

Supplemental tables

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Table S1. Population characteristics for 4,313 Dutch participants aged 1-79 y derived from the Dutch National Food Consumption Survey 2012-2016.^a

	Total population (n=4,313)		Children, 1-8y (n=1,192)		Children, 9-18y (n=1,043)		Men, 19-79y (n=1,043)		Women, 19-79 (n=1,035)	
Characteristics	N, mean	(%),SD	N, mean	(%),SD	N, mean	(%),SD	N, mean	(%),SD	N, mean	(%),SD
Gender										
Male	2165	(50)	593	(50)	529	(51)	1043	(100)	0	0
Female	2148	(50)	599	(50)	514	(49)	0	0	1035	(100)
Age (y)	40	21	5	1	13	2	48	21	48	21
DHD15							51.8	22.4	64.2	23.6
BMI ^b										
Underweight	226	(5)	92	(8)	105	(10)	13	(1)	16	(2)
Normal weight	2414	(56)	973	(82)	751	(72)	354	(34)	336	(32)
Overweight	793	(18)	98	(8)	155	(15)	293	(28)	247	(24)
Obese	361	(8)	26	(2)	32	(3)	124	(12)	179	(17)
Level of education ^c										
Low	809	19	73	(6)	137	(13)	241	(23)	358	(35)
Moderate	1607	37	387	(32)	432	(41)	406	(39)	382	(37)
High	1888	44	732	(61)	468	(45)	395	(38)	293	(28)
Degree of urbanization										
Extremely, strongly	1996	(46)	543	(46)	475	(46)	494	(47)	484	(47)
Moderately	871	(20)	255	(21)	204	(20)	200	(19)	212	(20)
Hardly, not	1446	(34)	394	(33)	364	(35)	349	(33)	339	(33)
Region										
West	1931	(45)	542	(45)	481	(46)	454	(44)	454	(44)
North	459	(11)	129	(11)	112	(11)	109	(10)	109	(11)
East	949	(22)	261	(22)	223	(21)	235	(23)	230	(22)
South	974	(23)	260	(22)	227	(22)	245	(23)	242	(23)
Smoking ^d										
Yes	413	(10)					206	(20)	207	(20)
No	1654	(38)					831	(80)	823	(80)

SD, standard deviation; DHD15, Dutch healthy diet index 2015; BMI, body mass index

^areported values weighted for demographic properties, season and combination of both consumption days.

^b,BMI not obtained for adults ≥ 71 y ^cmissing data for 9 participants, ^dmissing data for 11 participants

Table S2. Categorization and shortened names for 16 main groups and 9 aggregated groups for analysis adapted from GloboDiet.

Main groups	Aggregated groups	GloboDiet groups
Animal based foods		
Meat total	Meat, fish and eggs	'07' Meat and meat products (excl. '07-06' meat replacers)
Red processed meat	Meat, fish and eggs	'07-04' Meat products and processed meat and 'red' ^a
Red unprocessed meat	Meat, fish and eggs	'07-00' Meat miscellaneous; '07-01' Fresh meat; '07-03' Game and '07-05' Oval meat
White processed meat	Meat, fish and eggs	'07-04' Meat products and processed meat and 'white' ¹
White unprocessed meat	Meat, fish and eggs	'07-02' Poultry
Dairy	Dairy and cheese	'05' Dairy (excl. '05-05' Cheese; '05-02' Dairy replacers and '05-07-02', '05-08-02' both non-dairy based products)
Dairy drinks	Dairy and cheese	'05-01' Dairy drinks
Cheese	Dairy and cheese	'05-05' Cheese
Fish	Meat, fish and eggs	'08' Fish, shellfish and amphibians
Eggs	Meat, fish and eggs	'09' Eggs and egg products
Plant-based foods		
Potatoes and cereals	Potatoes and cereals	'01' Potatoes and other tubers and '06' Cereals and cereal products
Vegetables	Vegetables, fruits and legumes	'02' Vegetables
Fruits	Vegetables, fruits and legumes	'04' Fruits, olives (excl. 04.02)
Nuts and seeds	Nuts and seeds	'04-02' Nuts, peanuts, seeds and nut spread
Legumes	Vegetables, fruits and legumes	'03' Legumes
Beverages		
Non-alcoholic beverages	Non-alcoholic beverages	'13' Non-alcoholic beverages
Soft drinks	Non-alcoholic beverages	'13-02' Lemonade, soft drinks
Coffee and tea	Non-alcoholic beverages	'13-03' Coffee, tea and herbal tea
Fruit and vegetable juice	Non-alcoholic beverages	'13-01' Fruit and vegetable juice
Water	Non-alcoholic beverages	'13-04' Water
Alcoholic beverages	Alcoholic beverages	'14' Alcoholic beverages
Miscellaneous		
Sugar, confectionery, cakes, biscuits and savoury	Miscellaneous	'11' Sugar and confectionery; '12' Cakes and sweet biscuits and '18' Savoury snacks.
Fats and oils	Fats and oils	'10' Fats and oils
Broth, sauces and	Miscellaneous	'15' Condiments, spices, sauces and yeast and '16'

