

**Recommended Energy Intakes per day**

Life stage/ age group	Weight (kg)		Energy (kcal)	
	M	F	M	F
Infants, mo				
0–5	6.5	6.0	620	560
6–11	9.0	8.0	720	630
Children, y				
1–2	12.0	11.5	1,000	920
3–5	17.5	17.0	1,350	1,260
6–9	23.0	22.5	1,600	1,470
10–12	33.0	36.0	2,060	1,980
13–15	48.5	46.0	2,700	2,170
16–18	59.0	51.5	3,010	2,280
Adults, y				
19–29	60.5	52.5	2,530	1,930
30–49	60.5	52.5	2,420	1,870
50–59	60.5	52.5	2,420	1,870
60–69	60.5	52.5	2,140	1,610
≥ 70	60.5	52.5	1,960	1,540
Pregnant				+300*
Lactating				+500

Abbreviations: M–Male, F–Female, E–Energy

\*For 2<sup>nd</sup> and 3<sup>rd</sup> trimesters only**Acceptable Macronutrient Distribution Ranges**

Lifestage/ age group	Range (% of Energy)		
	Protein	Total Fat	Carbohydrate*
Infants, mo			
0–5	5	40–60	35–55
6–11	8–15	30–40	45–62
Children, y			
1–2	6–15	25–35	50–69
3–18	6–15	15–30	55–79
Adults, y			
≥ 19	10–15	15–30	55–75

NOTE: *Acceptable Macronutrient Distribution Range (AMDR)* is the range of intakes for a particular energy source (carbohydrate, protein or fat) that is associated with reduced risk of chronic diseases while providing adequate intakes of essential nutrients, expressed as a percentage of total energy intake.

\*The AMDR for carbohydrate is the percentage of total energy available after taking into account that consumed as protein and fat, hence the wide ranges.

**Recommended Nutrient Intakes per day (Macronutrients)**

Life stage/ age group	Weight (kg)		Energy (kcal)		Protein (g)		Essential Fatty Acids		Dietary Fiber (g)	Water (mL)	
	M	F	M	F	M	F	$\alpha$ -Linolenic Acid	Linoleic Acid		M	F
							(%E)	(%E)			
Infants, mo											
0–5	6.5	6.0	620	560	<b>9</b>	<b>8</b>	<i>0.5</i>	<i>4.5</i>	-	680	680
6–11	9.0	8.0	720	630	<b>17</b>	<b>15</b>	<i>0.5</i>	<i>4.5</i>	-	890	890
Children, y											
1–2	12.0	11.5	1,000	920	<b>18</b>	<b>17</b>	<i>0.5</i>	<i>3.0</i>	<i>6–7</i>	<i>1,000</i>	<i>920</i>
3–5	17.5	17.0	1,350	1,260	<b>22</b>	<b>21</b>	<i>0.5</i>	<i>2.0</i>	<i>8–10</i>	<i>1,350</i>	<i>1,260</i>
6–9	23.0	22.5	1,600	1,470	<b>30</b>	<b>29</b>	<i>0.5</i>	<i>2.0</i>	<i>11–14</i>	<i>1,600</i>	<i>1,470</i>
10–12	33.0	36.0	2,060	1,980	<b>43</b>	<b>46</b>	<i>0.5</i>	<i>2.0</i>	<i>15–17</i>	<i>2,060</i>	<i>1,980</i>
13–15	48.5	46.0	2,700	2,170	<b>62</b>	<b>57</b>	<i>0.5</i>	<i>2.0</i>	<i>18–20</i>	<i>2,700</i>	<i>2,170</i>
16–18	59.0	51.5	3,010	2,280	<b>72</b>	<b>61</b>	<i>0.5</i>	<i>2.0</i>	<i>21–23</i>	<i>3,010</i>	<i>2,280</i>
Adults, y											
19–29	60.5	52.5	2,530	1,930	<b>71</b>	<b>62</b>	<i>0.5</i>	<i>2.0</i>	<i>20–25</i>	<i>2,530</i>	<i>1,930</i>
30–49	60.5	52.5	2,420	1,870	<b>71</b>	<b>62</b>	<i>0.5</i>	<i>2.0</i>	<i>20–25</i>	<i>2,420</i>	<i>1,870</i>
50–59	60.5	52.5	2,420	1,870	<b>71</b>	<b>62</b>	<i>0.5</i>	<i>2.0</i>	<i>20–25</i>	<i>2,420</i>	<i>1,870</i>
60–69	60.5	52.5	2,140	1,610	<b>71</b>	<b>62</b>	<i>0.5</i>	<i>2.0</i>	<i>20–25</i>	<i>2,140</i>	<i>1,610</i>
≥ 70	60.5	52.5	1,960	1,540	<b>71</b>	<b>62</b>	<i>0.5</i>	<i>2.0</i>	<i>20–25</i>	<i>1,960</i>	<i>1,540</i>
Pregnant				+300*		<b>+27</b>					+300
Lactating				+500		<b>+27</b>					+700

NOTE: Recommended Nutrient Intakes (RNI) are in **bold font**, while Adequate Intakes (AI) are in *italics*.

