

Supplementary tables and figures

Supplementary Table 1. Composition of fat in various food items. (Fatty acids in %)

	Saturated fatty acids					MUFA (monounsatur.)			PUFA (polyunsaturated)					
	12:0		14:0	16:0	18:0	18:1		18:1t	18:2		18:3	20:4	20:5	22:6
	Total	Lauric	Myristic	Palmitic	Stearic	Total	(Oleic)*	Elaidic or Vaccenic	Total	(Linoleic)*	(ALA)†	ARA**	EPA	DHA
DAIRY & EGGS														
Butter, w/o salt	62,25	3,19	9,17	26,75	12,33	28,89	20,93	3,68	3,71	2,67	0,39	0,00	0,00	0,00
Cheese, Mozzarella (22,4% fat)	58,84	3,09	9,79	23,85	10,93	29,41	25,27 ¹		3,42	1,76 ²	1,66 ³	0,00	0,00	0,00
Cheese, cheddar (20,4% fat)	61,75	3,14	10,05	28,22	10,58	25,99	20,46	2,52	4,38	2,43	0,30	0,17	0,03	0,00
Goat milk (4,1% fat)	64,42	3,00	7,85	22,01	10,65	26,79	23,60 ¹		3,60	2,63 ²	0,97 ³	0,00	0,00	0,00
Low -fat milk (1,0% fat)	65,26	2,99	9,38	29,59	12,99	28,56	21,96	3,81	3,61	2,78	0,41	0,00	0,00	0,00
Whole milk (3,3% fat)	57,03	2,35	9,08	25,35	11,16	24,83	24,83 ¹		5,96	3,67 ²	2,29 ³	0,00	0,00	0,00
Eggs, hard-boiled	30,79	0,03	0,33	22,14	7,80	38,43	35,11 ¹		13,33	11,20 ²	0,33 ³	1,40	0,05	0,36
MEAT														
Beef brisket, cooked	37,53	0,07	3,26	23,11	10,94	46,81	42,03 ¹		2,61	2,17 ²	0,22 ³	0,22		
Chicken breast, cooked	31,29	0,16	0,60	22,21	7,44	38,23	32,52	0,28	24,10	18,27	0,76	2,68	0,13	0,22
Lard	39,20	0,20	1,30	23,80	13,50	45,10	41,20 ¹		11,20	10,20 ²	1,00 ³	0,00	0,00	0,00
Mutton tallow	47,30	0,00	3,80	21,50	19,50	40,60	37,60 ¹		7,80 ²	5,50 ³	2,30 ⁴	0,00	0,00	0,00
Pork bacon, baked	32,79	0,00	1,27	20,86	10,19	44,06	40,30 ¹		11,23	9,45	0,49	0,35	0,00	0,00
FISH														
Carp, raw	19,34	0,00	2,04	11,73	3,30	41,57	20,54 ¹		25,55	9,23 ²	4,82 ³	2,71	4,25	2,04
Herring (Atlantic), raw	22,57	0,13	6,13	14,97	1,21	41,33	16,77 ¹		23,60	1,44 ²	1,14 ³	0,66	7,84	9,54
Salmon (Atlantic), farmed, raw	22,73	0,00	4,14	13,99	3,69	28,09	20,23 ¹		28,96	6,71 ²	1,10	0,69	6,42	8,23
Sardine (Atlantic) & plant oil	13,35	0,00	1,68	8,67	3,00	33,79	18,73 ¹		44,96	30,94 ²	4,35 ³	0,00	4,13	4,45
Sardine (Pacific)&tomato sauce	25,34	0,00	6,72	16,63	2,33	46,10	17,70 ¹		20,20	1,18 ²	2,25 ³	2,84	5,09	8,27
Mackerel (Atlantic), cooked	23,45	0,12	4,85	15,30	3,05	39,28	16,44		24,12	1,58 ²	1,14 ³	1,32	6,46	10,09
Tuna, yellow fin, raw	35,10	0,20	1,84	21,63	9,18	23,67	16,33	0,61	30,00	1,22	0,41	3,06	2,45	17,96
PLANT SEEDS & OILS														
Almonds	7,62	0,00	0,01	6,18	1,41	63,20	62,68	0,00	24,69	24,68	0,01	0,00	0,00	0,00
Cocoa butter oil	59,70	0,00	0,10	25,40	33,20	32,90	32,60 ¹		3,00	2,80 ²	0,10 ³	0,00	0,00	0,00
Coconut oil	86,50	44,60	16,80	8,20	2,80	5,80	5,80 ¹		1,80	1,80 ²	0,00	0,00	0,00	0,00
Corn oil, all-purpose	12,95	0,00	0,02	10,58	1,85	27,58	27,33	0,00	54,68	53,23	1,16	0,00	0,00	0,00
Hazelnuts	7,35	0,00	0,00	5,10	2,08	75,14	74,74 ¹	0,00	13,04	12,89 ¹	0,14 ³	0,00	0,00	0,00
Margarine (corn & soybean oil)	18,82	0,00	0,06	10,45	7,65	48,17	30,34	17,58	30,11	26,67	2,42	0,00	0,00	0,00
Mustard oil	11,58		1,39	3,75	1,12	59,19	11,61 ¹		21,23	15,33 ²	5,90 ³			
Olive oil (salad or cooking)	13,81	0,00	0,00	11,29	1,95	72,96	71,27 ¹		10,52	9,76 ²	0,76 ³	0,00	0,00	0,00
Palm oil	49,30	0,10	1,00	43,50	4,30	37,00	36,60 ¹		9,30	9,10	0,20 ³	0,00	0,00	0,00
Poppy seeds	10,87	0,00	0,19	8,62	1,88	14,39	14,11	0,00	68,74	68,08 ²	0,66	0,00	0,00	0,00
Rape (canola) oil	7,37	0,00	0,00	4,30	2,09	63,28	61,71	0,03	28,14	18,64	9,14	0,00	0,00	0,00
Soybean oil	15,65	0,00	0,00	10,46	4,44	22,78	22,55	0,00	57,74	50,42	6,79	0,00	0,00	0,00
Sunflower oil, high-oleic	9,86	0,00	0,06	3,68	4,32	83,69	82,63 ¹		3,80	3,61 ²	0,19 ³	0,00	0,00	0,00
Sunflower oil, linoleic	10,30	0,00	0,00	5,90	4,50	19,50	19,50 ¹		65,70	65,70 ²	0,00	0,00	0,00	0,00
Walnuts, English	9,39	0,00	0,00	6,75	2,54	13,70	13,49 ¹		72,34	58,42 ²	13,92 ³	0,00	0,00	0,00

Notes: ALA = α -linolenic acid, EPA = eicosapentaenoic acid, DHA = docosahexaenoic acid.

*Includes this fatty acid, unless stated otherwise.

**Undifferentiated 20:4. Equals to arachidonic acid (ARA) (20:4, n-6) in animal fat.

¹Undifferentiated 18:1. May include vaccenic acid (18:1t, n-7) found in animal fat, or elaidic acid (18:1t, n-9) found in hydrogenated plant oils (margarines).

²Undifferentiated 18:2. May include rumenic acid (18:2t, n-7) found in animal fat.

³Undifferentiated 18:3. May include γ -linolenic acid (18:3, n-6) and some conjugated 18:3 fatty acids.

Source: After the USDA.gov database [41].

Supplementary Table 2. Glycaemic index and insulin index in selected foods. A comparison of 1000 kJ-portions, relative to glucose.

GLYCAEMIC INDEX		INSULIN INDEX	
Glucose	100	Glucose	100
Potatoes (boiled)	78	Potatoes (boiled)	88
„Whole-meal bread“ (Australia)	74	Baked beans	88
White rice	72	White bread	73
Brown rice	72	„Whole-meal bread“ (Australia)	70
White bread	70	Ice tea (Narkena Ltd.)	69
Beer (4.9% alcohol)	66	Black grapes	60
Pizza	60	Skim-fat milk (0.1%)	60
Ice tea (Narkena Ltd.)	59	Bananas	59
Coca-Cola	53	White rice	58
Bananas	52	Low-fat cottage cheese (2.3% fat)	52
Black grapes	50	Pizza	47
Spiral white pasta	46	Brown rice	45
„Grain bread“ (Australia)	36-50	Coca-Cola	44
Baked beans	44	Oranges	44
Oranges	42	Apples (Red delicious)	43
Lentils served with tomato sauce	37	Lentils served with tomato sauce	42
Apples (Red delicious)	36	„Grain bread“ (Australia)	41-52
Whole-fat milk (3.8%)	31	Beef steak	37
Low-fat milk (1.0%)	29	Low-fat milk (1.0%)	34
Skim-fat milk (0.1%)	29	Cheddar cheese (35.6% fat)	33
Hot-dog (sausage)	28	Spiral white pasta	29
Low-fat cottage cheese (2.3% fat)	0	Whole-fat milk (3.8%)	24
Beef steak	0	Eggs (poached)	23
Cheddar cheese (35.6% fat)	0	Beer (4.9% alcohol)	20
Eggs (poached)	0	Chicken (fried in olive oil)	19
Chicken (fried in olive oil)	0	Cream cheese (35.3% fat)	18
Cream cheese (35.3% fat)	0	Hot-dog (sausage)	16
Tuna (canned in oil)	0	Tuna (canned in oil)	16
Walnuts	0	Walnuts	5
Avocado	0	Avocado	4
Olive oil	0	Olive oil	3
White wine (11% alcohol)	0	White wine (11% alcohol)	3
Butter	0	Butter	2
Gin (40% alcohol)	0	Gin (40% alcohol)	1

Source: After Bao et al. [32].

Supplementary Table 3a. Raised blood pressure (Men): Parsimonious models of the ridge regression, LASSO regression and elastic net regression, computed by the bootstrapping method and sorted according to the absolute *beta* coefficients of the ridge regression and elastic net regression. In the ridge regression, all food items that reach a non-zero value in the elastic net regression are listed.

VARIABLES	Ridge		LASSO		VARIABLES	Elastic net	
	Beta	absolute	Beta	absolute		Beta	absolute
Vegetables total	-0,079	0,079	0	0	Total fat & Animal protein	-0,141	0,141
Raised cholesterol	-0,071	0,071	0	0	Total fat & Total protein	-0,114	0,114
% PC CARB energy	0,066	0,066	0	0	% CA energy	0,084	0,084
Cheese	-0,065	0,065	0	0	% PC CARB energy	0,068	0,068
Oilcrops total	-0,063	0,063	0	0	Tree nuts	-0,061	0,061
Health expenditure (1995-2008)	-0,058	0,058	0	0	Health expenditure (2008)	-0,060	0,060
Refined sugar	-0,057	0,057	0	0	Health expenditure (1995-2008)	-0,050	0,050
Plant fat	-0,053	0,053	0	0	Cheese	-0,035	0,035
Tree nuts	-0,052	0,052	0	0	Total fat	-0,027	0,027
Health expenditure (2008)	-0,052	0,052	0	0	Fruits total	-0,026	0,026
Rye	0,050	0,050	0	0	Plant fat	-0,020	0,020
Total fat & Animal protein	-0,049	0,049	-0,376	0,376	Oranges & Mandarins	-0,004	0,004
% CA energy	0,049	0,049	0	0			
Fruits total	-0,048	0,048	0	0			
Honey	-0,048	0,048	0	0			
Total fat & Total protein	-0,048	0,048	0	0			
Oranges & Mandarins	-0,046	0,046	0	0			
Cocoa beans	-0,044	0,044	0	0			
Distilled alcohol	0,043	0,043	0	0			
Lard	0,041	0,041	0	0			
Ref. sugar & Sweeteners total	-0,039	0,039	0	0			
Fish & Seafood	0,039	0,039	0	0			
Beer	0,038	0,038	0	0			
PC CARB energy	0,038	0,038	0	0			
Milk	0,037	0,037	0	0			
Sunflower oil	0,036	0,036	0	0			
Total energy	-0,036	0,036	0	0			
Poultry	-0,035	0,035	0	0			
Plant protein	-0,033	0,033	0	0			
Milk products (dairy) total	0,031	0,031	0	0			
CA energy	0,031	0,031	0	0			
Pork	0,030	0,030	0	0			
Total fat	-0,030	0,030	0	0			

Supplementary Table 3b. Raised blood pressure (Men): Results of the elastic net regression (a model with the lowest prediction error).

Model	Ridge Penalty	Lasso Penalty	Regularization "R Square" (1-Error)	Number of selected predictors	Standardized sum of beta-coefficients	Apparent prediction error	Expected prediction error		
							Estimate	Std. Error	N
548	1,000	0,740	0,796	14	0,216	0,204	0,383	0,116	41

VARIABLES	Beta	absolute
Total fat & Animal protein	-0,149	0,149
Total fat & Total protein	-0,126	0,126
% CA energy	0,098	0,098
Tree nuts	-0,096	0,096
% PC CARB energy	0,095	0,095
Health expenditure (2008)	-0,077	0,077
Cheese	-0,070	0,070
Health expenditure (1995-2008)	-0,064	0,064
Plant fat	-0,050	0,050
Fruits total	-0,048	0,048
Total fat	-0,034	0,034
Oranges & Mandarins	-0,033	0,033
Raised cholesterol	-0,013	0,013
Olive oil	-0,003	0,003

Supplementary Table 4a. Raised blood pressure (Women): Parsimonious models of the ridge regression, LASSO regression and elastic net regression, computed by the bootstrapping method and sorted according to the absolute *beta* coefficients of the ridge regression and elastic net regression. In the ridge regression, all food items that reach a non-zero value in the elastic net regression are listed.

