

Supplementary Table S1: Consumption of vD supplements (IU/day). Values are means and ranges

Age period (months)	Vitamin D supplementation (IU/day)			
	200	400	600	800
1 - 2	219	406	595	800
	46-282	188 -630	372-1,033	98-1,297
2 - 4	219	388	554	766
	65-285	183-489	343-693	414-1,612
4 – 5.5	230	427	563	786
	85-341	306-530	285-888	394-1,140
5.5 – 7.5	222	406	560	817
	58-289	237-552	215-715	495-1,065
7.5 - 9	231	405	572	785
	120-300	119-857	0-761	339-1,086

Supplementary Table S2: Number of low 25(HO)D levels by supplement dose and age

Age (mo)	25(HO)D level (nmol/L)	Vitamin D supplement (IU/day)				
		200	400	600	800	
2	<12.5	0	0	0	0	24
	12.5 - 29.9	3	2	1	0	
	30 - 49.9	10	2	3	3	
4	<12.5	0	0	0	0	16
	12.5 - 29.9	2	3	0	0	
	30 - 49.9	3	5	1	2	
5.5	<12.5	1	2	0	0	12
	12.5 - 29.9	4	0	1	0	
	30 - 49.9	0	3	1	0	
7.5	<12.5	0	1	0	0	5
	12.5 - 29.9	1	0	0	0	
	30 - 49.9	1	0	2	0	
9	<12.5	0	0	0	0	3
	12.5 - 29.9	0	0	0	0	
	30 - 49.9	1	1	1	0	
12	<12.5	0	0	0	0	3
	12.5 - 29.9	0	0	0	0	
	30 - 49.9	1	1	1	0	
Total		27	20	11	5	63

Supplementary Table S3: Data for subjects with multiple deficient plasma 25(OH)D levels (8 females, 7 males; birth months June through November)

Subject	Dose <sup>a</sup>		Age (months)						
			1	2	4	5.5	7.5	9	12
17133	200	25(OH)D <sup>b</sup>	<i>16.2</i>	<i>43.0</i>	70.2	80.0	57.0	<i>36.0</i>	107.8
		Intake <sup>c</sup>		174	136	197	167	227	
17143 <sup>d</sup>	200	25(OH)D	<i>31.0</i>	<i>48.8</i>	53.0	<i>23.5</i>	<i>33.2</i>	90.83	95.0
		Intake		212	212	256	227	228	
17165	200	25(OH)D	<i>18.2</i>	<i>13.5</i>	<i>16.2</i>	<i>7.8</i>	62.0	71.8	79.8
		Intake		246	285	221	205	249	
17169	200	25(OH)D	<i>15.5</i>	<i>42.2</i>	<i>31.8</i>	<i>25.2</i>	79.5	65.5	64.2
		Intake		196	268	224	230	235	
17201 <sup>e</sup>	200	25(OH)D	<i>26.0</i>	<i>44.8</i>	<i>32.0</i>	<i>17.8</i>	<i>29.5</i>		
		Intake		46	38	181			
17277	200	25(OH)D	<i>26.0</i>	56.8	<i>25.8</i>	<i>12.5</i>	61.2	104.8	84.0
		Intake		260	311	280	268	263	
17911	200	25(OH)D	<i>9.8</i>	<i>48.0</i>	<i>44.2</i>	81.5	110.2	99.5	
		Intake		172	305	235	157		
17194	400	25(OH)D	<i>23.5</i>	60.8	<i>23.0</i>	<i>12.0</i>	<i>7.0</i>	<b>56.8</b>	<b>53.0</b>
		Intake		326	400	444	573	2000 <sup>f</sup>	2000 <sup>f</sup>
17215	400	25(OH)D	54.5	64.2	<i>16.8</i>	<i>11.8</i>	<b>67.0</b>	-	-
		Intake		364	371	428	2000 <sup>f</sup>		
17916	400	25(OH)D	<i>27.8</i>	<i>37.0</i>	<i>24.0</i>	<i>42.2</i>	-	-	-
		Intake		629		505			
17931	400	25(OH)D	<i>48.5</i>	<i>27.0</i>	<i>48.5</i>	<i>32.8</i>	68.0	60.5	87.2
		Intake		345	203	778	268	333	
17950	400	25(OH)D	<i>44.5</i>	<i>42.2</i>	<i>47.2</i>	<i>43.0</i>	51.5	71.5	73.0
		Intake		428	397	414	378	357	
17144	600	25(OH)D	<i>33.0</i>	67.0	<i>45.0</i>	<i>23.2</i>	<i>42.5</i>		85.5
		Intake		418	483	668	610	285	
17173	600	25(OH)D	<i>35.8</i>	53.0	59.8	<i>48.5</i>	<i>43.2</i>	38.5	
		Intake		601	570	539	504		
17280	800	25(OH)D	<i>38.8</i>	<i>40.2</i>	<i>47.8</i>	50.0	98.2	121.8	72.0
		Intake		738	830	1229	903	889	

<sup>a</sup> dose of vitamin D supplement in IU/d

<sup>b</sup> plasma concentration in nmol/L; low (<50 nmol/L) values *in italics*, values after therapeutic intervention in **bold**

<sup>c</sup> actual intake of supplemental vitamin D in IU/d

<sup>d</sup> subject with dark skin pigmentation

<sup>e</sup> parents indicated study drops not given regularly

<sup>f</sup> therapeutic dose recommended (IU/d)