



**EUROPEAN COMMISSION**  
HEALTH & CONSUMER PROTECTION DIRECTORATE-GENERAL

Directorate C - Scientific Opinions  
**C2 - Management of scientific Committees; scientific co-operation and networks**

**Scientific Committee on Food**

SCF/CS/NUT/GEN/18 Final  
6 March 2003

**Opinion of the Scientific Committee on Food  
on the revision of reference values  
for nutrition labelling**

(expressed on 5 March 2003)

**Table 2** Comparison of recommended daily intakes (RDAs/PRIs) of vitamins and minerals for adults derived from different countries and organisations

<b>Vitamins</b>	<b>B<sub>1</sub> Thiamine (mg)</b>	<b>B<sub>2</sub> Riboflavin (mg)</b>	<b>Niacin (mg)</b>	<b>B<sub>6</sub> (mg)</b>	<b>Folates (µg)</b>	<b>B<sub>12</sub> (µg)</b>	<b>C (mg)</b>	<b>A (µg RE<sup>#</sup>)</b>	<b>D (µg)</b>	<b>E (mg)</b>	<b>K (µg)</b>	<b>Pantothenic acid (mg)</b>	<b>Biotin (µg)</b>
European Union (including Greece), 1992 <sup>4</sup>	1.1/0.9	1.6/1.3	18/14	1.5/1.1	200	1.4	45	700/600	0-10	0.4*/ >4->3	-	3-12	15-100
Belgium, 2000 <sup>9</sup>	1.1/0.9	1.6/1.3	18/14	1.7/1.2	200	1.4	70	700/600	2.5-10	10	-	3-12	15-100
France, 2001 <sup>10</sup>	1.3/1.1	1.6/1.5	14/11	1.8/1.5	330/300	2.4	110	800/600	5	12	45	5	50
Germany, Austria, Switzerland, 2000 <sup>11</sup>	1.2/1.0	1.4/1.2	16/13	1.5/1.2	400	3.0	100	1000/800	5	15/12	70/60	6	30-60
Ireland, 1999 <sup>12</sup>	1.1/0.9	1.6/1.3	18/14	1.5/1.1	300	1.4	60	700/600	0-10	-	-	-	-
Italy, 1996 <sup>13</sup>	1.2/0.9	1.6/1.3	18/14	1.5/1.1	200	2	60	700/600	0-10	>8	-	-	-
Netherlands, 1989, 2000, 2003 <sup>14,15,16</sup>	1.1	1.5/1.1	17/13	1.5	300	2.8	70	1000/800	2.5-5	11.8/ 9.3	-	5	-
Nordic countries, 1996 <sup>17</sup>	1.4/1.1	1.8/1.3	19/15	1.5/1.2	300	2.0	60	900/800	5	10/8	-	-	-
Portugal, 1982 <sup>18</sup>	1.5/1.2	1.6/1.4	18/14	2.2	400	3.0	75	1000	-	-	-	-	-
Spain, 1994-1998 <sup>19</sup>	1.2/0.9	1.8/1.4	20/15	1.8/1.6	200	2.0	60	750	2.5	12	-	-	-
United Kingdom, 1991 <sup>20</sup>	1.0/0.8	1.3/1.1	17/13	1.4/1.2	200	1.5	40	700/600	-	>4/>3	74/60	3-7	10-200
United States, 1997, 1998, 2000, 2001 <sup>22,23,24,25</sup>	1.2/1.1	1.3/1.1	16/14	1.3	400	2.4	90/75	900/700	5	15	120/ 90	5	30
FAO/WHO, 2002 <sup>26</sup>	1.2/1.1	1.3/1.1	16/14	1.3	400	2.4	45	600/500	5	10/7.5	65/55	5	30
<b>Reference Labelling Value (RLV)</b>	<b>1.1</b>	<b>1.4</b>	<b>16</b>	<b>1.4</b>	<b>400</b>	<b>2.5</b>	<b>80</b>	<b>800</b>	<b>5</b>	<b>12</b>	<b>75</b>	<b>6</b>	<b>50</b>

When there are 2 values, the left-hand side value represents the contribution advised for men, that of right-hand side for women. When a range of values is proposed, it is indicated by sign “-”.