VARIABLES	Ridge		LASSO		VARIABLES	Elastic net	
	Beta	absolute	Beta	absolute		Beta	absolute
Oranges & Mandarins	-0,055	0,055	-0,069	0,069	Health expenditure (1995-2008)	-0,184	0,184
Fish & Seafood fat	-0,049	0,049	0	0	Health expenditure (2008)	-0,164	0,164
Health expenditure (1995-2008)	-0,048	0,048	-0,470	0,470	Oranges & Mandarins	-0,136	0,136
Total protein	-0,048	0,048	-0,014	0,014	Total fat & Total protein	-0,103	0,103
Health expenditure (2008)	-0,041	0,041	-0,176	0,176	Total fat & Animal protein	-0,080	0,080
Meat protein	-0,040	0,040	0	0	% PC CARB energy	0,079	0,079
Animal protein	-0,038	0,038	0	0	Animal protein	-0,071	0,071
Total fat & Total protein	-0,037	0,037	0	0	Total fat	-0,069	0,069
Cheese	-0,036	0,036	0	0	% CA energy	0,049	0,049
% CA energy	0,034	0,034	0	0	Cheese	-0,044	0,044
% PC CARB energy	0,031	0,031	0,034	0,034	Meat protein	-0,037	0,037
Total fat & Animal protein	-0,029	0,029	-0,003	0,003	Total protein	-0,016	0,016
Total fat	-0,023	0,023	0	0	Fish & Seafood fat	-0,013	0,013
Fruits total	-0,020	0,020	0	0	Fruits total	-0,002	0,002

Supplementary Table 4b. Raised blood pressure (Women): Results of the elastic net regression (a model with the lowest prediction error).

Model	Ridge Penalty	Lasso Penalty	Regularization "R Square" (1-Error)	Number of selected predictors	Standardized sum of beta-coefficients	Apparent prediction error	Expected prediction error		
							Estimate	Std. Error	N
172	0,300	0,360	0,910	16	0,088	0,090	0,185	0,060	42

VARIABLES	Beta	absolute
Health expenditure (1995-2008)	-0,213	0,213
Health expenditure (2008)	-0,163	0,163
Oranges & Mandarins	-0,162	0,162
% PC CARB energy	0,083	0,083
Total fat & Total protein	-0,066	0,066
Total fat & Animal protein	-0,056	0,056
Cheese	-0,048	0,048
Animal protein	-0,045	0,045
Meat protein	-0,043	0,043
Total protein	-0,037	0,037
Fish & Seafood fat	-0,035	0,035
% CA energy	0,034	0,034
Total fat	-0,020	0,020
Oilcrops total	-0,016	0,016
Plant fat	-0,004	0,004
Refined sugar	-0,004	0,004

Supplementary Table 5a. Actual total CVD mortality (Men): Parsimonious models of the ridge regression, LASSO regression and elastic net regression, computed by the bootstrapping method and sorted according to the absolute *beta* coefficients of the ridge regression and elastic net regression. In the ridge regression, all food items that reach a non-zero value in the elastic net regression are listed.

VARIABLES	Ridge		LASSO		VARIABLES	Elastic net	
	Beta	absolute	Beta	absolute		Beta	absolute
Health expenditure (1995-2008)	-0,056	0,056	-0,064	0,064	Oranges & Mandarins	-0,150	0,150
Tree nuts	-0,056	0,056	0	0	Health expenditure (2008)	-0,144	0,144
Distilled beverages	0,054	0,054	0	0	Health expenditure (1995-2008)	-0,142	0,142
Olive oil	-0,054	0,054	0	0	Fruits total	-0,063	0,063
Health expenditure (2008)	-0,053	0,053	-0,293	0,293	Total fat	-0,055	0,055
Sunflower oil	0,051	0,051	0	0	Total fat & Animal protein	-0,035	0,035
Poultry	-0,051	0,051	0	0			
Oranges & Mandarins	-0,050	0,050	-0,235	0,235			
PC CARB energy	-0,049	0,049	0	0			
Cereals total	-0,048	0,048	0	0			
Raised cholesterol	-0,048	0,048	0	0			
% Plant food energy	-0,047	0,047	0	0			
Bananas	-0,046	0,046	0	0			
Total fat	-0,043	0,043	0	0			
Animal fat	0,042	0,042	0	0			
Soybean oil	-0,041	0,041	0	0			
Total fat & Animal protein	-0,040	0,040	0	0			
Fruits total	-0,039	0,039	0	0			

Supplementary Table 5b. Actual total CVD mortality (Men): Results of the elastic net regression (a model with the lowest prediction error).

Model	Ridge Penalty	Lasso Penalty	Regularization "R Square" (1-Error)	Number of selected predictors	Standardized sum of beta-coefficients	Apparent prediction error	Expected prediction error		
							Estimate	Std. Error	N
281	0,500	0,500	0,869	10	0,179	0,131	0,230	0,092	41

VARIABLES	Beta	absolute
Oranges & Mandarins	-0,193	0,193
Health expenditure (2008)	-0,173	0,173
Health expenditure (1995-2008)	-0,169	0,169
Total fat & Total protein	-0,120	0,120
Total fat	-0,085	0,085
Olive oil	-0,078	0,078
Fruits total	-0,076	0,076
Tree nuts	-0,069	0,069
% CA energy	0,026	0,026
Total energy	-0,012	0,012

Supplementary Table 6a. Actual total CVD mortality (Women): Parsimonious models of the ridge regression, LASSO regression and elastic net regression, computed by the bootstrapping method and sorted according to the absolute *beta* coefficients of the ridge regression and elastic net regression. In the ridge regression, all food items that reach a non-zero value in the elastic net regression are listed.

VARIABLES	Ridge		LASSO		VARIABLES	Elastic net	
	Beta	absolute	Beta	absolute		Beta	absolute
BMI (1990-2008)	0,101	0,101	0	0	Oranges & Mandarins	-0,143	0,143
Smoking (1990-2009)	-0,087	0,087	-0,079	0,079	Fruits total	-0,133	0,133
Grapes	-0,080	0,080	0	0	Smoking (1990-2009)	-0,127	0,127
Alcoholic beverages total	-0,078	0,078	0	0	BMI (1990-2008)	0,123	0,123
Eggs total	0,073	0,073	0	0	Alcoholic beverages total	-0,116	0,116
Coffee	-0,072	0,072	-0,027	0,027	Coffee	-0,114	0,114
Fruits total	-0,066	0,066	-0,044	0,044	Cheese	-0,092	0,092
Cheese	-0,064	0,064	0	0	Potatoes	0,072	0,072
Oranges & Mandarins	-0,063	0,063	-0,077	0,077	Total protein	-0,069	0,069
Wine	-0,063	0,063	0	0	Wine	-0,028	0,028
Cereals total	-0,061	0,061	0	0	Tree nuts	-0,006	0,006
Potatoes	0,059	0,059	0	0	Total fat	-0,006	0,006
Total protein	-0,059	0,059	0	0			
Fish & Seafood	0,054	0,054	0	0			
PC CARB energy	-0,052	0,052	0	0			
Tree nuts	-0,051	0,051	0	0			
Total energy	-0,051	0,051	0	0			
Honey	0,050	0,050	0	0			
Health expenditure (1995-2008)	-0,050	0,050	0	0			
Total fat	-0,049	0,049	0	0			

Supplementary Table 6b. Actual total CVD mortality (Women): Results of the elastic net regression (a model with the lowest prediction error).

Model	Ridge Penalty	Lasso Penalty	Regularization "R Square" (1-Error)	Number of selected predictors	Standardized sum of beta-coefficients	Apparent prediction error	Expected prediction error		
							Estimate	Std. Error	N
259	0,500	0,060	0,905	53	0,637	0,095	0,523	0,176	36

VARIABLES	Beta	absolute	VARIABLES	Beta	absolute
Smoking (1990-2009)	-0,174	0,174	Soybean oil	-0,044	0,044
BMI (1990-2008)	0,161	0,161	Rye	0,044	0,044
Alcoholic beverages total	-0,159	0,159	% CA energy	0,039	0,039
Cheese	-0,153	0,153	Onions	0,036	0,036
Coffee	-0,145	0,145	Beef & pork fat	0,036	0,036
Eggs total	0,144	0,144	Maize	-0,036	0,036
Potatoes	0,139	0,139	Edible offals	0,033	0,033
Grapes	-0,137	0,137	Plant protein	-0,031	0,031
Wine	-0,135	0,135	Refined sugar	0,030	0,030
Honey	0,114	0,114	% PC CARB energy	0,028	0,028
Total protein	-0,112	0,112	Distilled alcohol	0,027	0,027
Cereals total	-0,102	0,102	% Plant food energy	0,025	0,025
Total energy	-0,098	0,098	Dairy protein	0,025	0,025
Health expenditure (1995-2008)	-0,097	0,097	CA energy	0,024	0,024
Total fat	-0,096	0,096	Butter & Ghee	0,023	0,023
Fish & Seafood	0,094	0,094	Poultry	-0,019	0,019
Tree nuts	-0,090	0,090	Plant oils total	0,016	0,016
Fish & Seafood fat	0,077	0,077	Total fat & Animal protein	-0,014	0,014
Sunflower oil	0,071	0,071	Total fat & Total protein	-0,013	0,013
Health expenditure (2008)	-0,069	0,069	Wheat	-0,012	0,012
Legumes total	-0,064	0,064	Refined sugar&Sweeteners total	0,005	0,005
Beer	-0,062	0,062	Meat fat	0,004	0,004
Oilcrops total	0,059	0,059	Tomatoes	0,001	0,001
PC CARB energy	-0,057	0,057	Meat protein	-0,001	0,001
Pork	-0,056	0,056	Meat total	-0,001	0,001
Milk	0,048	0,048	Dairy fat	0,001	0,001
Lard	0,045	0,045			

Supplementary Table 7. Actual total CVD mortality in men: The first row displays results of the dependent t-test (standard deviations of the mean difference between pairs of r-values). The lower the number, the closer the temporal relationship between two trend lines. The second row displays results of the regression slope test (probability p-values expressing the similarity between linear slopes of two trend lines). The higher the p-value, the higher the probability that two linear trend lines are running parallel to each other. (See Figs. S23-S24)

	Health expenditure	TF & AP	Fruits	Bananas	Oranges & Mandarins	Wine	Coffee	Cheese	% CA energy	Cereals	Potatoes	Distilled beverages	Onions
Health exp.	-												
TF & AP	0.027 p=0.38	-											
Fruits	0.038 p=0.05	0.038 p=0.05	-										
Bananas	0.031 p=0.01	0.087 p=0.01	0.079 p=0.27	-									
Or & Mand.	0.071	0.090	0.060	0.070 p=0.14	-								
Wine	0.045	0.056	0.075	0.102	0.122	-							
Coffee	0.067	0.068	0.051 p=0.01	0.074 p=0.29	0.059 p=0.54	0.111	-						
Cheese	0.025	0.026 p=0.05	0.027 p=0.05	0.073	0.072	0.067	0.052	-					
%CA energy	0.021 p=0.12	0.049 p=0.87	0.052 p=0.01	0.060 p=0.01	0.084	0.047	0.075	0.043	-				
Cereals	0.065	0.078	0.100	0.129	0.148	0.033	0.135	0.093	0.076	-			
Potatoes	0.078	0.088	0.075	0.080 p=0.05	0.074 p=0.61	0.127	0.049 p=0.24	0.071	0.091	0.156	-		
Dist. bever.	0.092 p=0.48	0.072 p=0.75	0.100 p=0.18	0.135 p=0.06	0.150	0.096 p=0.21	0.109 p=0.01	0.089 p=0.12	0.104 r=0.69	0.107 p=0.03	0.122	-	
Onions	0.107	0.112	0.101	0.108 p=0.04	0.094 p=0.32	0.151	0.075 p=0.14	0.099	0.119	0.178	0.050 p=0.51	0.138	-
Sunfl. oil	0.097	0.109	0.084	0.096	0.060 p=0.03	0.151	0.063	0.091	0.113	0.179	0.048 p=0.09	0.148	0.069 p=0.60

Abbreviations: TF & AP = Total fat & Animal protein, Or & Mand = Oranges & Mandarins, % CA energy = % energy from carbohydrates and alcohol in the diet.

