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International Comparisons: CRN ULS, US FNB UL, EC SCF UL, UK EVM SUL or GL, and Japan UL

Vitamins

Nutrient	CRN ULS ¹ 2004	US FNB UL ²	EC SCF UL	UK EVM SUL ³ or GL ⁴	Japan UL ⁵ (1999)
Vitamin A (retinol and its esters)	3,000 µg (10,000 IU) w/low dietary retinol; 1,500 µg (5,000 IU) w/high dietary retinol	3,000 µg	3,000 µg (for women of childbearing age)	1,500 µg total (GL) (for bone effects)	1,500 µg
Beta-carotene	25 mg non-smokers; smokers should not use	Not established; smokers should not use	Not established; risk for smokers	7 mg supplement (SUL); smokers should not use	Not established
Vitamin D	60 µg (2,400 IU)	50 µg	50 µg	25 µg supplement (GL)	50 µg
Vitamin E	1,000 mg (1,600 IU)	1,000 mg	300 mg	540 mg supplement (800 IU) (SUL)	600 mg
Vitamin K	10 mg	Not established	Not established	1 mg supplement (GL)	30 mg
Vitamin C	2,000 mg	2,000 mg	No UL (1,000 mg as guidance) ⁶	1,000 mg supplement (GL)	Not established
Vitamin B ₁ (Thiamin)	100 mg	Not established	Not established	100 mg supplement (GL)	Not established
Vitamin B ₂ (Riboflavin)	200 mg	Not established	Not established	40 mg supplement (GL)	Not established
Nicotinic acid	500 mg ⁷ 250 mg SR ⁸	35 mg ^{9,10}	10 mg ¹⁰	17 mg ¹⁰ supplement (GL)	30 mg
Nicotinamide	1,500 mg	35 mg ⁹	900 mg	500 mg supplement (GL)	Not established
Vitamin B ₆ (Pyridoxine)	100 mg	100 mg	25 mg	10 mg supplement (SUL) chronic intake	100 mg
Folic acid	1,000 µg	1,000 µg	1,000 µg	1,000 µg supplement (GL)	1,000 µg
Vitamin B ₁₂	3,000 µg	Not established	Not established	2,000 µg supplement (GL)	Not established
Biotin	2,500 µg	Not established	Not established	900 µg supplement (GL)	Not established
Pantothenic Acid	1,000 mg	Not established	Not established	200 mg supplement (GL)	Not established

¹ ULS = CRN's Upper Level for Supplements

² UL = Tolerable Upper Intake Level (applies to total intake unless specified otherwise)

³ SUL = Safe Upper Limit (may apply to either total or supplemental intake, as specified)

⁴ GL = Guidance Level (may apply to either total or supplemental intake, as specified)

⁵ Japanese UL values in English are available only as a table and therefore are not discussed in text of this publication, but have been added to this chart to extend international comparisons

⁶ EFSA (European Food Safety Authority) assumed this assessment function in place of EC SCF in January 2004

⁷ Based on liver and gastrointestinal toxicity

⁸ SR = slow-release (time-release) formulations of nicotinic acid

⁹ FNB UL for niacin is set for both nicotinic acid and nicotinamide

¹⁰ Based on vasodilative flushing reaction

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Minerals and Trace Elements

Nutrient	CRN ULS ¹ 2004	US FNB UL ²	EC SCF UL	UK EVM SUL ³ or GL ⁴	Japan UL ⁵ (1999)
Calcium	1,500 mg	2,500 mg	2,500 mg	1,500 mg supplement (GL)	2,500 mg
Phosphorus	1,500 mg	4,000 mg	Not reviewed	250 mg supplement; 2,400 mg total (GL)	4,000 mg
Magnesium	400 mg	350 mg nonfood sources	250 mg nonfood sources	400 mg supplement (GL)	650-700 mg
Potassium	1,500 mg (3 x 500)	Not established	Not reviewed	3,700 mg supplement, w/ minor adverse effects (GL)	2,000 mg
Boron	6 mg	20 mg	Not reviewed	9.6 mg (SUL)	Not established
Chromium	1,000 µg (any form of Cr III)	Not established	Not established	10 mg (10,000 µg) (not picolinate) (GL)	250 µg
Copper	9 mg	10 mg	5 mg	10 mg total (SUL)	9 mg
Fluoride	No ULS (UL= 6 mg)	10 mg	Not reviewed	Not to be reviewed	Not established
Iodine	500 µg	1,100 µg	600 µg	500 µg supplement; 930 µg total (GL)	3,000 µg
Iron	60 mg (full stomach)	45 mg (empty stomach)	Not reviewed	17 mg supplement (GL)	40 mg
Manganese	10 mg	11 mg	Not established	4 mg supplement; 12.2 mg total (GL)	10 mg
Molybdenum	350 µg	2,000 µg	600 µg	230 µg food (GL)	250 µg
Selenium	200 µg	400 µg	300 µg total	350 µg supplement; 450 µg total (SUL)	250 µg
Zinc	30 mg	40 mg	25 mg	25 mg supplement (SUL)	30 mg

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