



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Intake of vitamin D containing supplements

Results from DNFCs 2007-2010

Colofon

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This investigation has been performed by order of the Health Council

Introduction

The Health council is evaluating the guidelines for Vitamin D. Therefore The Health Council has asked for additional analyses based on the Dutch National Food Consumption Survey 2007-2010. In this memo the following results are given:

- Table 1. The number of **users of vitamin D containing dietary supplements** by each age-gender group.
- Table 2. the **mean and intake distribution of the habitual intake** of vitamin D from foods
- Table 3. The **mean and intake distribution of the habitual intake** of vitamin D from foods and dietary supplements

Based on the two means, also the mean intake of vitamin D from dietary supplements was calculated.

Information on the study design and methods can be found in the previous report on the DFCNS 2007-2010 [1]. All new results are highlighted.



Table 1a Intake of Vitamin D containing dietary supplements by the Dutch population aged 7 to 18 years (DNFCS 2007-2010), weighted for socio-demographic factors and season

	7-8 years		9-13 years				14-18 years			
	Total (n=304)		Male (n=351)		Female (n=352)		Male (n=352)		Female (n=354)	
	W %	R %	W %	R %	W %	R %	W %	R %	W %	R %
Overall supplement use	48	27	41	27	39	21	26	17	34	23
Vitamin A/D	4	2	4	2	3	2	3	3	4	3
Vitamin D	3	1	4	3	3	1	4	2	6	5
Multi vitamins	10	6	9	5	6	4	6	3	7	5
Multi vitamins/minerals	30	18	24	15	26	13	12	9	19	13
Vitamin D containing dietary supplements	41	24	32	21	33	17	18	13	24	16
Vitamin D containing dietary supplements (W or R)	42		33		33		19		26	
Vitamin D containing dietary supplements (W and R)	23		19		17		12		15	

W=%users of specific supplements during winter

R=% users of specific supplements during the rest of the year

Table 1b Intake of Vitamin D containing dietary supplements by the Dutch population aged 19 to 69 years (DNFCS 2007-2010), weighted for socio-demographic factors and season

	19-30 years				31-50 years				51-69 years			
	Male (n=356)		Female (n=347)		Male (n=348)		Female (n=351)		Male (n=352)		Female (n=354)	
	W	R	W	R	W	R	W	R	W	R	W	R
	%	%	%	%	%	%	%	%	% [#]	%	% [#]	%
Overalls upplement use	29	18 [#]	47	36 [#]	36	27	54	41	36	27	49	37
Vitamin A	6	3	5	4	2	2	3	1	3	3	2	2
Vitamin AD	5	2	5	4	3	2	3	2	4	3	4	4
Vitamin D	6	3	7	5	3	2	4	3	6	5	6	4
Multivitamins	8	3	9	5	6	3	7	5	6	5	5	3
Multivitamins/minerals	20	13	31	23	26	20	39	30	23	16	30	23
Vitamin D containing dietary supplements	23	14	39	27	28	21	44	34	27	19	37	28
Vitamin D containing dietary supplements (W or R)	23		41		29		45		27		39	
Vitamin D containing dietary supplements (W and R)	14		25		20		32		18		26	

W=%users of specific supplements during winter

R=% users of specific supplements during the rest of the year

[#] = Information on supplement use missing for 1 person

Table 2 Habitual intake distribution of vitamin D from food sources only by the Dutch population aged 7 to 69 years (DNFCS 2007-2010), weighted for socio-demographic factors, season and day of the week