Supplementary Table 8. Actual total CVD mortality in women: The first row displays results of the dependent t-test (standard deviations of the mean difference between pairs of r-values). The lower the number, the closer the temporal relationship between two trend lines. The second row displays results of the regression slope test (probability p-values expressing the similarity between linear slopes of two trend lines). The higher the p-value, the higher the probability that two linear trend lines are running parallel to each other. (See Figs. 19-20)

	Health expenditure	TF & AP	Fruits	Bananas	Oranges & Mandarins	Wine	Coffee	Cheese	% CA energy	Cereals	Potatoes	Distilled beverages	Onions
Health exp.	-												
TF & AP	0.021 p=0.52	-											
Fruits	0.031 p=0.20	0.028 p=0.16	-										
Bananas	0.032	0.078	0.073 p=0.05	-									
Or & Mand.	0.062	0.079	0.061	0.062 p=0.41	-								
Wine	0.056	0.062	0.078	0.114	0.124	-							
Coffee	0.072	0.072	0.057	0.071 p=0.29	0.058 p=0.81	0.125	-						
Cheese	0.024	0.019	0.026 p=0.98	0.069	0.068	0.076	0.059	-					
% CA energy	0.015 p=0.18	0.036 p=0.99	0.040 p=0.09	0.062 p=0.09	0.071	0.060	0.076	0.037	-				
Cereals	0.053	0.063	0.078	0.120	0.127	0.020 p=0.90	0.126	0.077	0.065	-			
Potatoes	0.089	0.100	0.090	0.079 p=0.01	0.079 p=0.06	0.152	0.055 p=0.10	0.085	0.099	0.156	-		
Dist. bev.	0.070 p=0.37	0.056 p=0.53	0.070 p=0.18	0.113 p=0.02	0.122	0.080 p=0.03	0.097	0.066 p=0.08	0.079 p=0.51	0.082 p=0.03	0.124	-	
Onions	0.084	0.096	0.090	0.079 p=0.28	0.088 p=0.64	0.141	0.069 p=0.77	0.085	0.094	0.146	0.047 p=0.33	0.119	-
Sunflower oil	0.098	0.114	0.098	0.085	0.067	0.168	0.061	0.098	0.112	0.171	0.042 p=0.16	0.140	0.078 p=0.04

Abbreviations: TF & AP = Total fat & Animal protein, Or & Mand = Oranges & Mandarins, % CA energy = % energy from carbohydrates and alcohol in the diet.

Supplementary Table 9. Raised blood pressure in men: The first row displays results of the dependent t-test (standard deviations of the mean difference between pairs of r-values). The lower the number, the closer the temporal relationship between two trend lines. The second row displays results of the regression slope test (probability p-values expressing the similarity between linear slopes of two trend lines). The higher the p-value, the higher the probability that two linear trend lines are running parallel to each other. (see Figs. S25-S26)

	Health exp.	TF & AP	Fruits	Or & Mand.	Wine	Coffee	Cheese	Tree nuts	Cereals	Sunfl. oil	Distilled beverages	Onions	Potatoes
Health exp.	-												
TF & AP	0.011 p=0.04	-											
Fruits	0.044	0.069	-										
Or & Mand.	0.077	0.092	0.043 p=0.10	-									
Wine	0.093	0.098	0.158	0.184	-								
Coffee	0.057	0.061	0.063 p=0.35	0.070 p=0.02	0.147	-							
Cheese	0.025 p=0.93	0.028 p=0.20	0.064	0.085	0.110	0.060	-						
Tree nuts	0.044 p=0.33	0.045 p=0.76	0.065	0.093	0.104	0.086 p=0.01	0.040 p=0.29	-					
Cereals	0.070	0.070	0.127	0.155	0.048	0.113	0.080	0.083	-				
Sunfl. oil	0.048 p=0.09	0.044	0.071 p=0.05	0.080	0.129	0.061 p=0.36	0.058	0.075 p=0.06	0.102	-			
Dist. bev.	0.114 p=0.58	0.104 p=0.76	0.144 p=0.04	0.166 p=0.01	0.132	0.125 p=0.12	0.124 p=0.49	0.135 p=0.86	0.104 p=0.10	0.106 p=0.26	-		
Onions	0.070	0.077	0.068 p=0.87	0.075 p=0.15	0.159	0.076 p=0.56	0.085	0.091	0.128	0.063 p=0.17	0.124 p=0.07	-	
Potatoes	0.033 p=0.90	0.046 p=0.43	0.062	0.090	0.115	0.077 p=0.05	0.048 p=0.85	0.046 p=0.43	0.087	0.064 p=0.24	0.121 p=0.57	0.075 p=0.02	-
% CA energy	0.036	0.035 p=0.01	0.085	0.115	0.083	0.076	0.046	0.055 p=0.21	0.045	0.070	0.097 p=0.73	0.093	0.051 p=0.03

Abbreviations: TF & AP = Total fat & Animal protein, Or & Mand = Oranges & Mandarins, % CA energy = % energy from carbohydrates and alcohol in the diet.

Supplementary Table 10. Raised blood pressure in women: The first row displays results of the dependent t-test (standard deviations of the mean difference between pairs of r-values). The lower the number, the closer the temporal relationship between two trend lines. The second row displays results of the regression slope test (probability p-values expressing the similarity between linear slopes of two trend lines). The higher the p-value, the higher the probability that two linear trend lines are running parallel to each other. (see Figs. 21-22)

	Health exp.	TF & AP	Fruits	Or & Mand.	Wine	Coffee	Cheese	Tree nuts	Cereals	Sunfl. oil	Distilled beverages	Onions	Potatoes
Health exp.	-												
TF & AP	0.011 p=0.82	-											
Fruits	0.043	0.051	-										
Or & Mand.	0.054	0.060	0.043 p=0.99	-									
Wine	0.102	0.119	0.161	0.166	-								
Coffee	0.079	0.075	0.053 p=0.07	0.061 p=0.11	0.186	-							
Cheese	0.018	0.018	0.060	0.066	0.113	0.086	-						
Tree nuts	0.042 p=0.56	0.042 p=0.62	0.064	0.061	0.122	0.100	0.040 p=0.75	-					
Cereals	0.063	0.065	0.105	0.113	0.064	0.132	0.057	0.077	-				
Sunfl. oil	0.069	0.074	0.050 p=0.02	0.055 p=0.05	0.188	0.049 p=0.84	0.085	0.085	0.136	-			
Dist. bev.	0.094 p=0.15	0.089 p=0.16	0.115	0.138 p=0.01	0.113	0.129	0.094 p=0.16	0.118 p=0.27	0.083 p=0.31	0.138	-		
Onions	0.062 p=0.02	0.068 p=0.02	0.064	0.080 p=0.93	0.164	0.077 p=0.15	0.077	0.086 p=0.02	0.113	0.070 p=0.09	0.115 p=0.02	-	
Potatoes	0.039	0.058	0.047 p=0.76	0.060 p=0.78	0.160	0.072 p=0.06	0.064	0.066 p=0.01	0.108	0.052 p=0.02	0.121 p=0.01	0.045 p=0.88	-
% CA energy	0.028	0.031	0.070	0.081	0.094	0.099	0.027	0.050 p=0.06	0.040	0.100	0.082 p=0.73	0.083	0.072

Abbreviations: TF & AP = Total fat & Animal protein, Or & Mand = Oranges & Mandarins, % CA energy = % energy from carbohydrates and alcohol in the diet.

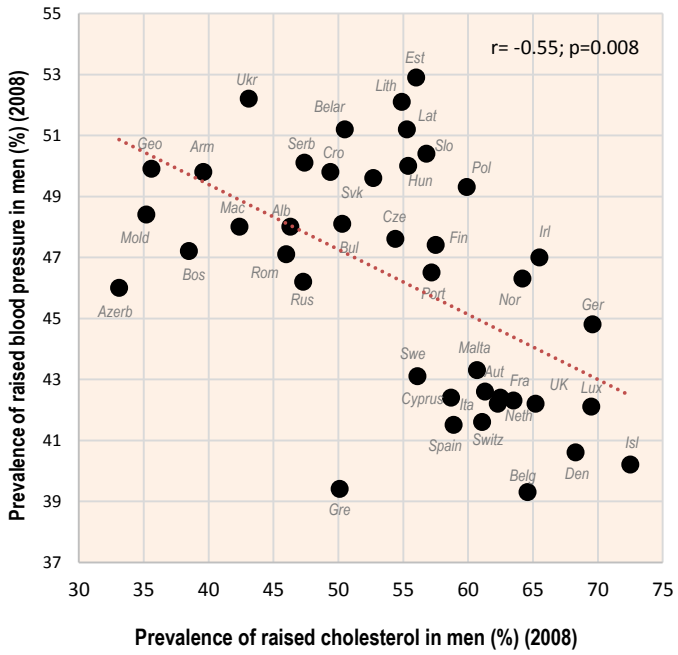
Supplementary Table 11. Comparison of CVD statistics from 1980 and 2000. Changes in CVD mortality rates between 1980 and 2000, and changes in the CHD / Stroke mortality ratio between 1980 and 2000.

	CHD mortality in 2000 (as a ratio of 1980)		Stroke mortality in 2000 (as a ratio of 1980)		Total CHD & stroke mortality (as a ratio of 1980)		CHD / Stroke mortality ratio (Men)		CHD / Stroke mortality ratio (Women)	
	Men	Women	Men	Women	Men	Women	1980	2000	1980	2000
Armenia	1.11	0.85	1.07	1.18	1.10	0.96	3.85	3.97	1.94	1.40
Austria	0.57	0.50	0.41	0.50	0.53	0.50	3.07	4.27	1.43	1.43
Azerbaijan	1.16	1.27	0.71	0.81	1.03	1.08	2.60	4.27	1.41	2.20
Belarus	1.51	1.29	1.25	1.11	1.43	1.21	2.32	2.80	1.20	1.38
Belgium	0.44	0.44	0.53	0.58	0.46	0.50	4.05	3.40	1.50	1.14
Bulgaria	1.09	1.05	1.03	0.79	1.07	0.88	1.26	1.33	0.58	0.77
Estonia	0.81	0.77	1.02	0.66	0.86	0.72	3.15	2.49	1.11	1.30
France	0.54	0.43	0.40	0.50	0.49	0.47	1.95	2.63	0.70	0.60
Georgia	0.94	0.85	0.99	0.79	0.95	0.83	2.01	1.91	1.23	1.32
Greece	0.94	0.90	0.77	0.50	0.89	0.65	2.45	3.00	0.63	1.13
Hungary	0.83	0.86	0.80	0.61	0.82	0.73	2.13	2.20	0.97	1.36
Iceland	0.33	1.08	0.25	0.77	0.32	0.92	7.31	9.75	1.00	1.40
Ireland	0.42	0.29	0.42	0.45	0.42	0.35	5.92	6.00	1.86	1.20
Italy	0.44	0.38	0.36	0.40	0.41	0.39	2.48	3.00	0.87	0.83
Latvia	0.83	0.72	0.85	0.94	0.84	0.81	2.83	2.79	1.42	1.10
Lithuania	0.92	0.70	0.73	0.62	0.87	0.66	3.07	3.87	1.27	1.44
Luxembourg	0.41	0.22	0.40	0.65	0.41	0.42	3.40	3.50	1.15	0.38
Malta	0.34	0.35	0.22	0.44	0.31	0.37	4.06	6.29	3.06	2.43
Moldova	1.09	0.89	1.19	1.58	1.12	1.13	2.37	2.16	1.92	1.08
Netherlands	0.37	0.47	0.60	0.64	0.40	0.53	6.13	3.78	1.73	1.29
Poland	0.84	0.94	1.14	1.00	0.91	0.97	3.32	2.44	1.06	1.00
Portugal	0.54	0.58	0.47	0.40	0.50	0.45	0.91	1.04	0.40	0.58
Romania	1.55	1.33	1.41	1.09	1.49	1.19	1.41	1.55	0.73	0.89
Russia	1.33	1.15	1.36	1.22	1.34	1.18	2.35	2.29	1.15	1.08
Spain	0.68	0.56	0.42	0.33	0.59	0.42	1.83	3.00	0.60	1.00
Ukraine	1.40	1.23	1.28	1.11	1.36	1.18	2.57	2.81	1.49	1.64
United Kingdom	0.38	0.40	0.48	0.47	0.40	0.43	6.22	5.00	2.00	1.71

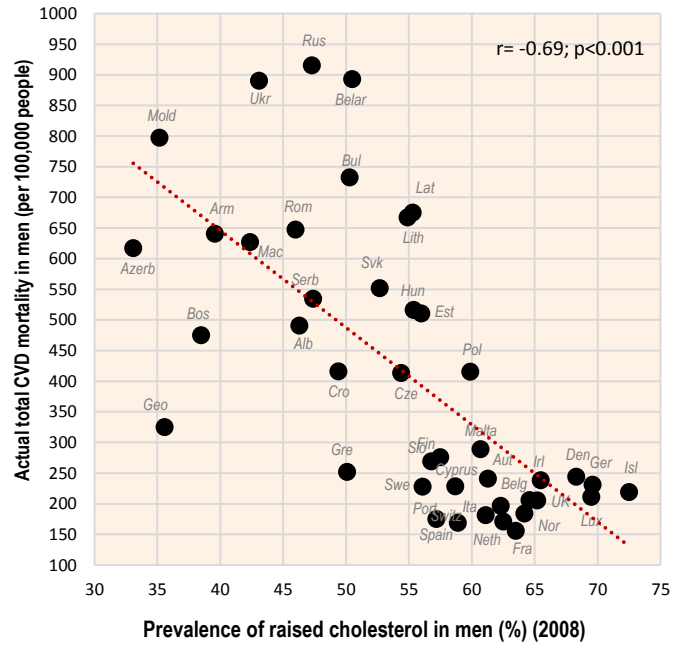
Note: Changes in CVD mortality rates between 1980 and 2000

+41% and more	+21-40%	+1-20%	No change	-1-20%	-21-40%	-41 % and less
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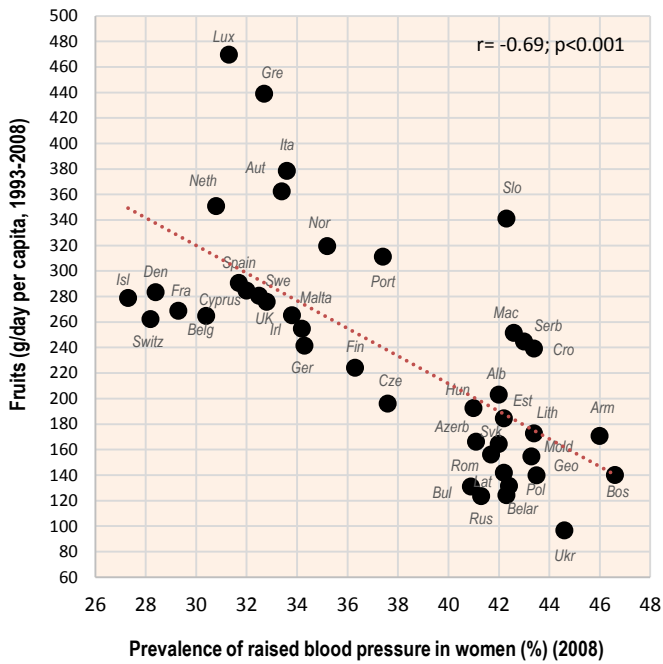
Source: After Nichols et al. [9].



