	0.4 mg	0.5 mg	0.4 mg	0.5 mg	0.6 mg	0.8 mg
Niacin	4 mg††	6 mg††	4 mg††	6 mg††	3 mg	5 mg
Vitamin B-6	0.3 mg	0.5 mg	0.3 mg	0.5 mg	0.45 mg	0.7 mg
Folate	80 μg‡‡	150 μg‡‡	80 μg‡‡	150 μg‡‡	75 μg	100 μg
Vitamin B-12	0.5 μg	0.9 μg	0.5 μg	0.9 μg	0.7 μg	1.0 μg
Biotin	6 μg	8 μg	6 μg	8 μg	6 μg	8 μg
Pantothenic acid	1.8 mg	2 mg	1.8 mg	2 mg	1.8 mg	2.0 mg
Vitamin C	50 mg	15 mg	50 mg	15 mg	30 mg	30 mg
Calcium	260 mg	700 mg	260 mg	700 mg	550 mg	700 mg
Iron	11 mg	7 mg	11 mg	7 mg	9 mg§§	6 mg
Phosphorous	275 mg	460 mg	275 mg	460 mg	300 mg	500 mg

In South Korea NRVs for infants and toddlers (defined as persons under the age of 2) shall be based on the nutrient intake standards. However, the daily value of carbohydrate, sugars, protein, and fat for infants and children between the ages of 1 and 2 shall be 150 g of carbohydrate, 50 g of sugars, 35 g of protein, and 30 g of fat.
N/A, not applicable
†Children for 1 year to less than 4 years of age
‡Sum of saturated fatty acids and trans fatty acids
§Retinol activity equivalents (RAE) or retinol equivalents (RE)
¶α-tocopherol equivalents (α-TE); ††Niacin equivalents (NE)
‡‡Dietary folate equivalents (DFE)
§§9 mg for infants from 6 months or 3 mg for infants under 6 months.

Table 2. The comparison of the setting status of NRVs for infants and toddlers in each country

Target age	The United States		Canada		Australia/New Zealand	
	Infant through 12 months of age	Children for 12 months to 36 months of age	Infant solely for six months to less than 1 years of age	Children for six months to less than 4 years of age	Infants	Children for 1 year to 3 years of age
Magnesium	75 mg	80 mg	75 mg	80 mg	60 mg	80 mg
Copper	0.2 mg	0.3 mg	0.2 mg	0.3 mg	0.65 mg	0.8 mg
Iodine	130 μg	90 μg	130 μg	90 μg	60 μg	70 μg
Manganese	0.6 mg	1.2 mg	0.6 mg	1.2 mg	0.8 mg	1.5 mg
Selenium	20 μg	20 μg	20 μg	20 μg	15 μg	25 μg
Zinc	3 mg	3 mg	3 mg	3 mg	4.5 mg	4.5 mg
Chromium	5.5 μg	11 μg	5.5 μg	11 μg	40 μg	60 μg
Molybdenum	3 μg	17 μg	3 μg	17 μg	30 μg	50 μg
Chloride	570 mg	1500 mg	570 mg	1500 mg	N/A	N/A
Fluoride	N/A	N/A	N/A	N/A	N/A	N/A
Choline	150 mg	200 mg	150 mg	200 mg	N/A	N/A

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