

Annex 1

Recommended nutrient intakes^a – minerals

Group	Calcium ^b (mg/day)	Selenium (µg/day)	Magnesium (mg/day)	Zinc ^c (mg/day)		
				High bioavailability	Moderate bioavailability	Low bioavailability
Infants						
0–6 months	300 ^d	6	26 ^d	1.1 ^d	2.8	6.6
	400 ^e		36 ^h			
7–12 months	400	10	54	0.8 ^d	4.1	8.4
				2.5 ^f		
Children						
1–3 years	500	17	60	2.4	4.1	8.3
4–6 years	600	22	76	2.9	4.8	9.6
7–9 years	700	21	100	3.3	5.6	11.2
Adolescents						
Females						
10–18 years	1300 ^k	26	220	4.3	7.2	14.4
Males						
10–18 years	1300 ^k	32	230	5.1	8.6	17.1
Adults						
Females						
19–50 years (premenopausal)	1000	26	220	3.0	4.9	9.8
51–65 years (menopausal)	1300	26	220	3.0	4.9	9.8
Males						
19–65 years	1000	34	260	4.2	7.0	14.0
Elderly						
Females						
65+ years	1300	25	190	3.0	4.9	9.8
Males						
65+ years	1300	33	224	4.2	7.0	14.0
Pregnant women						
First trimester	m	m	220	3.4	5.5	11.0
Second trimester	m	28	220	4.2	7.0	14.0
Third trimester	1200	30	220	6.0	10.0	20.0
Lactating women						
0–3 months	1000	35	270	5.8	9.5	19.0
3–6 months	1000	35	270	5.3	8.8	17.5
7–12 months	1000	42	270	4.3	7.2	14.4

^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 4 for details.

^c See Chapter 12 for details.

^d Breastfed.

^e Neonatal iron stores are sufficient to meet the iron requirement for the first 6 months in full-term infants. Premature infants and low birth weight infants require additional iron.

^f Recommendation for the age group 0–4.9 years.

^g Cow milk-fed.

^h Formula-fed.

Iron (mg/day)				
15% Bioavailability	12% Bioavailability	10% Bioavailability	5% Bioavailability	Iodine (µg/day)
e	e	e	e	90 ^f
6.2 ⁱ	7.7 ⁱ	9.3 ⁱ	18.6 ⁱ	90 ^f
3.9	4.8	5.8	11.6	90 ^f
4.2	5.3	6.3	12.6	90 ^f
5.9	7.4	8.9	17.8	120 (6–12 yrs)
9.3 (11–14 yrs) ^j	11.7 (11–14 yrs) ^j	14.0 (11–14 yrs) ^j	28.0 (11–14 yrs) ^j	150 (13–18 yrs)
21.8 (11–14 yrs)	27.7 (11–14 yrs)	32.7 (11–14 yrs)	65.4 (11–14 yrs)	
20.7 (15–17 yrs)	25.8 (15–17 yrs)	31.0 (15–17 yrs)	62.0 (15–17 yrs)	
9.7 (11–14 yrs)	12.2 (11–14 yrs)	14.6 (11–14 yrs)	29.2 (11–14 yrs)	150 (13–18 yrs)
12.5 (15–17 yrs)	15.7 (15–17 yrs)	18.8 (15–17 yrs)	37.6 (15–17 yrs)	
19.6	24.5	29.4	58.8	150
7.5	9.4	11.3	22.6	150
9.1	11.4	13.7	27.4	150
7.5	9.4	11.3	22.6	150
9.1	11.4	13.7	27.4	150
n	n	n	n	200
n	n	n	n	200
n	n	n	n	200
10.0	12.5	15.0	30.0	200
10.0	12.5	15.0	30.0	200
10.0	12.5	15.0	30.0	200

ⁱ Bioavailability of dietary iron during this period varies greatly.

^j Not applicable to infants exclusively breastfed.

^k Particularly during the growth spurt.

^l Pre-menarche.

^m Not specified.

ⁿ It is recommended that iron supplements in tablet form be given to all pregnant women because of the difficulties in correctly assessing iron status in pregnancy. In non-anaemic pregnant women, daily supplements of 100 mg of iron (e.g. as ferrous sulphate) given during the second half of pregnancy are adequate. In anaemic women higher doses are usually required.

Annex 2

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.

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	^j	55
35	2.8	500	850	5	^j	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.