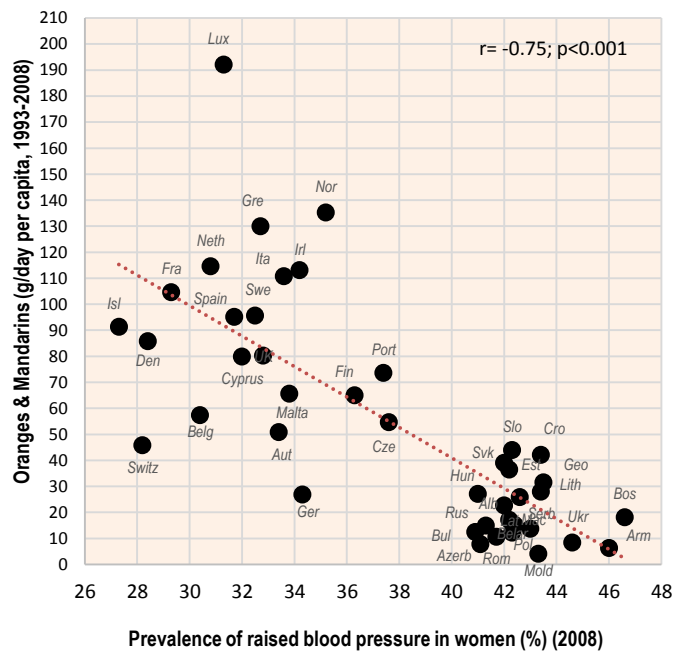
Supplementary Fig. 1. Correlation between the prevalence of raised blood pressure and the prevalence of raised cholesterol levels in men ($r = -0.55$; $p < 0.001$).



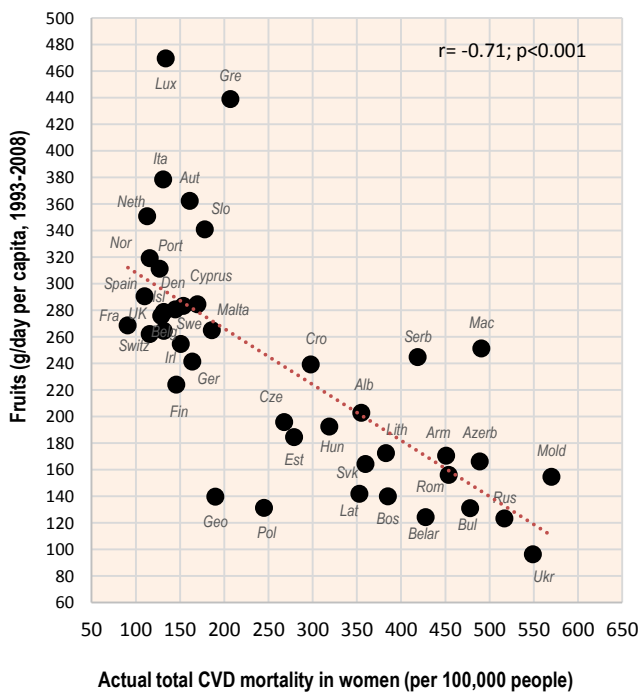
Supplementary Fig. 2. Correlation between the actual total CVD mortality and the prevalence of raised cholesterol levels in men ($r = -0.69$; $p < 0.001$).



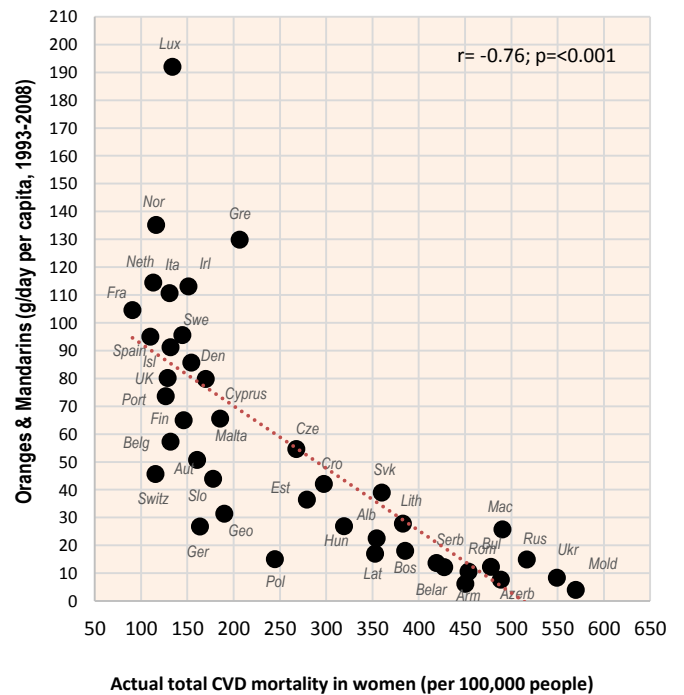
Supplementary Fig. 3. Correlation between the mean daily consumption of fruits and the prevalence of raised blood pressure in women ($r = -0.69$; $p < 0.001$).



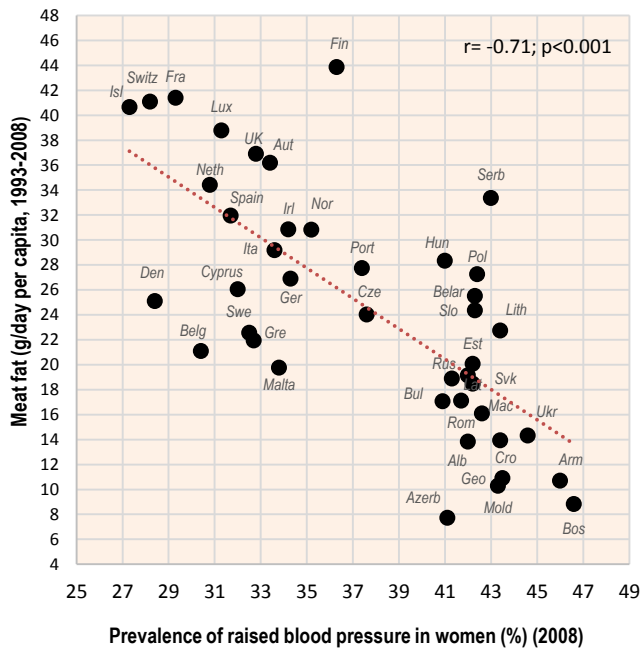
Supplementary Fig. 4. Correlation between the mean daily consumption of oranges & mandarins and the prevalence of raised blood pressure in women ($r = -0.75$; $p < 0.001$).



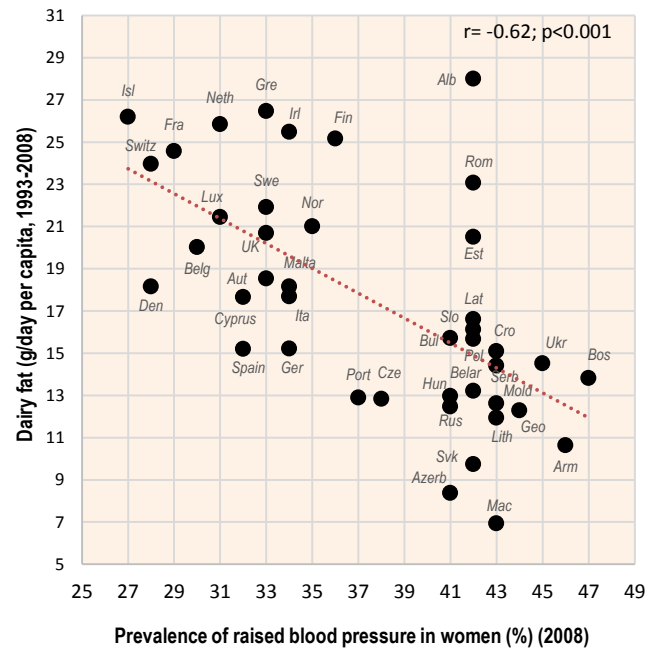
Supplementary Fig. 5. Correlation between the mean daily consumption of fruits and the actual total CVD mortality in women ($r = -0.71$; $p < 0.001$).



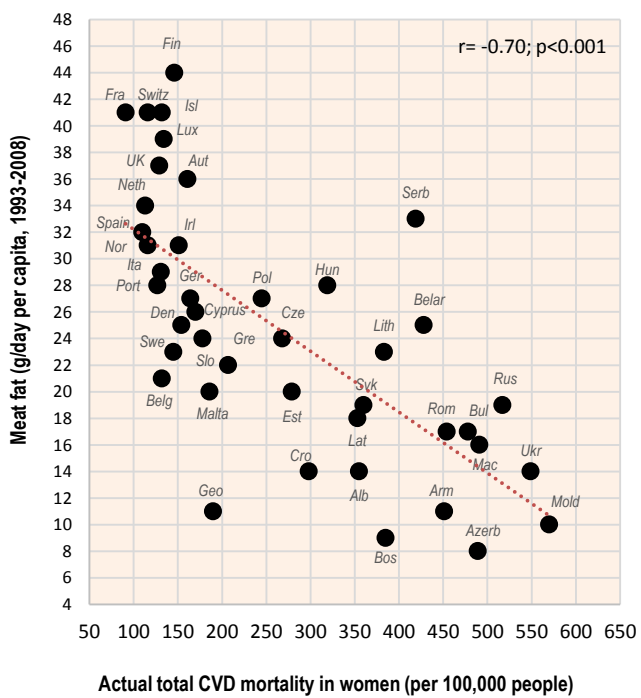
Supplementary Fig. 6. Correlation between the mean daily consumption of oranges & mandarins and the actual total CVD mortality in women ($r = -0.76$; $p = 0.001$).



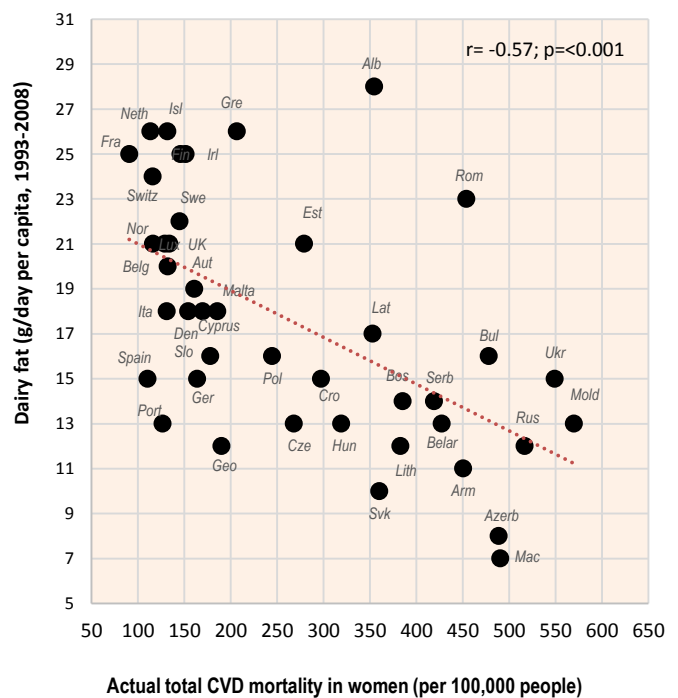
Supplementary Fig. 7. Correlation between the mean daily consumption of meat fat and the prevalence of raised blood pressure in women ($r = -0.71$; $p = 0.001$).