\*For 2<sup>nd</sup> and 3<sup>rd</sup> trimesters only



### Recommended Nutrient Intakes per day (Minerals)

Life stage/ age group	Weight (kg)		Iron (mg)		Zinc (mg)		Selenium (µg)		Iodine (µg)		Calcium (mg)		Magnesium (mg)		Phosphorus (mg)		Fluoride (mg)		Electrolytes		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Sodium (mg)	Chloride (mg)	Potassium (mg)
Infants, mo																					
0–5	6.5	6.0	<i>0.4</i>	<i>0.4</i>	2.0	2.0	7	6	90	90	200	200	26	26	90	90	0.01	0.01	120	180	500
6–11	9.0	8.0	<b>10</b>	<b>9</b>	4.2	3.7	10	9	90	90	400	400	50	50	275	275	0.5	0.4	200	300	700
Children, y																					
1–2	12.0	11.5	<b>8</b>	<b>8</b>	4.1	4.0	17	16	90	90	500	500	60	60	460	460	0.6	0.6	225	350	1,000
3–5	17.5	17.0	<b>9</b>	<b>9</b>	5.0	4.8	20	20	90	90	550	550	70	70	500	500	0.9	0.9	300	500	1,400
6–9	23.0	22.5	<b>10</b>	<b>9</b>	5.1	5.0	20	19	120	120	700	700	90	90	500	500	1.2	1.1	400	600	1,600
10–12	33.0	36.0	<b>12</b>	<b>20</b>	6.6	6.1	21	23	120	120	1,000	1,000	150	160	1,250	1,250	1.7	1.8	500	750	2,000
13–15	48.5	46.0	<b>19</b>	<b>(28)</b>	9.2	7.4	30	29	150	150	1,000	1,000	220	210	1,250	1,250	2.4	2.3	500	750	2,000
16–18	59.0	51.5	<b>14</b>	<b>(28)</b>	9.0	7.2	37	32	150	150	1,000	1,000	265	230	1,250	1,250	3.0	2.6	500	750	2,000
Adults, y																					
19–29	60.5	52.5	<b>12</b>	<b>(28)</b>	6.5	4.6	38	33	150	150	750	750	240	210	700	700	3.0	2.6	500	750	2,000
30–49	60.5	52.5	<b>12</b>	<b>(28)</b>	6.5	4.6	38	33	150	150	750	750	240	210	700	700	3.0	2.6	500	750	2,000
50–59	60.5	52.5	<b>12</b>	<b>10</b>	6.5	4.6	38	33	150	150	750	800	240	210	700	700	3.0	2.6	500	750	2,000
60–69	60.5	52.5	<b>12</b>	<b>10</b>	6.5	4.6	38	33	150	150	800	800	240	210	700	700	3.0	2.6	500	750	2,000
≥ 70	60.5	52.5	<b>12</b>	<b>10</b>	6.5	4.6	38	33	150	150	800	800	240	210	700	700	3.0	2.6	500	750	2,000
Pregnant				<b>(+10)</b>	<b>+5.1</b>		<b>+4</b>		<b>+100</b>		<b>+50*</b>		<b>+0</b>		<b>+0</b>		<b>+0</b>		-	-	-
Lactating				<b>+2</b>	<b>+7.0</b>		<b>+9</b>		<b>+100</b>		<b>+0</b>		<b>+50</b>		<b>+0</b>		<b>+0</b>		-	-	-

NOTE: Recommended Nutrient Intakes (RNI) are in **bold font**, while Adequate Intakes (AI) are in *italics*.

( ) Requirements cannot be met by usual diet alone. Intake of iron-rich and iron-fortified foods and the use of supplements are recommended, if necessary.

\*The calcium recommendation for pregnant women is for 3<sup>rd</sup> trimester only.