<sup>#</sup> Retinol equivalents. \* mg/g PUFA.

<b>Minerals</b>	<b>Ca (mg)</b>	<b>P (mg)</b>	<b>K (mg)</b>	<b>Na (mg)</b>	<b>Cl (mg)</b>	<b>Fe (mg)</b>	<b>Zn (mg)</b>	<b>Cu (mg)</b>	<b>I (µg)</b>	<b>Se (µg)</b>	<b>Mg (mg)</b>	<b>Mn (mg)</b>	<b>Cr (µg)</b>	<b>Mo (µg)</b>	<b>F (mg)</b>
European Union (including Greece), 1992 <sup>4</sup>	700	550	3100	575-3500	match sodium	9/20	9.5/7	1.1	130	55	150-500	1-10	-	-	-
Belgium, 2000 <sup>9</sup>	900	800	2000-4000	575-3500	750-4600	9/20	9.5/7	1.1	150	70	420/330	2-5	-	75-250	-
France, 2001 <sup>10</sup>	900	750	-	-	-	9/16	12/10	2.0/1.5	150	60/50	420/360	-	65/55	30-50	2.5/2.0
Germany, Austria, Switzerland, 2000 <sup>11</sup>	1000	700	2000	550	830	10/15	10.0/7.0	1.0-1.5	200	30-70	350/300	2.0-5.0	30-100	50-100	3.8/3.1
Ireland, 1999 <sup>12</sup>	800	550	3100	-	-	10/14	9.5/7	1.1	130	55	-	-	-	-	-
Italy, 1996 <sup>13</sup>	1000	1000	3100	-	-	10/18	10/7	1.2	150	55	-	-	-	-	-
Netherlands, 1989, 2000 <sup>14,15</sup>	1000	700-1400	-	-	-	9/15	10/9	1.5-3.5	-	50-150	300-350/250-300	-	-	-	-
Nordic countries, 1996 <sup>17</sup>	800	600	3500/3100	-	-	10/18	9/7	-	150	50/40	350/280	-	-	-	-
Portugal, 1982 <sup>18</sup>	800	800	3750	2200	3400	15	11/15	2.5	150	-	350/300	3.8	-	-	2.7
Spain, 1994-1998 <sup>19</sup>	600-850	-	-	-	-	10-15/18	15	-	140-145/110-115	-	350-400/330	-	-	-	-
United Kingdom, 1991 <sup>20</sup>	700	550	3500	1600	2500	8.7/14.8	9.5/7.0	1.2	140	75/60	300/270	>1.4	>25	50-400	3.7/3.0
United States, 1997, 1998, 2000, 2001 <sup>22,23,24,25</sup>	1000	700	2000	500	750	8/18	11/8	0.9	150	55	400-420/310-320	2.3/1.8	35/25	45	4/3
FAO/WHO, 2002 <sup>26</sup>	1000	-	-	-	-	9/20	7.0/4.9	-	130/110	34/26	260/220	-	-	-	-
<b>Reference Labelling Value (RLV)</b>	<b>1000</b>	<b>700</b>	<b>2000</b>	<b>600</b>	<b>800</b>	<b>14</b>	<b>10</b>	<b>1.0</b>	<b>150</b>	<b>55</b>	<b>375</b>	<b>2.0</b>	<b>40</b>	<b>50</b>	<b>3.5</b>

**Table 3** Comparison of recommended daily intakes (RDAs/PRIs) of vitamins and minerals for infants aged 6-12 months and children aged 1-3 years or 1-4 years derived from different countries and organisations