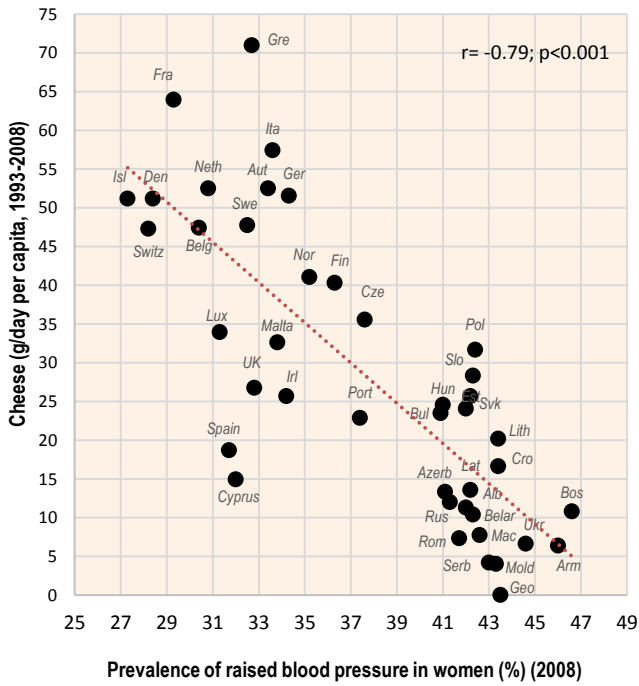
Supplementary Fig. 8. Correlation between the mean daily consumption of dairy fat and the prevalence of raised blood pressure in women ($r = -0.62$; $p = 0.001$).



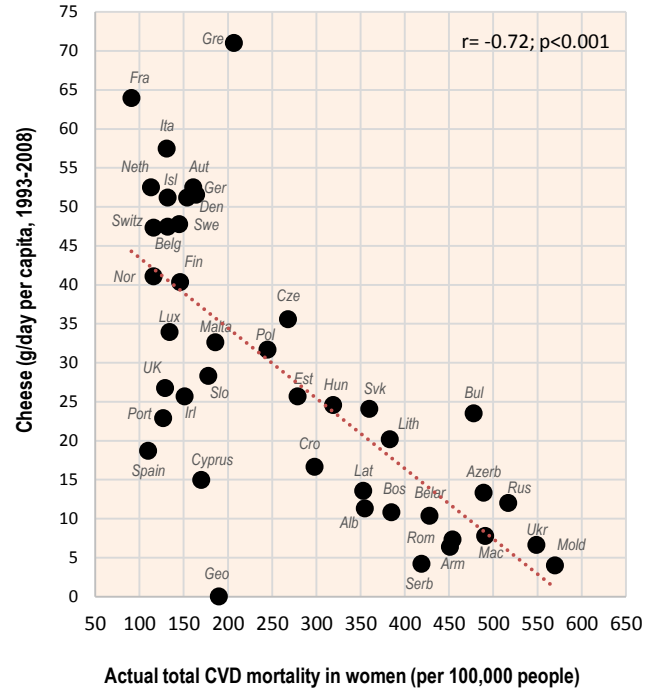
Supplementary Fig. 9. Correlation between the mean daily consumption of meat fat and the actual total CVD mortality in women ($r = -0.70$; $p < 0.001$).



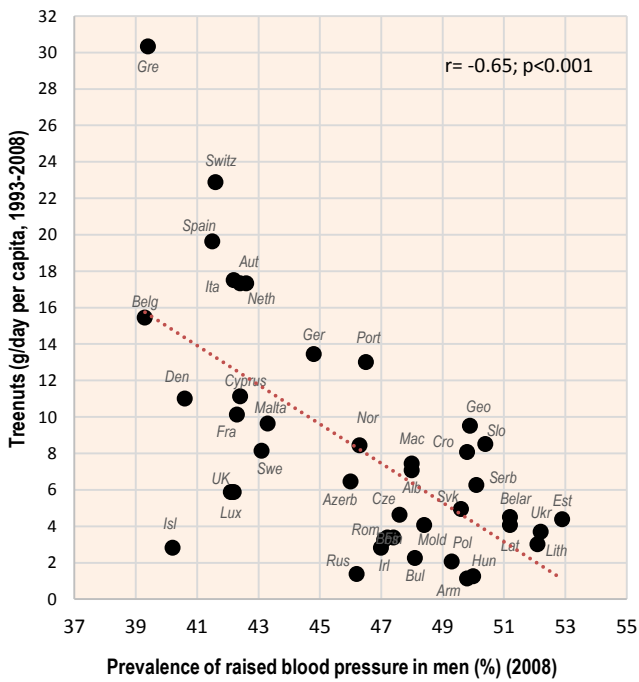
Supplementary Fig. 10. Correlation between the mean daily consumption of dairy fat and the actual total CVD mortality in women ($r = -0.57$; $p = 0.001$).



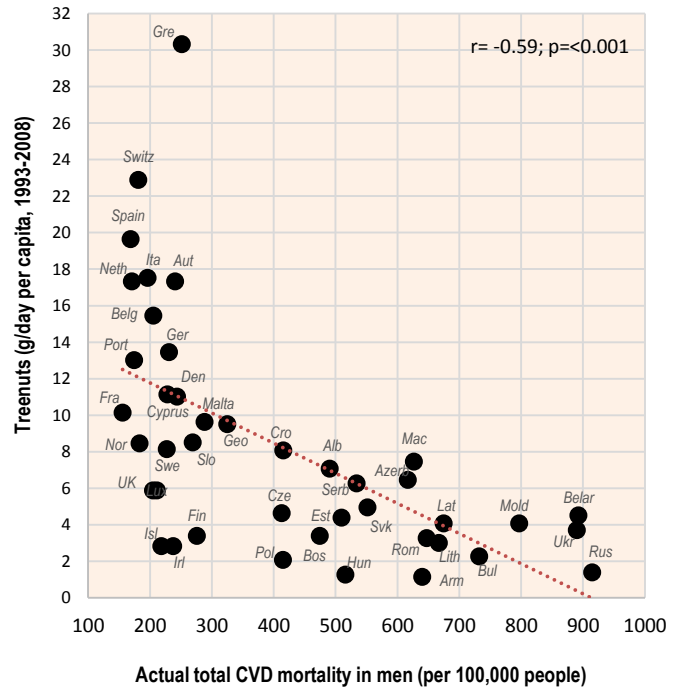
Supplementary Fig. 11. Correlation between the mean daily consumption of cheese and the prevalence of raised blood pressure in women ($r = -0.79$; $p = 0.001$).



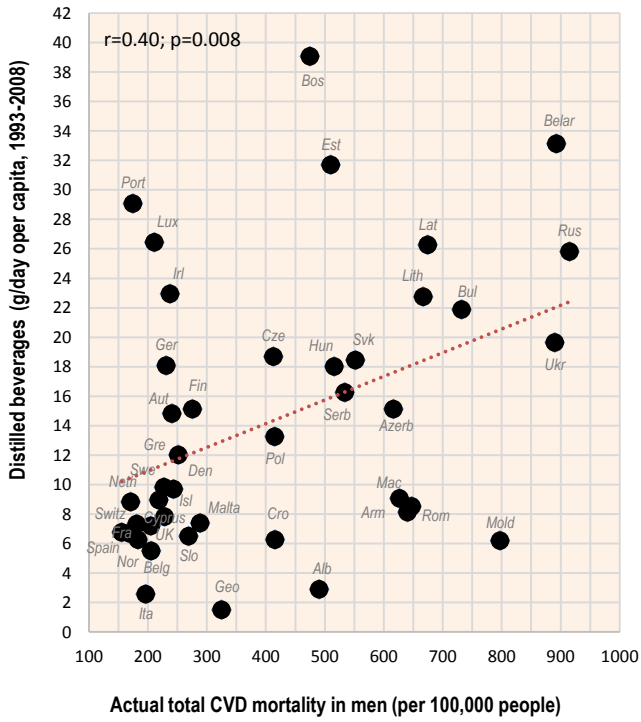
Supplementary Fig. 12. Correlation between the mean daily consumption of cheese and the actual total CVD mortality in women ($r = -0.72$; $p < 0.001$).



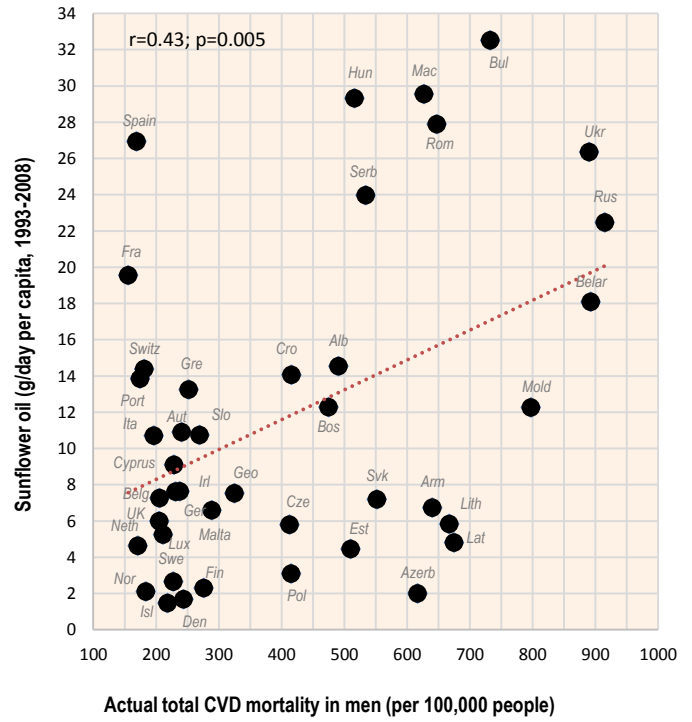
Supplementary Fig. 13. Correlation between the mean daily consumption of tree nuts and the prevalence of raised blood pressure in men ($r = -0.65$; $p < 0.001$).



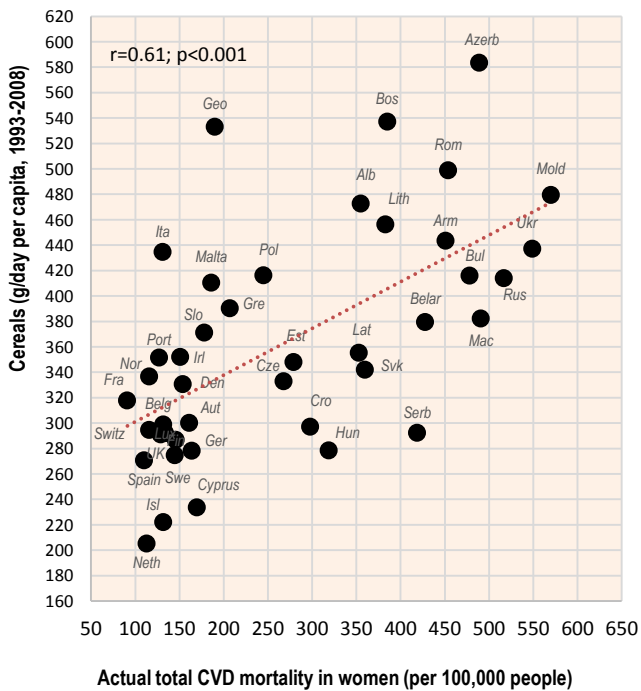
Supplementary Fig. 14. Correlation between the mean daily consumption of tree nuts and the actual total CVD mortality in men ($r = -0.59$; $p = 0.001$).



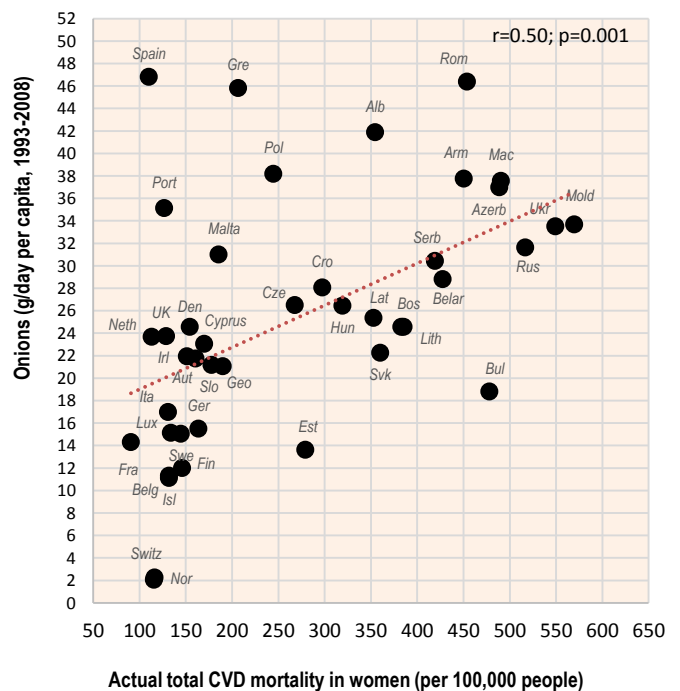
Supplementary Fig. 15. Correlation between the mean daily consumption of distilled beverages (1993-2008) and the actual total CVD mortality in men ($r=0.40; p=0.008$).



