

**Supplementary Table S1.** Patterns of observed food consumption related to vitamin D diet: comparison of true consumers with the use of FPQ data and 24-h dietary recalls

Food categories	Adolescents (10–17 Years Old)		Adults (18–64 Years Old)		Elderly (65–74 Years Old)	
	True consumers FPQ (%)	Consumers in 24 h dietary recalls (%)	True consumers FPQ (%)	Consumers in 24 h dietary recalls (%)	True consumers FPQ (%)	Consumers in 24 h dietary recalls (%)
Sea fish	75.8	65.4	80.8	72.8	73.8	68.8
Beef, veal and pork meat	91.5	98.3	95.3	96.4	96.6	99.3
Fish cans and pate	73.1	67.5	75.6	66.8	72.1	71.4
Sweetened flakes	68.2	69.4	24.2	22.5	8.17	1.20
Sausages, hot dogs and meat pate	94.2	95.3	86.3	87.9	88.9	90.9
Cheese and cheese spreads	88.9	95.5	91.5	94.0	90.1	91.4
Chicken meat	98.1	98.3	96.4	97.0	97.8	98.3
Milk	92.7	96.6	82.7	85.7	83.7	87.5
Mushrooms	57.7	64.7	77.2	79.4	79.6	73.8
Cakes and rolls	89.5	84.0	80.8	58.0	73.0	46.4
Milk ice-cream and milk pudding	93.8	80.6	75.8	37.1	63.5	7.69
Butter	85.3	85.9	82.1	85.4	83.9	86.3
Biscuits and wafers	94.2	90.4	81.3	82.1	72.8	72.8
Margarine	54.0	65.8	53.2	53.0	45.2	48.6
Croissants and similar products	90.8	92.1	82.9	51.7	80.1	0.0
Pasta	99.2	94.7	96.7	98.4	96.9	95.2
Soya drinks	12.2	7.26	7.42	3.57	4.81	1.92
Soft and hard yogurts and curd cheese	90.8	92.1	92.0	91.8	90.4	90.1
Ready and half-ready meals	55.3	51.9	47.3	46.4	28.7	0.00
Eggs*		98.5		100		100
Pancakes*		99.8		87.9		97.1
Lard and cracklings	57.9	41.0	71.2	45.9	78.1	31.7
Probiotic yogurts and other probiotic products	44.6	39.7	48.6	34.3	28.7	28.2
Drinks with added milk*		25.4		77.5		70.0
Rise and other plant-based drinks	13.7	3.63	11.3	0.55	5.5	0
White and halfwhite bread	95.3	70.7	84.9	15.9	76.7	27.6
Mixed and whole wheat bread	85.5	50.2	88.5	0.00	89.7	0.00
Milk (cream)*		94.7		86.8		97.6

Notes: FPQ: food propensity questionnaire. \*Food groups for which FPQ data were not collected.

**Supplementary Table S2.** Patterns of observed FPQ food consumption related to vitamin D diet in subjects with intakes lower and higher than 2.5 µg vitamin D per day