condiments
Other

Miscellaneous

Soups and stocks
'17' Miscellaneous; '07-06' meat replacers; '05-02'
Dairy replacers and '05-07-02', '05-08-02' both
non-dairy based products

^a GloboDiet group '07-04' Processed meat was categorized as red or white meat. Poultry was considered as white meat, remaining meats were categorized as red meat.

Table S3. Spearman correlation coefficients for greenhouse gas emission and acidification, fresh water eutrophication, marine eutrophication, land use and water use for 242 foods with primary life cycle analysis data.

Environmental impact indicator	ρ^a	p-value
GHG emission (kg CO ₂ -eq/kg)	1.00	
Acidification (kg SO ₂ -eq/kg)	0.86	<0.0001
Fresh water eutrophication (kg P-eq/kg)	0.72	<0.0001
Marine eutrophication (kg N-eq/kg)	0.75	<0.0001
Land use (m ² * year/kg)	0.70	<0.0001
Water use (m ³ /kg)	0.51	<0.0001

GHG, greenhouse gas, CO₂-eq, carbon dioxide equivalents; SO₂-eq, sulfur dioxide; P, phosphor equivalents; N-eq, nitrogen equivalents;

^aCorrelations based on primary life cycle assessment data per kg foods

Table S4 Components and recommendations (threshold and cut-off) of the Dutch Healthy Diet index 2015 and their minimum and maximum scores.

Component	Dutch dietary guidelines 2015	Minimum score (0 points)	Maximum score (10 points)
Vegetables	Eat at least 200 g of vegetables daily	0 g/d	≥200 g/d
Fruit	Eat at least 200 g of fruit daily	0 g/d	≥200 g/d
Wholegrain products ^a	a.Eat at least 90 g of wholegrain products daily	0 g/d	≥90 g/d
	b.Replace refined cereal products by wholegrain products	No consumption of wholegrain products OR Ratio of wholegrains to refined grains ≤0.7	No consumption of refined products OR ratio of whole grains to refined grains ≥11
Legumes	Eat legumes daily	0 g/d	≥10 g/d
Nuts	Eat at least 15 g of unsalted nuts daily	0 g/d	≥15 g/d
Dairy ^b	Eat a few portions dairy products daily, including milk or yoghurt	0 g/d OR ≥ 750 g/d	300-450 g/d
Fish ^c	Eat one serving of fish weekly, preferably oily fish	0 g/d	≥15 g/d
Tea	Drink three cups of black or green tea daily	0 g/d	≥450 g/d
Fats and oils	Replace butter, hard margarines and cooking fats by soft margarines, liquid cooking fats and vegetable oils	No consumption of soft margarines, liquid cooking fats and vegetables oils OR ratio of liquid cooking fats to solid cooking ≤0.6	No consumption of butter, hard margarines and cooking fats OR ratio of liquid cooking fats to solid cooking fats ≥13
Coffee ^d	Replace unfiltered coffee by filtered coffee	Any consumption of unfiltered coffee	Consumption of only filtered coffee OR no coffee consumption
Red meat	Limit consumption of red meat	≥100 g/d	≤45 g/d
Processed meat	Limit consumption of processed meat	≥50 g/d	0 g/d
Sweetened beverages and fruit juices	Limit consumption of sweetened beverages and fruit juices	≥250 g/d	0 g/d
Alcohol	If alcohol is consumed at all, intake should be limited to one Dutch unit (10 g ethanol) daily	Women ≥20 g ethanol/day Men ≥30 g ethanol /day	Women ≤10 g ethanol/d Men ≤10 g ethanol/d
Salt	Limit consumption of table salt to 6 g daily	≥3-8 g Na/d	≤1.9 g/d

^aThis component comprises two sub-components (a and b) and each sub-component has a maximum score of 5 points. ^bA maximum of 40 g cheese can be included.