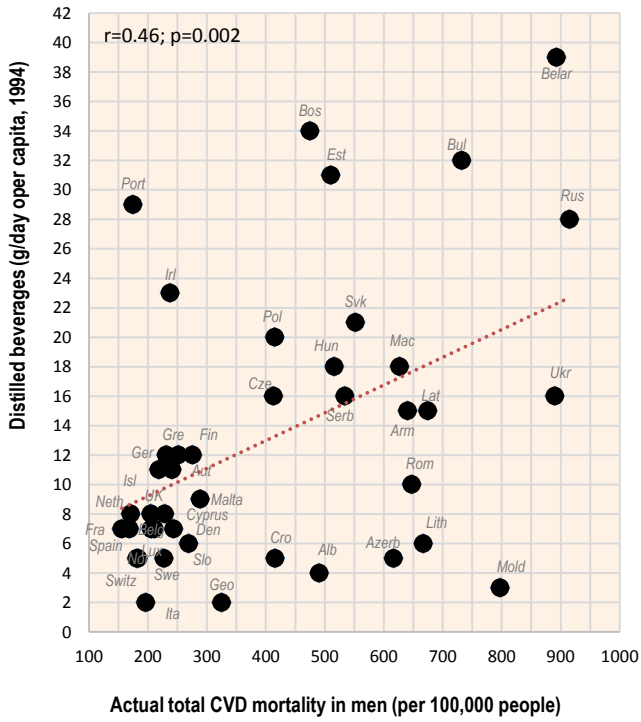
Supplementary Fig. 16. Correlation between the mean daily consumption of sunflower oil (1993-2008) and the actual total CVD mortality in men ($r=0.43; p=0.005$).



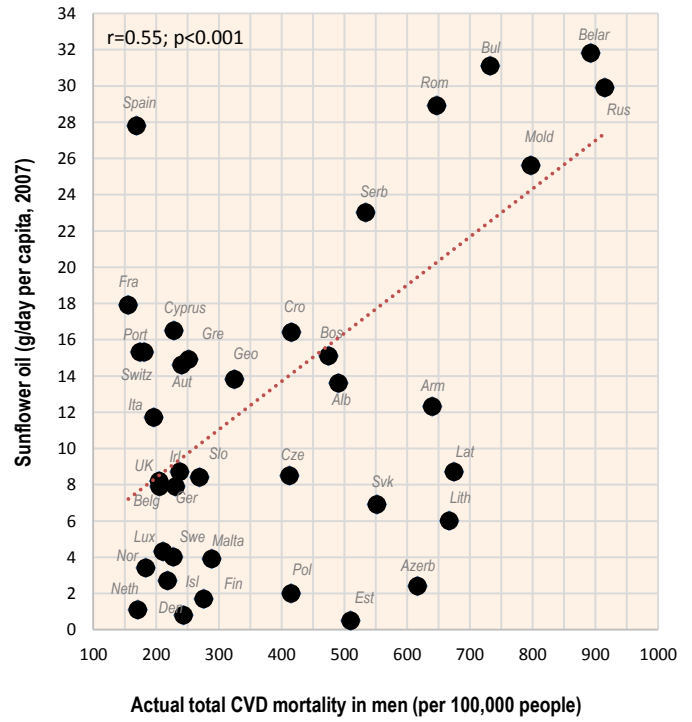
Supplementary Fig. 17. Correlation between the mean daily consumption of cereals (1993-2008) and the actual total CVD mortality in women ($r=0.61; p<0.001$).



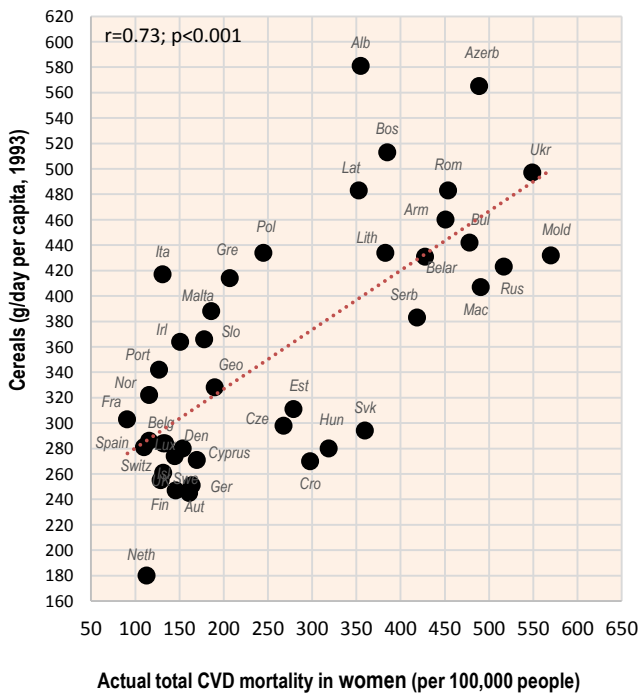
Supplementary Fig. 18. Correlation between the mean daily consumption of onions (1993-2008) and the actual total CVD mortality in women ($r=0.50; p=0.001$).



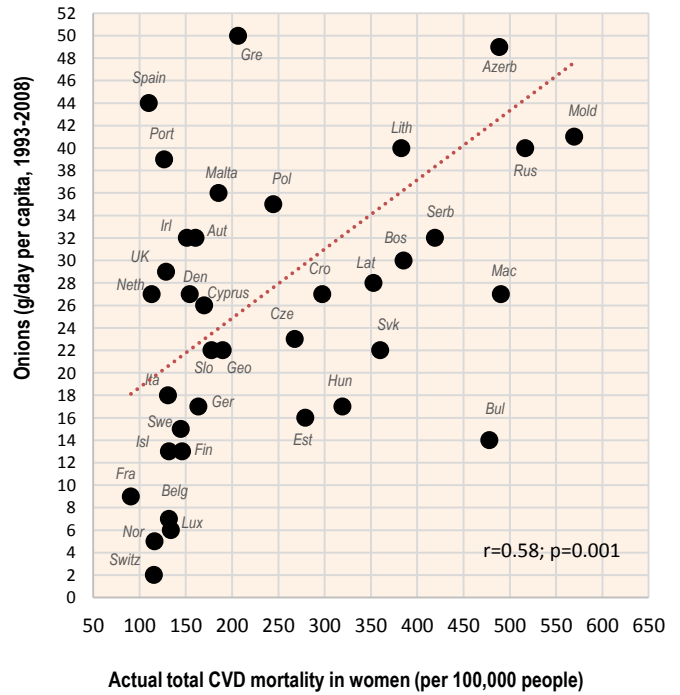
Supplementary Fig. 19. Correlation between the mean daily consumption of distilled beverages (1994) and the actual total CVD mortality in men ($r=0.46$; $p=0.002$).



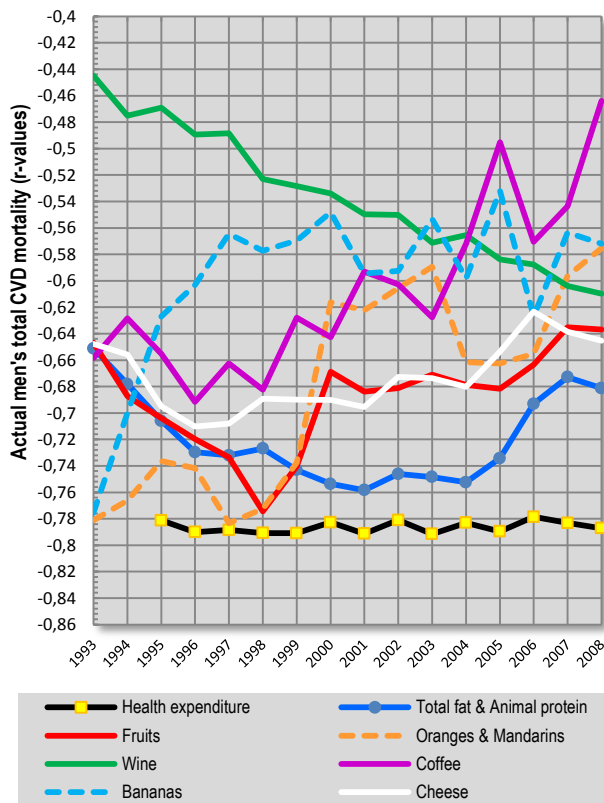
Supplementary Fig. 20. Correlation between the mean daily consumption of sunflower oil (2007) and the actual total CVD mortality in men ($r=0.55$; $p<0.001$).



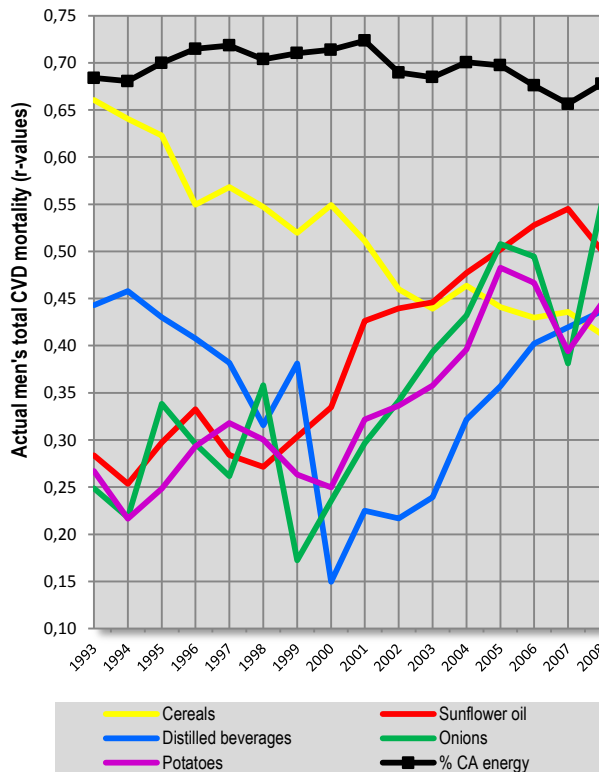
Supplementary Fig. 21. Correlation between the mean daily consumption of cereals (1993) and the actual total CVD mortality in women ($r=0.73$; $p<0.001$).



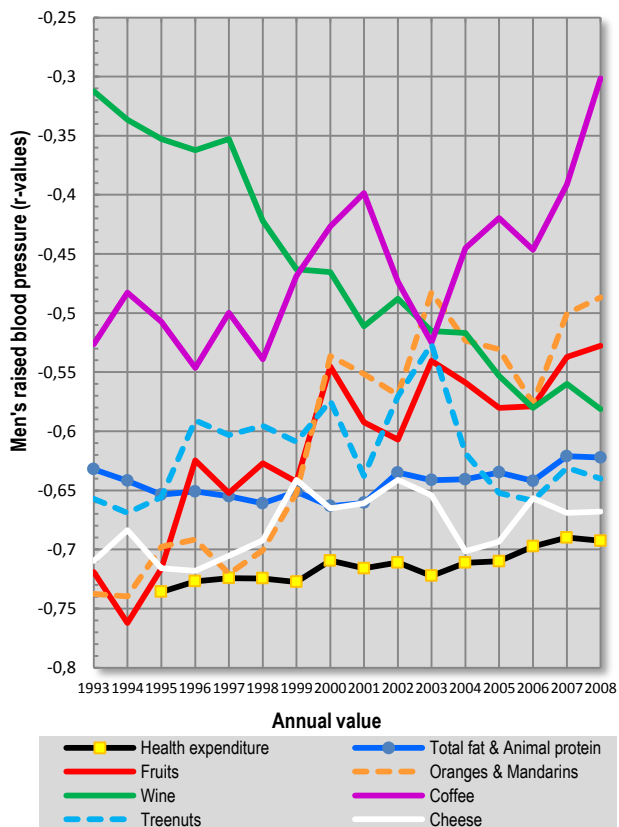
Supplementary Fig. 22. Correlation between the mean daily consumption of onions (2008) and the actual total CVD mortality in women ($r=0.58$; $p=0.001$).



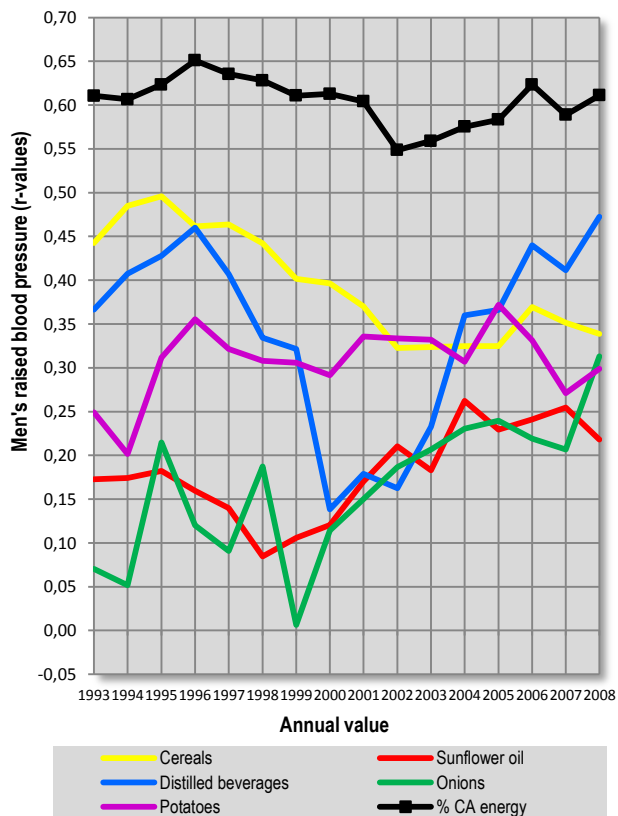
Supplementary Fig. 23. Temporal changes in the relationship among 7 negative correlates of total CVD mortality (men).