FFQ categories	Proportions of food consumers based on FPQ data; % (95% CI)								
	Adolescents (10-17)			Adults (18-64)			Elderly (65-74)		
	All	<2.5 µg/day	>2.5 µg/day	All	<2.5 µg/day	>2.5 µg/day	All	<2.5 µg/day	>2.5 µg/day
Sea fish	78.5 (73.5-82.8)	72.7 (65.7-78.7)	85.6 (78.5-90.6)	83.1 (78.6-86.7)	74.5 (67.0-80.8)	90.3 (84.9-93.9)	78.8 (73.0-83.6)	72.3 (62.8-80.0)	89.0 (82.8-93.1)
Beef, veal, and pork meat	92.8 (89.9-94.9)	89.6 (85.0-92.9)	96.7 (93.1-98.4)	95.1 (92.2-97.0)	92.8 (87.6-95.9)	97.1 (92.8-98.8)	97.4 (95.4-98.5)	96.3 (93.1-98.1)	99.0 (96.2-99.8)
Fish cans and pate	75.4 (65.0-80.1)	71.6 (64.5-77.7)	80.0 (71.4-86.5)	77.9 (73.0-82.2)	69.9 (61.9-76.8)	84.7 (78.5-89.4)	71.5 (62.79-79.0)	65.7 (54.8-75.2)	80.7 (59.1-92.3)
Sweetened flakes	70.9 (65.2-76.1)	63.9 (56.2-71.1)	79.5 (71.1-85.9)	25.6 (20.8-31.1)	24.8 (18.2-32.8)	26.3 (19.8-34.2)	7.6 (4.9-11.9)	9.9 (5.6-16.8)	4.1 (2.0-8.1)
Sausages, hot dogs, and meat pate	94.6 (91.4-96.7)	96.5 (93.7-98.1)	92.2 (85.5-96.0)	85.9(81.5-89.3)	79.6 (72.1-85.4)	91.2 (85.7-94.7)	89.7 (85.6-92.7)	86.5 (80.1-91.1)	94.6 (89.3-97.3)
Cheese and cheese spreads	86.5 (78.4-91.9)	83.8 (70.1-91.9)	89.9 (82.5-94.4)	90.9 (86.6-93.9)	88.2 (81.7-92.6)	93.2 (86.5-96.7)	91.5 (87.9-94.2)	88.0 (82.0-92.3)	97.0 (93.3-98.7)
Chicken meat	98.2 (96.4-99.1)	97.9 (95.0-99.2)	98.5 (95.8-99.5)	96.9 (93.8-97.9)	95.3 (90.7-97.7)	97.3 (93.6-98.9)	97.1 (92.4-99.0)	95.6 (87.9-98.5)	99.6 (97.0-99.9)
Milk	94.3 (91.2-96.2)	94.1 (90.4-96.4)	94.6 (89.9-97.2)	84.4 (79.9-88.0)	80.3 (73.0-86.1)	87.7 (82.0-91.8)	75.2 (60.4-85.8)	71.8 (51.4-86.0)	80.6 (59.2-92.2)
Mushrooms	57.3 (50.0-64.4)	49.1 (40.5-57.6)	67.5 (57.2-76.3)	76.4 (71.0-81.1)	73.2 (64.1-80.1)	79.2 (71.9-85.0)	73.3 (60.0-83.4)	69.0 (50.0-83.2)	80.0 (66.8-88.8)
Cakes and rolls	89.8 (85.9-92.7)	89.9 (85.2-93.2)	89.8 (82.6-94.2)	81.2 (76.4-85.2)	75.6 (67.7-82.0)	85.9 (79.8-90.4)	68.3 (55.5-78.9)	66.7 (48.6-80.9)	70.9 (53.7-83.7)
Milk ice-cream and milk pudding	95.3 (93.1-96.7)	94.4 (91.0-96.6)	96.5 (93.3-98.2)	77.7 (72.7-82.0)	71.0 (63.0-78.0)	83.3 (77.2-88.1)	58.2 (47.2-68.5)	58.0 (42.8-71.8)	58.6 (43.5-72.2)
Butter	84.4 (79.4-88.4)	82.8 (75.9-88.0)	86.5 (78.3-91.9)	82.3 (77.6-86.2)	78.6 (71.0-84.7)	85.4 (79.2-90.0)	87.2 (82.9-90.6)	85.0 (78.5-89.8)	90.6 (84.4-94.5)
Biscuits and wafers	95.2 (92.9-96.8)	94.5 (91.0-96.8)	96.1 (92.4-98.0)	82.1 (77.3-86.0)	77.6 (69.9-83.7)	85.9 (79.6-90.4)	77.1 (71.0-82.2)	75.7 (67.0-82.7)	79.3 (70.6-85.9)
Margarine	53.6 (46.3-60.8)	50.9 (42.2-59.6)	56.9 (45.4-67.8)	48.3 (42.5-54.1)	44.8 (36.7-53.3)	51.2 (43.2-59.1)	41.8 (33.4-50.6)	43.8 (32.1-56.3)	38.5 (28.0-50.2)
Croissants and similar products	90.2 (85.8-93.4)	89.1 (82.6-93.3)	91.6 (84.7-95.6)	84.4 (80.0-88.0)	78.2 (70.8-84.2)	89.6 (84.1-93.4)	83.8 (78.9-87.8)	81.3 (73.8-87.0)	87.9 (81.1-92.4)
Pasta	99.4 (98.4-99.8)	99.6 (98.2-99.9)	99.3 (96.2-99.9)	96.6 (93.6-98.2)	96.3 (90.9-98.6)	96.8 (92.7-98.6)	97.4 (95.2-98.6)	97.1 (94.0-98.6)	97.8 (93.5-99.3)
Soya drinks	11.8 (8.5-16.1)	12.4 (7.9-18.9)	11.13 (6.95-17.4)	7.5 (4.97-.11.1)	7.04 (3.68-13.1)	7.85 (4.6-13.0)	4.07 (2.47-6.63)	2.70 (1.22-5.86)	6.21 (3.28-11.5)
Soft and hard yogurts and curd cheese	91.2 (87.8-93.8)	90.2 (85.5-93.4)	92.5 (86.6-95.9)	92.6 (89.2-94.9)	88.5 (82.5-92.7)	96.0 (91.8-98.1)	93.6 (90.7-95.6)	93.5 (89.8-95.9)	93.6 (88.0-96.7)
Ready and half-ready meals	56.2 (48.9-63.2)	51.4 (42.6-60.1)	62.0 (51.1-71.8)	49.8 (44.0-55.6)	44.1 (35.8-52.8)	54.7 (46.7-62.5)	30.1 (23.1-38.2)	27.9 (19.5-38.2)	33.6 (22.7-46.7)

Notes: FPQ: food propensity questionnaire