

Recommended nutrient intakes^a – water- and fat-soluble vitamins

Group	Water-soluble vitamins					
	Vitamin C ^b (mg/day)	Thiamine (mg/day)	Riboflavin (mg/day)	Niacin ^c (mg NE/day)	Vitamin B ₆ (mg/day)	Pantothenate (mg/day)
Infants						
0–6 months	25	0.2	0.3	2 ⁱ	0.1	1.7
7–12 months	30	0.3	0.4	4	0.3	1.8
Children						
1–3 years	30	0.5	0.5	6	0.5	2.0
4–6 years	30	0.6	0.6	8	0.6	3.0
7–9 years	35	0.9	0.9	12	1.0	4.0
Adolescents						
Females						
10–18 years	40	1.1	1.0	16	1.2	5.0
Males						
10–18 years	40	1.2	1.3	16	1.3	5.0
Adults						
Females						
19–50 years (premenopausal)	45	1.1	1.1	14	1.3	5.0
51–65 years (menopausal)	45	1.1	1.1	14	1.5	5.0
Males						
19–65 years	45	1.2	1.3	16	1.3 (19–50yrs) 1.7 (50+yrs)	5.0
Elderly						
Females						
65+ years	45	1.1	1.1	14	1.5	5.0
Males						
65+ years	45	1.2	1.3	16	1.7	5.0
Pregnant women	55	1.4	1.4	18	1.9	6.0
Lactating women	70	1.5	1.6	17	2.0	7.0

^a Recommended nutrient intake (RNI) is the daily intake which meets the nutrient requirements of almost all (97.5%) apparently healthy individuals in an age- and sex-specific population.

^b See Chapter 7 for details.

^c NE = Niacin equivalents.

^d DFE = Dietary folate equivalents; μg of DFE provided = [μg of food folate + $(1.7 \times \mu\text{g}$ of synthetic folic acid)].

^e Vitamin A values are “recommended safe intakes” instead of RNIs. See Chapter 2 for further details.

^f Recommended safe intakes as μg retinol equivalent (RE)/day; conversion factors are as follows:

1 μg retinol = 1 RE

1 μg β -carotene = 0.167 μg RE

1 μg other provitamin A carotenoids = 0.084 μg RE.

Table from: World Health Organization and Food and Agriculture Organization of the United Nations (2004). Vitamin and mineral requirements in human nutrition, 2nd ed. World Health Organization

Water-soluble vitamins			Fat-soluble vitamins			
Biotin (µg/day)	Vitamin B ₁₂ (µg/day)	Folate ^d (µg DFE/day)	Vitamin A ^{e,f} (µg RE/day)	Vitamin D (µg/day)	Vitamin E ^g (mg α-TE/day)	Vitamin K ^h (µg/day)
5	0.4	80	375	5	2.7 ⁱ	5 ^k
6	0.7	80	400	5	2.7 ⁱ	10
8	0.9	150	400	5	5.0 ^j	15
12	1.2	200	450	5	5.0 ^j	20
20	1.8	300	500	5	7.0 ^j	25
25	2.4	400	600	5	7.5	35–55
25	2.4	400	600	5	10.0	35–55
30	2.4	400	500	5	7.5	55
30	2.4	400	500	10	7.5	55
30	2.4	400	600	5 (19–50yrs) 10 (51–65yrs)	10.0	65
	2.4	400	600	15	7.5	55
^l	2.4	400	600	15	10.0	65
30	2.6	600	800	5	ⁱ	55
35	2.8	500	850	5	ⁱ	55

^g Data were not strong enough to formulate recommendations. The figures in the table therefore represent the best estimate of requirements.

^h See Chapter 6 for details.

ⁱ Preformed niacin.

^j See Chapter 5 for details.

^k This intake cannot be met by infants who are exclusively breastfed. To prevent bleeding due to vitamin K deficiency, all breast-fed infants should receive vitamin K supplementation at birth according to nationally approved guidelines.

^l Not specified.

Table from World Health Organization and Food and Agriculture Organization of the United Nations (2004). Vitamin and mineral requirements in human nutrition, 2nd ed. World Health Organization