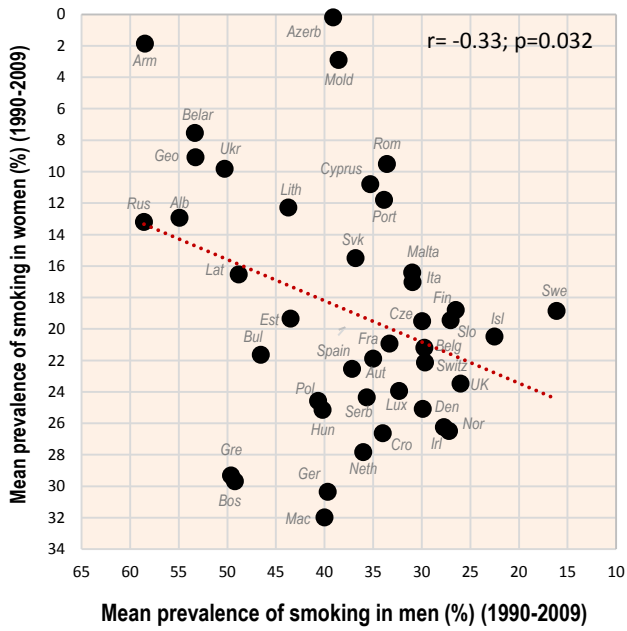
Supplementary Fig. 24. Temporal changes in the relationship among 6 positive correlates of total CVD mortality (men).



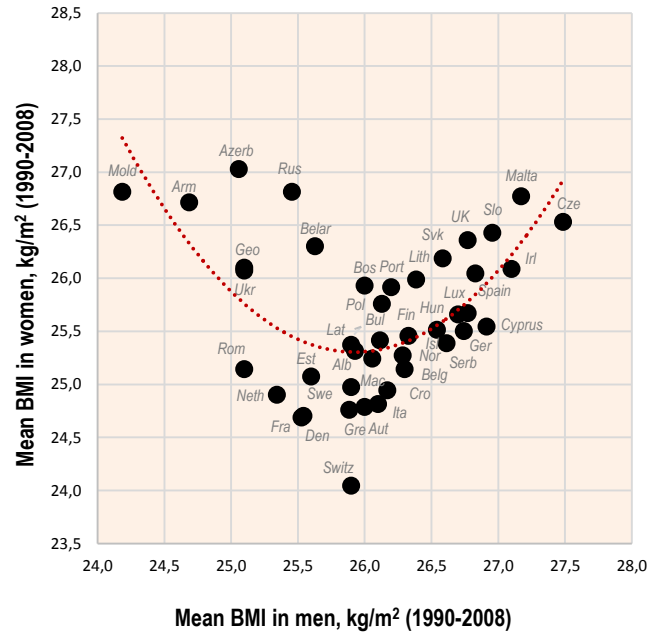
Supplementary Fig. 25. Temporal changes in the correlation among 8 negative correlates of raised blood pressure (men).



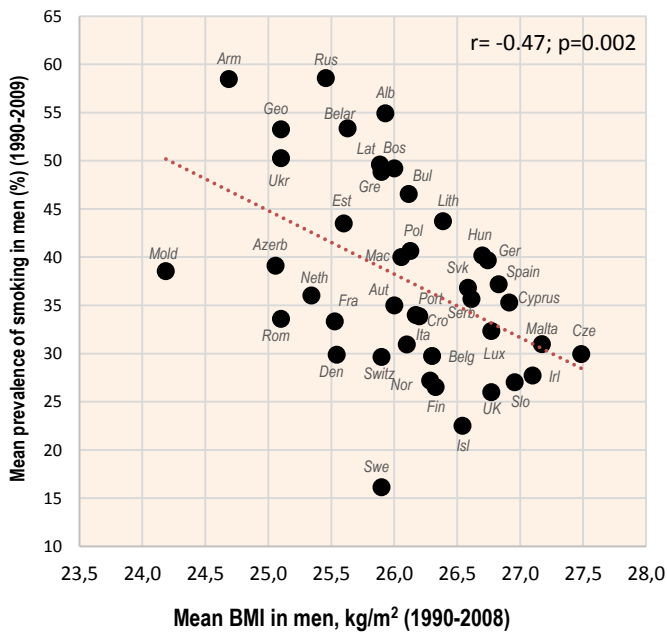
Supplementary Fig. 26. Temporal changes in the correlation among 6 positive correlates of raised blood pressure (men, 42 countries, excluding Turkey).



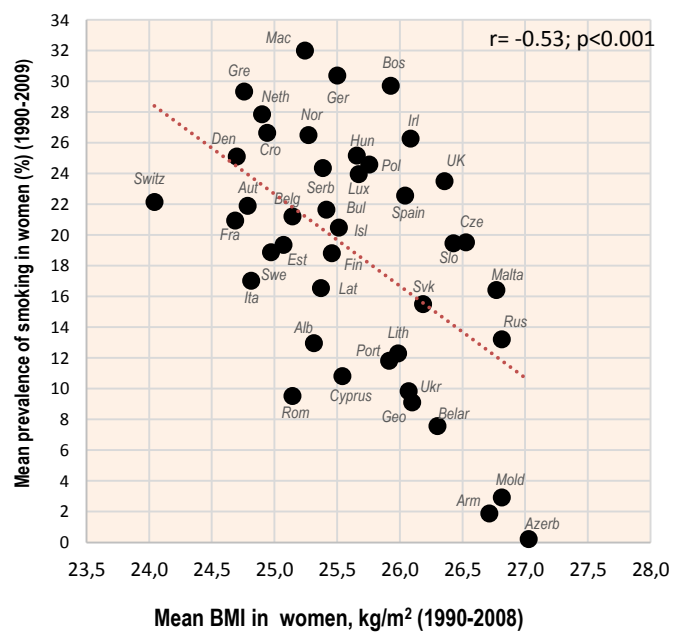
Supplementary Fig. 27. Correlation between the mean prevalence of smoking in men and women ($r = -0.33$; $p = 0.032$).



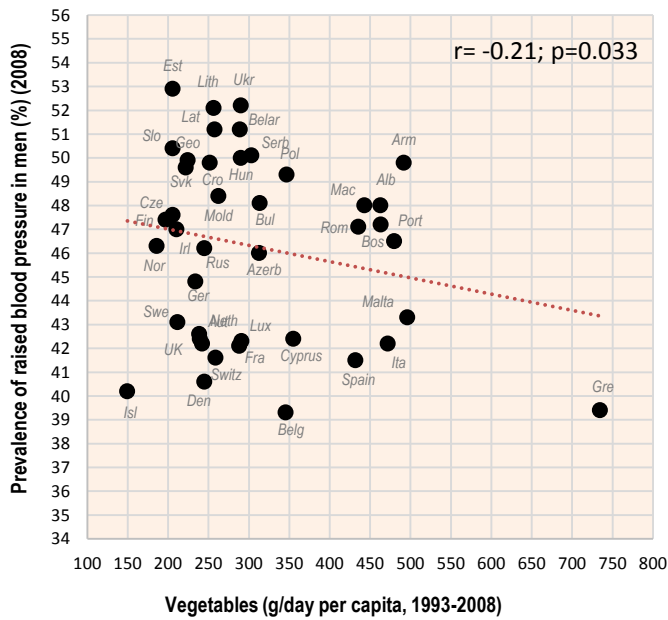
Supplementary Fig. 28. Relationship between the mean BMI in men and women.



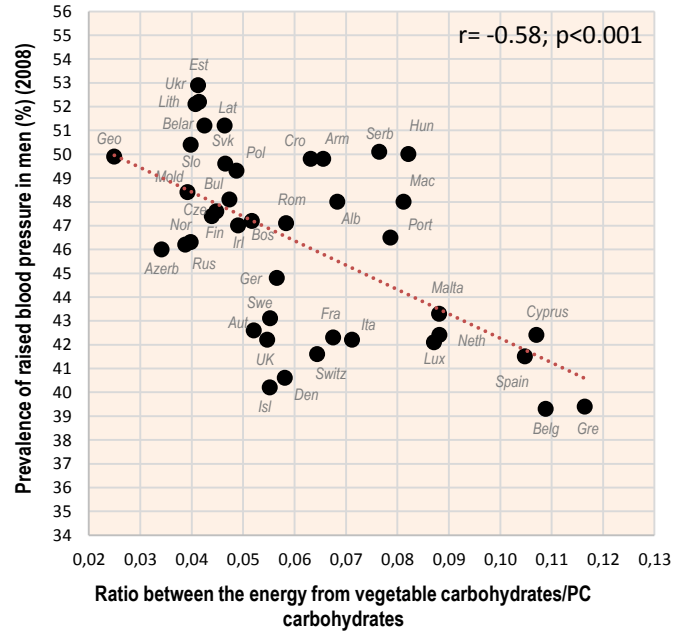
Supplementary Fig. 29. Correlation between the mean prevalence of smoking and the mean BMI in men ($r = -0.47$; $p = 0.002$).



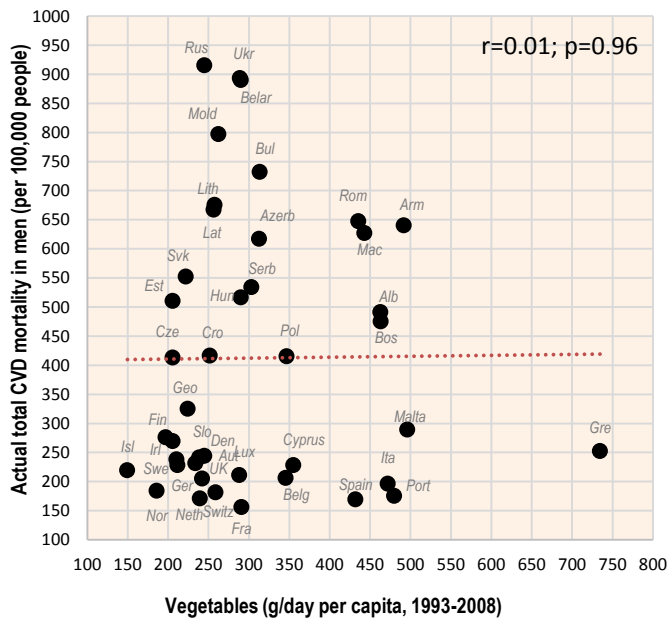
Supplementary Fig. 30. Correlation between the mean prevalence of smoking and the mean BMI in women ($r = -0.53$; $p < 0.001$).



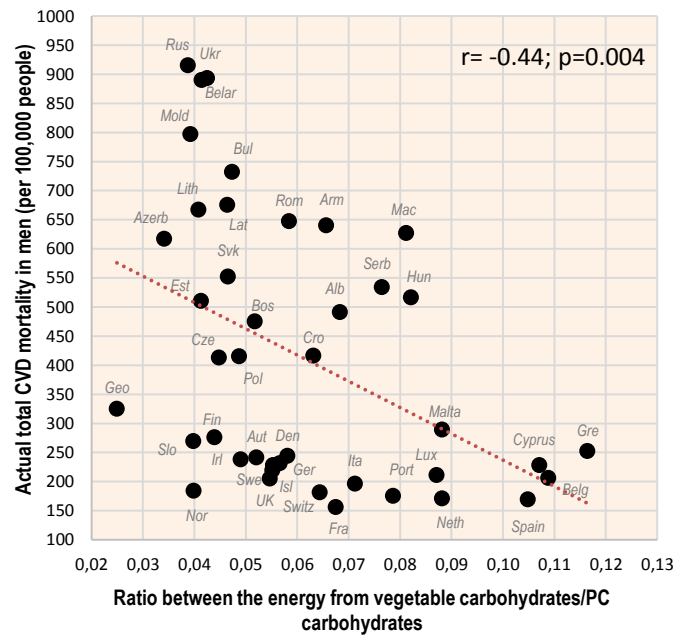
Supplementary Fig. 31. Correlation between the mean consumption of vegetables and the prevalence of raised blood pressure in men ($r = -0.21$; $p = 0.033$).