^cA maximum of 4 g lean fish can be included. ^dNo information was gathered with regard to coffee consumption therefore this component is excluded. Source: Looman, M., Feskens, E. J., de Rijk, M., Meijboom, S., Biesbroek, S., Temme, E. H., ... & Geelen, A. (2017). Development and evaluation of the Dutch Healthy Diet index 2015. Public Health Nutrition, 1-11.

Table S5. Mean (standard deviation) food consumption per component of the Dutch Healthy Diet index 2015 for 2,078 Dutch men and women aged 19-79 y derived from the Dutch National Food Consumption Survey 2012-2016^a.

DHD15 component	Men, 19-79y (n=1,043)		Women, 19-79y (n=1,035)	
	Mean	SD	Mean	SD
Red meat (g/day)	96	90	64	66
Processed meat (g/day)	59	69	40	51
Dairy (g/day)	241	313	204	257
Cheese (g/day)	40	45	33	36
Fish (total) (g/day)	8	29	7	28
Fatty fish (g/day)	7	28	7	28
Lean fish (g/day)	1	2	1	2
Wholegrain products(g/day)	109	109	82	79
Refined grain products(g/day)	124	135	85	92
Vegetables (g/day)	142	119	147	136
Fruit(g/day)	100	147	125	171
Nuts (g/day)	3	15	3	12
Legumes (g/day)	5	26	5	29
Tea (g/day)	242	482	509	749
Sweetened beverages and fruit juices (g/day)	380	605	252	427
Alcohol(g/day)	17	29	6	16
Fat, solid(g/day)	16	20	11	13
Fat, liquid(g/day)	13	18	10	14
Sodium(mg/day)	2885	1296	2172	973

SD, standard deviation;DHD15, Dutch Healthy Diet index 2015.

^a reported values weighted for demographic properties, season and combination of both consumption days.

Table S6. Environmental impact of daily diets and nutritional aspects for total population (n=4,313) aged 1-79 y derived from the Dutch National Food Consumption Survey 2012-2016^a.

Environmental indicator	Mean	SD	P5	P25	P50	P75	P95
GHG emission (kg CO ₂ -eq/day)	4.96	1.99	2.37	3.63	4.69	5.94	8.35
Land use (m ² * year/day)	2.91	1.11	1.35	2.16	2.76	3.51	4.91
Water use (m ³ /day)	0.14	0.08	0.05	0.09	0.12	0.18	0.30
Acidification (kg SO ₂ -eq/day)	0.049	0.029	0.019	0.031	0.044	0.060	0.096
Marine eutrophication (kg N-eq/day)	0.0083	0.0051	0.0034	0.0053	0.0074	0.0101	0.0161
Fresh water eutrophication (kg P-eq/day)	0.0004	0.0002	0.0002	0.0003	0.0003	0.0004	0.0006
Nutritional aspects							
Quantity(g/day)	3053	989	1553	2370	2984	3630	4760
Energy(kcal/day)	2126	717	1167	1636	2015	2531	3435
Carbohydrates(g/day)	236	84	123	180	226	280	383
Fat(g/day)	84	36	37	59	79	104	148
Protein(g/day)	79	28	40	60	75	93	128
Animal protein(g/day)	48	22	18	33	45	60	88
Vegetable protein(g/day)	30	12	15	22	29	36	53
Fibre(g/d)	20	7	10	15	19	24	33

SD, standard deviation; P, percentile; GHG, greenhouse gas; CO₂-eq, carbon dioxide equivalents; SO₂-eq, sulfur dioxide ; N-eq, nitrogen equivalents; P, phosphor equivalents.

^a reported values weighted for demographic properties, season and combination of both consumption days