**Estimated Average Requirements per day**

Life stage/ age group	Protein (g)		Vitamin A <sup>a</sup> (µgRE)		Thiamin (mg)		Riboflavin (mg)		Niacin <sup>b</sup> (mg NE)		Vitamin B <sub>6</sub> (mg)		Vitamin B <sub>12</sub> (µg)		Folate <sup>c</sup> (µgDFE)		Vitamin C (mg)		Iron (mg)		Zinc (mg)		Selenium (µg)		Iodine (µg)		Calcium (mg)		Phosphorus (mg)		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Infants, mo																															
0–5	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	5.1	-	-	-	-	-	-
6–11	14	13	190	190	0.3	0.3	0.3	0.3	4	3	-	-	-	-	-	-	8.4	7.2	2.8	2.5	8.2	7.3	-	-	-	-	-	-	-	-	
Children, y																															
1–2	15	14	200	200	0.4	0.4	0.4	0.4	5	5	0.4	0.5	0.8	0.9	120	120	12	11	6.4	7.0	2.8	2.6	13.6	13.0	65	65	440	440	380	380	
3–5	18	17	226	214	0.5	0.4	0.5	0.4	5	5	0.5	0.5	0.9	1.0	160	160	17	17	7.5	7.4	3.3	3.2	16.1	15.6	65	65	440	440	405	405	
6–9	24	24	278	264	0.6	0.5	0.6	0.5	7	7	0.6	0.7	1.1	1.2	250	250	23	22	8.6	7.8	3.4	3.4	15.6	15.3	73	73	440	440	405	405	
10–12	35	38	364	375	0.7	0.8	0.8	0.8	9	10	0.8	1.0	1.5	1.7	250	250	33	36	10.2	16.5	4.4	4.1	16.5	18.0	73	73	440	440	1,055	1,055	
13–15	50	46	483	392	1.0	0.8	1.1	0.8	12	10	1.1	1.0	1.9	1.8	330	330	48	45	18.1	16.5	6.1	4.9	24.3	23.0	95	95	440	440	1,055	1,055	
16–18	59	49	563	427	1.1	0.9	1.2	0.9	14	11	1.2	1.1	2.3	2.0	330	330	58	51	12.1	16.2	6.0	4.8	29.5	25.8	95	95	440	440	1,055	1,055	
Adults, y																															
19–29	57	49	499	433	1.0	0.9	1.1	0.9	12	11	1.1	1.1	2.0	2.0	320	320	60	52	10.4	26.3	4.4	3.1	30.3	26.3	95	95	600	600	580	580	
30–49	57	49	499	433	1.0	0.9	1.1	0.9	12	11	1.1	1.1	2.0	2.0	320	320	60	52	10.4	26.3	4.4	3.1	30.3	26.3	95	95	600	600	580	580	
50–59	57	49	499	433	1.0	0.9	1.1	0.9	12	11	1.4	1.3	2.0	2.0	320	320	60	52	10.4	8.6	4.4	3.1	30.3	26.3	95	95	600	600	580	580	
60–69	57	49	499	433	1.0	0.9	1.1	0.9	12	11	1.4	1.3	2.0	2.0	320	320	60	52	10.4	8.6	4.4	3.1	30.3	26.3	95	95	600	600	580	580	
≥ 70	57	49	499	433	1.0	0.9	1.1	0.9	12	11	1.4	1.3	2.0	2.0	320	320	60	52	10.4	8.6	4.4	3.1	30.3	26.3	95	95	600	600	580	580	
Pregnant		72		-		1.2		1.4		14		1.6		2.2		520		-		31.7		-		30.3		160		-		580	
Lactating		72		-		1.1		1.3		13.4		1.7		2.4		450		-		28.2		-		35.3		209		-		580	

<sup>a</sup> 1 retinol equivalent (RE) = 1 µg retinol = 12 µg β-carotene or 24 µg other provitamin A carotenoids; 1 µg RE = 3.33 IU vitamin A

<sup>b</sup> As niacin equivalent (NE)

<sup>c</sup> 1 dietary folate equivalent (DFE) = 1 µg food folate = 0.6 µg folic acid from fortified foods or as supplement = 0.5 µg taken on an empty stomach