Vitamins	B <sub>1</sub> Thiamine (mg)		B <sub>2</sub> Riboflavin (mg)		Niacin (mg)		B <sub>6</sub> (mg)		Folates (µg)		B <sub>12</sub> (µg)		C (mg)	
	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y
European Union (including Greece), 1992 <sup>4</sup>	0.3	0.5	0.4	0.8	5	9	0.4	0.7	50	100	0.5	0.7	20	25
Belgium, 2000 <sup>9</sup>	0.3	0.5	0.4	0.8	5	9	0.4	0.7	50	100	0.5	0.7	35	40
France, 2001 <sup>10</sup>	0.2	0.4	0.4	0.8	3	6	0.3	0.6	70	100	0.5	0.8	50	60
Germany, Austria, Switzerland, 2000 <sup>11</sup>	0.4	0.6	0.4	0.7	5	7	0.3	0.4	80	200	0.8	1.0	55	60
Ireland, 1999 <sup>12</sup>	0.2-0.3	0.5	0.4	0.8	4-5	9	0.3-0.4	0.7	50	100	0.4	0.7	25	45
Italy, 1996 <sup>13</sup>	0.4	0.6	0.4	0.8	5	9	0.4	0.7	50	100	0.5	0.7	35	40
Netherlands, 2000, 2003 <sup>15,16</sup>	0.2	0.3	0.4	0.5	2	4	0.3	0.4	60	90	0.6	0.8	35	40
Nordic countries, 1996 <sup>17</sup>	0.4	0.7	0.5	0.8	6	9	0.5	0.8	50	75	0.6	1.0	35	40
Portugal, 1982 <sup>18</sup>	0.5	0.5	0.6	0.8	8	8	0.6	0.9	45	100	1.5	2.0	35	35
Spain, 1994-1998 <sup>19</sup>	0.3	0.4	0.6	0.8	6	8	-	-	60	100	0.3	0.9	50	55
United Kingdom, 1991 <sup>20</sup>	0.2-0.3	0.5	0.4	0.6	4-5	8	0.3-0.4	0.7	50	70	0.4	0.5	25	30
United States, 1997, 1998, 2000, 2001 <sup>22,23,24,25</sup>	0.3	0.5	0.4	0.5	4	6	0.3	0.5	80	150	0.5	0.9	50	15
FAO/WHO, 2002 <sup>26</sup>	0.3	0.5	0.4	0.5	4	6	0.3	0.5	80	160	0.5	0.9	30	30
<i>Overall values</i>	<b>0.4</b>	<b>0.5</b>	<b>0.4</b>	<b>0.7</b>	<b>4</b>	<b>7</b>	<b>0.3</b>	<b>0.7</b>	<b>70</b>	<b>125</b>	<b>0.5</b>	<b>0.8</b>	<b>45</b>	<b>45</b>
<b>Reference Labelling Value (RLV)</b>	<b>0.5</b>		<b>0.7</b>		<b>7</b>		<b>0.7</b>		<b>125</b>		<b>0.8</b>		<b>45</b>	

Vitamins	A (µg RE)		D (µg)		E (mg TE)		K (µg)		Pantothenic acid (mg)		Biotin (µg)	
	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y
European Union (including Greece), 1992 <sup>4</sup>	350	400	10-25	10	0.4 mg/g PUFA		-	-	-	-	-	-
Belgium, 2000 <sup>9</sup>	350	400	10-15	5-10	0.6-0.8 mg/g PUFA	0.6 mg/g PUFA	10	15	2-3	3-5	10-15	20-30
France, 2001 <sup>10</sup>	350	400	20-25	10	4	6	5-10	15	2	2.5	6	12
Germany, Austria, Switzerland, 2000 <sup>11</sup>	600	600	10	5	4	6/5	10	15	3	4	5-10	10-15
Ireland, 1999 <sup>12</sup>	350	400	7	10	-	-	-	-	-	-	-	-
Italy, 1996 <sup>13</sup>	350	400	10-25	10	-	-	-	-	-	-	-	-
Netherlands, 1989, 2000 <sup>14,15</sup>	400	400	5-10	5-10	3.6	5.7	-	-	2	2	-	-
Nordic countries, 1996 <sup>17</sup>	400	400	10	10	4	5	-	-	-	-	-	-
Portugal, 1982 <sup>18</sup>	400	400	-	-	-	-	-	-	-	-	-	-
Spain, 1994-1998 <sup>19</sup>	450	300	10.0	10.0	-	-	-	-	-	-	-	-
United Kingdom, 1991 <sup>20</sup>	350	400	7	7	0.4 mg/g PUFA	-	10	-	1.7	-	10-200	10-200
United States, 1997, 1998, 2000, 2001 <sup>22,23,24,25</sup>	500	300	5	5	5	6	2.5	30	1.8	2	6	8
FAO/WHO, 2002 <sup>26</sup>	400	400	5	5	2.7	5	10	15	1.8	2	6	8
<i>Overall values</i>	<b>450</b>	<b>400</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>10</b>	<b>12</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>10</b>
<b>Reference Labelling Value (RLV)</b>	<b>400</b>		<b>7</b>		<b>5</b>		<b>12</b>		<b>3</b>		<b>10</b>	