Vitamin D ($\mu\text{g}/\text{d}$)	7-8 year		9-13 year		14-18 year		19-30 year		31-50 year		51-69 year	
	Male (n=153)	Female (n=151)	Male (n=351)	Female (n=352)	Male (n=352)	Female (n=354)	Male (n=356)	Female (n=347)	Male (n=348)	Female (n=361)	Male (n=351)	Female (n=353)
Mean	2.5	2.4	2.9	2.6	3.3	2.6	3.6	2.7	4.0	3.0	4.3	3.4
P5	1.1	1.0	1.3	1.1	1.5	1.1	1.8	1.2	2.0	1.3	2.2	1.5
P25	1.7	1.7	2.0	1.7	2.4	1.8	2.7	1.9	3.0	2.1	3.2	2.4
P50	2.3	2.3	2.7	2.3	3.1	2.4	3.5	2.6	3.8	2.8	4.1	3.2
P75	3.0	3.0	3.5	3.1	4.0	3.2	4.4	3.4	4.9	3.7	5.1	4.1
P95	4.3	4.4	5.0	4.5	5.5	4.6	6.1	4.9	6.6	5.3	7.0	5.8
AI ($\mu\text{g}/\text{d}$) [†] (GR[2])	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5	5
Prevalence inadequate intake	ns	ns	low	ns	low	ns	low	low/ns*	low	low	ns	ns
UL ($\mu\text{g}/\text{d}$) [†] (EFSA[3])	25	25	25	25	50	50	50	50	50	50	50	50
% with intake >UL	0	0	0	0	0	0	0	0	0	0	0	0
95% CI	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0

[†] 51-60 year AI = 5.0; 61-69 year AI=7.5; 9-11 year UL=25; 12-13 year UL=50

* 19-20 year ns; 21-30 year low

Table 3 Habitual intake distribution of vitamin D from foods and dietary supplements by the Dutch population aged 7 to 69 years (DNFCS 2007-2010), weighted for socio-demographic factors, season and day of week

Vitamin D ($\mu\text{g}/\text{d}$)	7-8 year		9-13 year		14-18 year		19-30 year		31-50 year		51-69 year	
	Male (n=153)	Female (n=151)	Male (n=351)	Female (n=352)	Male (n=352)	Female (n=354)	Male (n=356)	Female (n=347)	Male (n=348)	Female (n=361)	Male (n=351)	Female (n=353)
Mean	3.1	2.8	3.4	2.8	3.5	2.8	3.9	3.3	4.5	3.8	4.8	4.4
Mean (supplements)	0.6	0.4	0.5	0.2	0.2	0.2	0.3	0.6	0.5	0.8	0.5	1.0
P5	1.2	1.1	1.4	1.1	1.6	1.2	1.8	1.3	2.1	1.5	2.3	1.7
P25	2.0	1.8	2.3	1.8	2.5	1.9	2.8	2.1	3.2	2.4	3.4	2.7
P50	2.8	2.5	3.0	2.5	3.3	2.6	3.7	2.9	4.2	3.3	4.4	3.8
P75	3.9	3.5	4.1	3.4	4.2	3.4	4.7	4.0	5.5	4.7	5.7	5.4
P95	6.4	5.8	6.2	5.5	6.1	5.3	6.7	6.4	8.0	7.9	8.4	8.7
AI ($\mu\text{g}/\text{d}$) [†] (GR[2])	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5	5
prevalence inadequate intake	low	low/ns*	low	low/ns*	low	low/ns*	low	low	low	low	ns	ns
UL ($\mu\text{g}/\text{d}$) [†] (EFSA[3])	25	25	25	25	50	50	50	50	50	50	50	50
% with intake >UL	0	0	0	0	0	0	0	0	0	0	0	0
95% CI	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0

[†] 51-60 year AI=5.0; 61-69 year AI=7.5; 9-11 year UL=25; 12-13 year UL=50

* 7, 12-14 year low; 8, 15-18 year ns

References

1. Van Rossum, C.T.M., et al., *Dutch National Food Consumption Survey 2007-2010 : Diet of children and adults aged 7 to 69 years*. 2011, RIVM: Bilthoven.
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3. European Food Safety Authority, *Tolerable upper intake levels for vitamins and minerals*. 2006.