

Dietary Reference Intakes: Elements

| Nutrient | Function | Life Stage Group | RDA/AI* (mg/d) | UL ^b (mg/d) | Selected Food Sources | Adverse effects of excessive consumption | Special Considerations | | | | |
|-----------|--|------------------|-------------------|---------------------------|---|--|--|--|--|--|--|
| Zinc | Component of multiple enzymes and proteins; involved in the regulation of gene expression. | Infants | 2* | 4 | Fortified cereals, red meats, certain seafood | Reduced copper status | Zinc absorption is low for those consuming vegetarian diets than those eating nonvegetarian diets. Therefore, it has been suggested that the zinc requirement for those consuming a vegetarian diet is approximately 1.5 fold greater than for those consuming a nonvegetarian diet. | | | | |
| | | 0-6 mo | 3 | 5 | | | | | | | |
| | | Children | | | | | | | | | |
| | | 1-3 y | 3 | 7 | | | | | | | |
| | | 4-8 y | 5 | 12 | | | | | | | |
| | | Males | | | | | | | | | |
| | | 9-13 y | 8 | 23 | | | | | | | |
| | | 14-18 y | 11 | 34 | | | | | | | |
| | | 19-30 y | 11 | 40 | | | | | | | |
| | | 31-50 y | 11 | 40 | | | | | | | |
| | | 50-70 y | 11 | 40 | | | | | | | |
| | | > 70 y | 11 | 40 | | | | | | | |
| | | Females | | | | | | | | | |
| | | 9-13 y | 8 | 23 | | | | | | | |
| | | 14-18 y | 9 | 34 | | | | | | | |
| | | 19-30 y | 8 | 40 | | | | | | | |
| | | 31-50 y | 8 | 40 | | | | | | | |
| | | 50-70 y | 8 | 40 | | | | | | | |
| | | > 70 y | 8 | 40 | | | | | | | |
| | | Pregnancy | | | | | | | | | |
| ≤ 18 y | 12 | 34 | | | | | | | | | |
| 19-30y | 11 | 40 | | | | | | | | | |
| 31-50 y | 11 | 40 | | | | | | | | | |
| Lactation | | | | | | | | | | | |
| ≤ 18 y | 13 | 34 | | | | | | | | | |
| 19-30y | 12 | 40 | | | | | | | | | |
| 31-50 y | 12 | 40 | | | | | | | | | |

NOTE: The table is adapted from the DRI reports, see www.nap.edu. It represents Recommended Dietary Allowances (RDAs) in bold type, Adequate Intakes (AIs) in ordinary type, and Upper Limits (ULs)^a. RDAs and AIs may both be used as goals for individual intake. RDAs are set to meet the needs of almost all (97 to 98 per cent) of individuals in a group. For healthy breastfed infants, the AI is the mean intake. The AI for other life stage and gender groups is believed to cover the needs of all individuals in a group, but lack of data prevent being able to specify with confidence the percentage of individuals covered by this intake.

^aUL = The maximum level of daily nutrient intake that is likely to pose no risk of adverse effects. Unless otherwise specified, the UL represents total intake from food, water, and supplements. Due to lack of suitable data, ULs could not be established for vitamin K, thiamin, riboflavin, vitamin B₁₂, pantothenic acid, biotin, or carotenoids. In the absence of data, extra caution may be warranted in consuming levels above recommended intakes.

^bND = Not determinable due to lack of data of adverse effects in this age group and concern with regard to lack of ability to handle excess amounts. Source of intake should be food only to prevent high levels of intake.

SOURCES: *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride* (1997); *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B₆, Folate, Vitamin B₁₂, Pantothenic Acid, Biotin, and Choline* (1998); *Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium, and Carotenoids* (2000); and *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc* (2001). These reports may be accessed via www.nap.edu.