**Tolerable Upper Intake Levels or Upper Limits per day**

Life stage/ age group	Vitamin A <sup>a</sup> (µgRE)	Vitamin D (µg)	Vitamin E <sup>b</sup> (mg α-TE)	Niacin <sup>b</sup> (mgNE)	Vitamin B <sub>6</sub> (mg)	Folate <sup>b</sup> (µgDFE)	Vitamin C (mg)	Iron (mg)	Zinc (mg)	Selenium (µg)	Iodine (µg)	Calcium <sup>b</sup> (mg)	Magnesium <sup>b</sup> (mg)	Phosphorus (mg)	Fluoride (mg)
Infants, mo															
0-5	600	25	c	c	c	c	c	40	4	45	c	1,000	c	c	0.7
6-11	600	25	c	c	c	c	c	40	5	60	c	1,500	c	c	0.9
Children, y															
1-2	600	50	200	10	30	300	400	40	7	90	200	2,500	65	3,000	1.3
3	600	50	200	10	30	300	400	40	7	90	200	2,500	65	3,000	1.3
4-5	900	50	300	15	40	400	650	40	12	150	300	2,500	110	3,000	2.2
6-8	900	50	300	15	40	400	650	40	12	150	300	2,500	110	3,000	2.2
9	1,700	50	600	20	60	600	1200	40	23	280	600	3,000	350	4,000	10.0
10-12	1,700	50	600	20	60	600	1200	40	23	280	600	3,000	350	4,000	10.0
13	1,700	50	600	20	60	600	1200	40	23	280	600	3,000	350	4,000	10.0
14-15	2,800	50	800	30	80	800	1800	45	34	400	900	3,000	350	4,000	10.0
16-18	2,800	50	800	30	80	800	1800	45	34	400	900	3,000	350	4,000	10.0
Adults, y															
19-29	3,000	50	1,000 <sup>d</sup>	35	100	1,000	1000	45	45	400	1,100	3,000	350	4,000	10.0
30-49	3,000	50	1,000 <sup>d</sup>	35	100	1,000	1000	45	45	400	1,100	3,000	350	4,000	10.0
50-59	3,000	50	1,000 <sup>d</sup>	35	100	1,000	1000	45	45	400	1,100	3,000	350	4,000	10.0
60-70	3,000	50	1,000 <sup>d</sup>	35	100	1,000	1000	45	45	400	1,100	3,000	350	4,000	10.0
>70	3,000	50	1,000 <sup>d</sup>	35	100	1,000	1000	45	45	400	1,100	2,000	350	3,000	10.0
Pregnant/Lactating, y															
14-18	2,800	50	800	35	80	800	1800	45	34	400	900	3,000	350	e	10.0
≥ 19	3,000	50	1,000 <sup>d</sup>	35	100	1,000	2000	45	40	400	1,100	2,500	350	e	10.0

NOTE: Adapted from *WHO/FAO Guidelines on Food Fortification with Micronutrients* (WHO/FAO, 2006); however, WHO/FAO have only recommended ULs for vitamins A, niacin, B<sub>6</sub>, C, D and E, calcium, selenium and zinc for adults. The remaining values are those recommended by IOM-FNB.

<sup>a</sup> As preformed vitamin A only; 1 µg RE = 3.33 IU vitamin A

<sup>b</sup> The ULs for vitamin E, niacin, folate and calcium apply to synthetic forms obtained from supplements and/or fortified foods; for magnesium, the UL applies to pharmacologic agent and does not include intake from food and water.

<sup>c</sup> Not possible to establish due to lack of data of adverse effects in this age group; source of intake should be from food only to prevent high levels of intake.

<sup>d</sup> More recent evidences suggested lower ULs: <1000 mg/d α-TE (Horwitt, 2001); 300 mg/d α-TE (NHMRC, 2005; EFSA, 2006).

<sup>e</sup> UL for phosphorus for pregnant and lactating women 14-50 years were 3,500 and 4,000 mg, respectively.

### Additional Recommendations

Dietary Component	Recommendation
Free sugars	Limit intake to <10% of total energy in children and adults <sup>a</sup>
Sodium	Limit intake to <2 g in adults <sup>b,d</sup>
Potassium	Increase intake to 3,510 mg in adults <sup>c,d</sup>

Sources:

<sup>a</sup> WHO Guideline on Sugars Intake for Adults and Children (2015); free sugars refer to all monosaccharides and disaccharides added to foods and drinks by the manufacturer, cook or consumer, including sugars naturally present in honey, syrups, fruit juices and fruit concentrates

<sup>b</sup> WHO Guideline on Sodium Intake for Adults and Children (2012)

<sup>c</sup> WHO Guideline on Potassium Intake for Adults and Children (2012)

<sup>d</sup> The recommendation for children is extrapolated from adults based on energy requirement:

$$\text{Recommendation for children} = \text{Recommendation for adults} \times \left( \frac{\text{Recommended Energy Intake}_{\text{children}}}{\text{Recommended Energy Intake}_{\text{adults}}} \right)$$