Minerals	Ca (mg)		P (mg)		K (mg)		Na (mg)		Cl (mg)		Fe (mg)		Zn (mg)		Cu (mg)	
	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y
European Union (including Greece), 1992 <sup>4</sup>	400	400	300	300	800	800	-	-	-	-	6	4	4	4	0.3	0.4
Belgium, 2000 <sup>9</sup>	600	800	500	700	293-780	800-1000	173-460	225-500	263-710	350-800	10	10	4	4	0.3-0.7	0.4-1
France, 2001 <sup>10</sup>	-	500	-	360	-	-	-	-	-	-	-	7	-	6	-	0.8
Germany, Austria, Switzerland, 2000 <sup>11</sup>	400	600	300	500	650	1000	180	300	270	450	8	8	2.0	3.0	0.6-0.7	0.5-1.0
Ireland, 1999 <sup>12</sup>	525	800	-	300	700	800	320-350	-	500	-	7.8	8	5.0	4	0.3	0.4
Italy, 1996 <sup>13</sup>	600	800	500	800	800	800	-	-	-	-	7	7	4	4	0.3	0.4
Netherlands, 1989, 2000 <sup>14,15</sup>	450	500	400	400-800	-	-	-	-	-	-	7	7	4	4	0.3-0.5	0.3-0.7
Nordic countries, 1996 <sup>17</sup>	540	600	420	470	800	800	-	-	-	-	8	8	5	5	-	-
Portugal, 1982 <sup>18</sup>	650	800	360	800	850	1100	500	650	800	1000	7	7	5	10	0.8	1.2
Spain, 1994-1998 <sup>19</sup>	600	650	-	-	-	-	-	-	-	-	7	7	5	10	-	-
United Kingdom, 1991 <sup>20</sup>	525	350	400	270	700	800	320-350	500	500	800	7.8	6.9	5.0	5.0	0.3	0.4
United States, 1997, 1998, 2000, 2001 <sup>22,23,24,25</sup>	270	500	275	460	700	1000-1400	200	225-300	300	350-500	11	7	3	3	0.22	0.34
FAO/WHO, 2002 <sup>26</sup>	400	500	-	-	-	-	-	-	-	-	6	4	4.1	4.1	-	-
<i>Overall values</i>	<b>450</b>	<b>550</b>	<b>350</b>	<b>550</b>	<b>700</b>	<b>1000</b>	<b>300</b>	<b>400</b>	<b>400</b>	<b>500</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>5</b>	<b>0.4</b>	<b>0.5</b>
<b>Reference Labelling Value (RLV)</b>	<b>550</b>		<b>550</b>		<b>1000</b>		<b>400</b>		<b>500</b>		<b>8</b>		<b>5</b>		<b>0.5</b>	

Minerals	Se (µg)		I (µg)		Mg (mg)		Mn (mg)		Cr (µg)		Mo (µg)		F (mg)	
	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y	6-12 m	1-3/4 y
European Union (including Greece), 1992 <sup>4</sup>	8	10	50	70	80	85	1-10	1-10	-	-	-	-	-	-
Belgium, 2000 <sup>9</sup>	15	20	90	90	60-80	80-85	0.6-1.0	1.0-1.5	-	-	21-40	25-50	-	-
France, 2001 <sup>10</sup>	-	20	-	80	-	80	-	-	-	25	-	-	-	0.5
Germany, Austria, Switzerland, 2000 <sup>11</sup>	7-30	10-40	80	100	60	80	0.6-1.0	1.0-1.5	20-40	20-60	20-40	25-50	0.5	0.7
Ireland, 1999 <sup>12</sup>	10	10	60	70	75-80	-	-	-	-	-	-	-	-	-
Italy, 1996 <sup>13</sup>	8	10	50	70	-	-	-	-	-	-	-	-	-	-
Netherlands, 1989 <sup>14</sup>	10-20	10-30	-	-	35-60	60-70	-	-	-	-	-	-	-	-
Nordic countries, 1996 <sup>17</sup>	15	20	50	70	80	85	-	-	-	-	-	-	-	-
Portugal, 1982 <sup>18</sup>	-	-	50	70	70	150	0.8	1.2	-	-	-	-	0.8	1.2
Spain, 1994-1998 <sup>19</sup>	-	-	45	55	85	125	-	-	-	-	-	-	-	-
United Kingdom, 1991 <sup>20</sup>	10	15	60	70	75-80	85	>0.14	>0.2	-	1-13	4-15	6-19	1.1-1.2	1.5
United States, 1997, 1999, 2000, 2001 <sup>22,23,24,25</sup>	20	20	130	90	75	80	0.6	1.2	5.5	11	3	17	0.5	0.7
FAO/WHO, 2002 <sup>26</sup>	10	17	135	75	53	60	-	-	-	-	-	-	-	-
<i>Overall values</i>	<b>15</b>	<b>20</b>	<b>70</b>	<b>80</b>	<b>75</b>	<b>80</b>	<b>0.7</b>	<b>1.2</b>	<b>10</b>	<b>20</b>	<b>15</b>	<b>25</b>	<b>0.5</b>	<b>0.7</b>
<b>Reference Labelling Value (RLV)</b>	<b>20</b>		<b>80</b>		<b>80</b>		<b>1.2</b>		<b>20</b>		<b>25</b>		<b>0.7</b>	

## 7. REFERENCES

1. FAO/WHO/Ministry of Trade and Industry, Finland (1988). Recommended nutrient reference values for food labeling purposes. Report of a Joint FAO/WHO Expert Consultation on recommended allowances of nutrients for food labeling purposes. Helsinki, Finland, 12-16 September 1988.
2. Codex guidelines on nutrition labeling CAC/GL 2-1985 (Rev. 1 - 1993). <http://www.fao.org/docrep/005/y2770e/y2770e06.htm>
3. Commission of the European Communities. White Paper on Food Safety. COM (1999) 719 final. [http://europa.eu.int/eur-lex/en/com/wpr/1999/com1999\\_0719en01.pdf](http://europa.eu.int/eur-lex/en/com/wpr/1999/com1999_0719en01.pdf)
4. SCF (Scientific Committee for Food) (1992). Nutrient and energy intakes for the European Community. Opinion adopted by the Scientific Committee on Food on 12 December 1992. Reports of the Scientific Committee for Food, Thirsty-First Series. European Commission, Luxembourg, 1993. <http://europa.eu.int/comm/food/fs/sc/scf/out89.pdf>
5. Commission Directive 91/321/EEC of 14 May 1991 on infant formula and follow-on formulae. Official Journal of the European Communities L 175, 04.07.1991 p 35.
6. Commission Directive 96/4/EC of 16 February 1996 amending Directive 91/321/EEC on infant formula and follow-on formulae. Official Journal of the European Communities L 49, 28.02.1996, p 12.
7. Commission Directive 96/5/EC of 16 February 1996 on processed cereal-based foods and baby foods for infants and young children. Official Journal of the European Communities L 49, 28.02.1996, p 17.



8. Council Directive 90/496/EEC of 24 September 1990 on nutrition labelling for foodstuffs. Official Journal of the European Communities L 276, 06.10.1990, p 40.
9. CSH (Conseil Supérieur d'Hygiène) (2000). Recommandations Nutritionnelles en Belgique - Révision 2000.
10. AFSSA (Agence Française de Sécurité Sanitaire des Aliments) (2001). Apport nutritionnels conseillés pour la population Française. Paris, Lavoisier Tec et Doc.
11. D-A-CH Referenzwerte (2000). Deutsche Gesellschaft für Ernährung, Österreichische Gesellschaft für Ernährung, Schweizerische Gesellschaft für Ernährungsforschung, Schweizerische Vereinigung für Ernährung: Referenzwerte für die Nährstoffzufuhr, Umschau/Braus Verlag, Frankfurt.
12. FSAI (Food Safety Authority of Ireland) (1999). Recommended Dietary Allowances for Ireland. Dublin. ([www.fsai.ie](http://www.fsai.ie)).
13. Società Italiana di Nutrizione Umana. Livelli di assunzione raccomandati di energia e nutrienti per la popolazione Italiana (LARN). Revisione 1996. Milano, EDRA srl, 1998.
14. Voedingsraad (Nutrition Council of the Netherlands) (1989). Nederlandse Voedingsnormen (Dietary Reference Intakes). Den Haag, voorlichtingsbureau voor de Voeding, 1992.
15. Gezondheidsraad (Health Council of the Netherlands) (2000). Dietary Reference Intake for calcium, vitamin D, thiamin, riboflavin, niacin, pantothenic acid and biotin. Den Haag. Nr 2000/12.
16. Gezondheidsraad (Health Council of the Netherlands) (2003). Dietary Reference Intake for folic acid, vitamin B<sub>6</sub> and vitamin B<sub>12</sub>. Den Haag. Nr 2003/4.
17. Nordisk Ministerråd, Nordisk Forlagshus. Nordiska Näringsrekommendationer 1996. Nord 1996: 28. (information included in the table is from the summary Nordic Nutrition Recommendations, Scandinavian Journal of Nutrition 1996, vol 40: 161-165).
18. Portugal - Recommended Dietary Allowances (Revised 1982). Nutrition Research Centre, National Institute of Health.
19. Spain - Based on "Ingesta Recomendada de Nutrientes (I.R.) ó R.D.A. para la Población Española". Information de la Sociedad Española de Dietética y Ciencias de la Alimentación (SEDCA). ([www.nutricion.org](http://www.nutricion.org)).
20. COMA (Committee on Medical Aspects of Food Policy) (1991). Department of Health. Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. Report of the Panel on Dietary Reference Values of the Committee on Medical Aspects of Food Policy. London: HMSO. (Report on Health and Social Subjects; 41).

21. FNB (Food and Nutrition Board) (1989). Recommended Dietary Allowances. 10<sup>th</sup> Edition. Institute of Medicine, National Academy Press, Washington, D.C.
22. FNB (Food and Nutrition Board) (1997). Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D and Fluoride. Institute of Medicine, National Academy Press, Washington, D.C.
23. FNB (Food and Nutrition Board) (1998). Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline. Institute of Medicine, National Academy Press, Washington, D.C.
24. FNB (Food and Nutrition Board) (2000). Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium and Carotenoids. Institute of Medicine, National Academy Press, Washington, D.C.
25. FNB (Food and Nutrition Board) (2001). Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc. Institute of Medicine, National Academy Press, Washington, D.C.
26. WHO/FAO (World Health Organization and Food and Agriculture Organization of the United Nations) (2002). Human vitamin and mineral requirements. Report of a Joint FAO/WHO Expert Consultation, Bangkok, Thailand. FAO Rome. <http://www.fao.org/docrep/004/y2809e/y2809e00.htm>