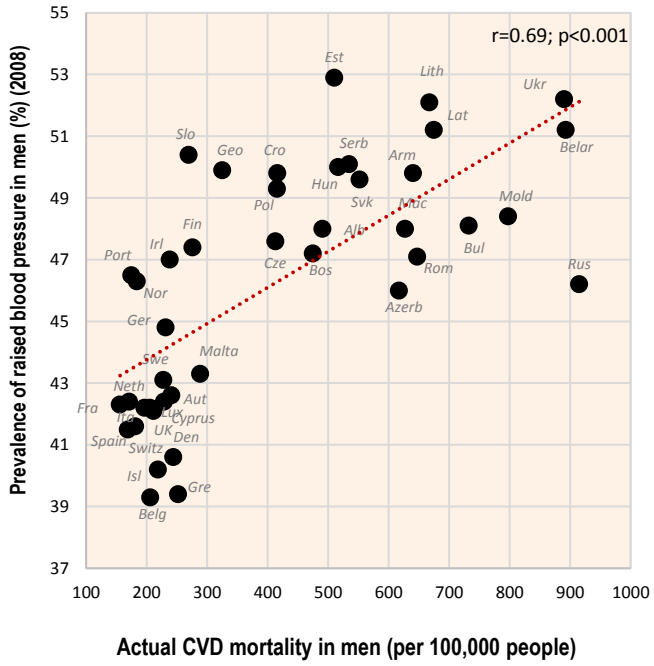
Supplementary Fig. 32. Correlation between the mean vegetable carbohydrates/PC CARB energy ratio and the prevalence of raised blood pressure in men ($r = -0.58$; $p < 0.001$).



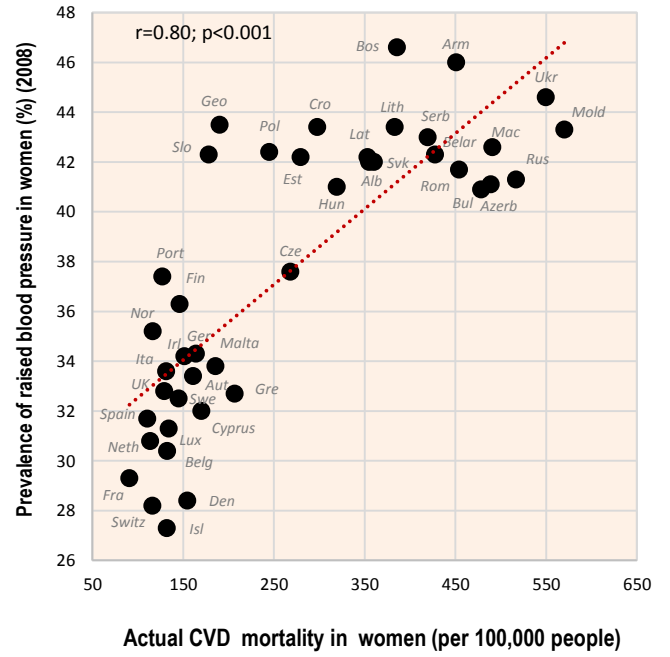
Supplementary Fig. 33. Correlation between the mean consumption of vegetables and the actual total CVD mortality in men ($r = 0.01$; $p = 0.96$).



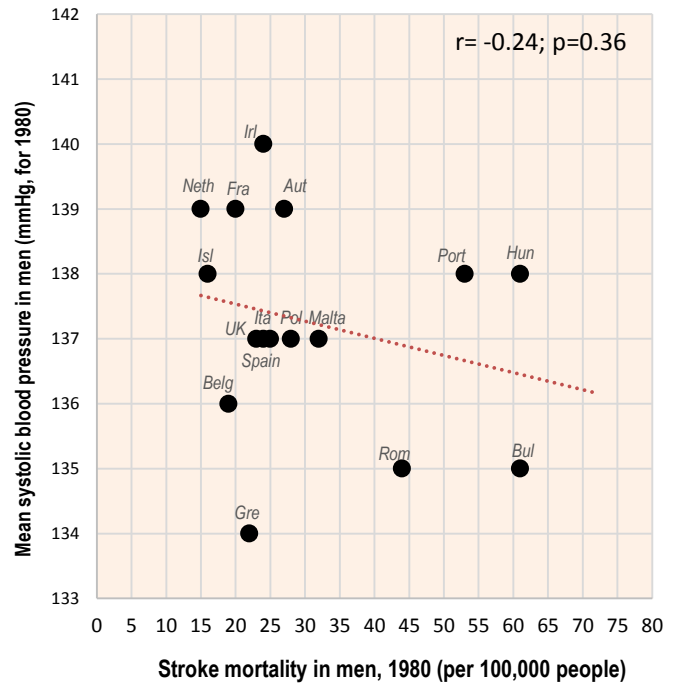
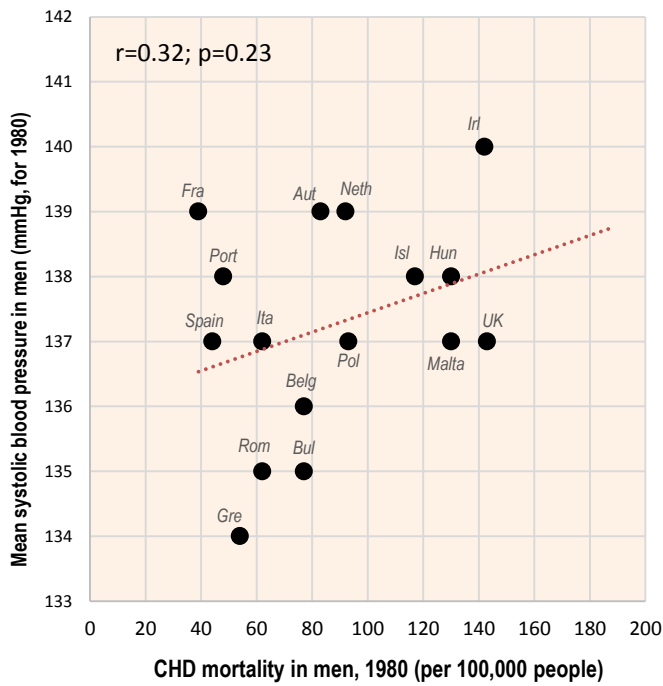
Supplementary Fig. 34. Correlation between the mean vegetable carbohydrates/PC CARB energy ratio and the actual total CVD mortality in men ($r = -0.44$; $p = 0.004$).



Supplementary Fig. 35. Correlation between the prevalence of raised blood pressure and the actual total CVD mortality in men ($r=0.69; p<0.001$).



Supplementary Fig. 36. Correlation between the prevalence of raised blood pressure and the actual total CVD mortality in women ($r=0.80; p<0.001$).

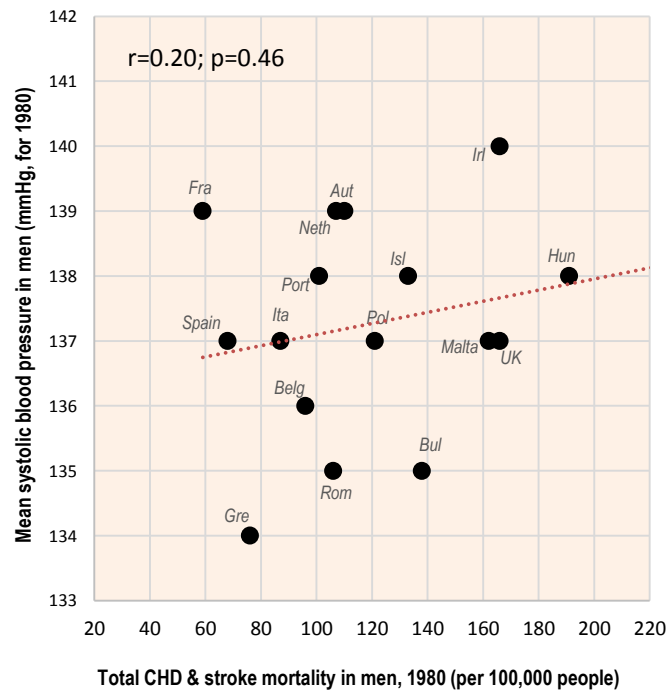


Supplementary Fig. 37. Historical correlation between the mean systolic blood pressure (for 1980) and CHD mortality in men, for 1980 ($r=0.32$; $p=0.23$).

Supplementary Fig. 38. Historical correlation between the mean systolic blood pressure (for 1980) and stroke mortality in men, for 2000 ($r=-0.24$; $p=0.36$).

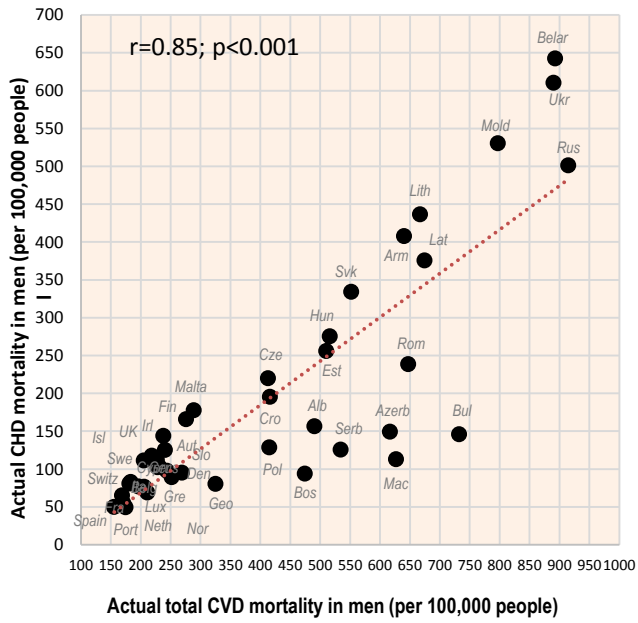
Note: This comparison uses only the sample of 16 countries, for which all data in 1980 are available. The correlation in the total sample of 27 available countries is $r=0.26$ ($p=0.18$).

Note: This comparison uses only the sample of 16 countries, for which all data in 1980 are available. The correlation in the total sample of 27 available countries is $r=-0.06$ ($p=0.76$).

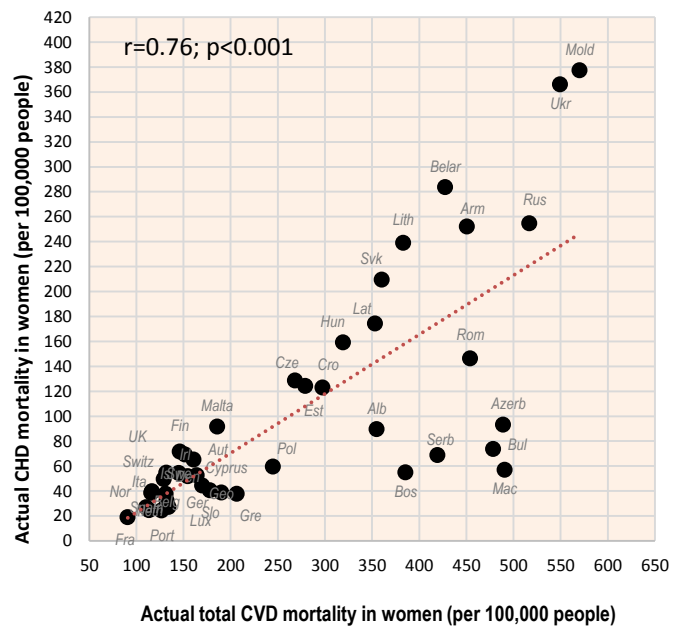


Supplementary Fig. 39. Historical correlation between the mean systolic blood pressure (for 1980) and total CHD & stroke mortality in men, for 1980 ($r=0.20$; $p=0.46$).

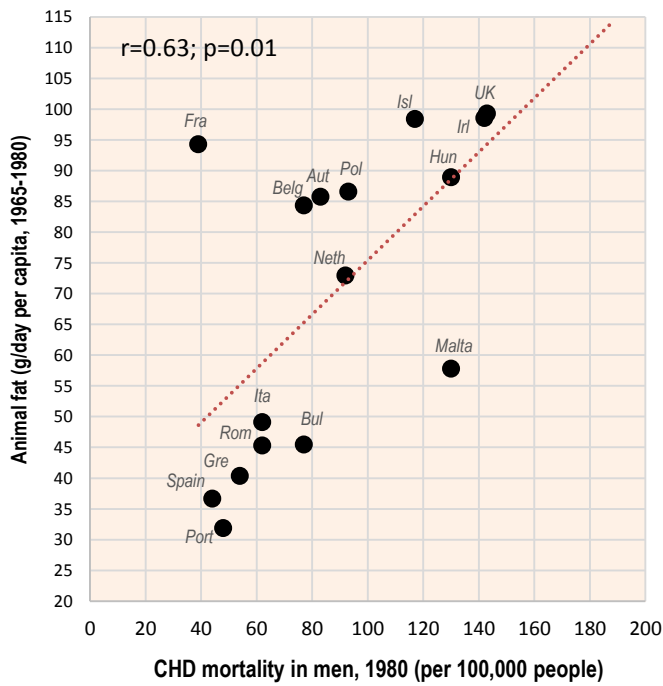
Note: This comparison uses only the sample of 16 countries, for which all data in 1980 are available. The correlation in the total sample of 27 available countries is $r=0.18$ ($p=0.37$).



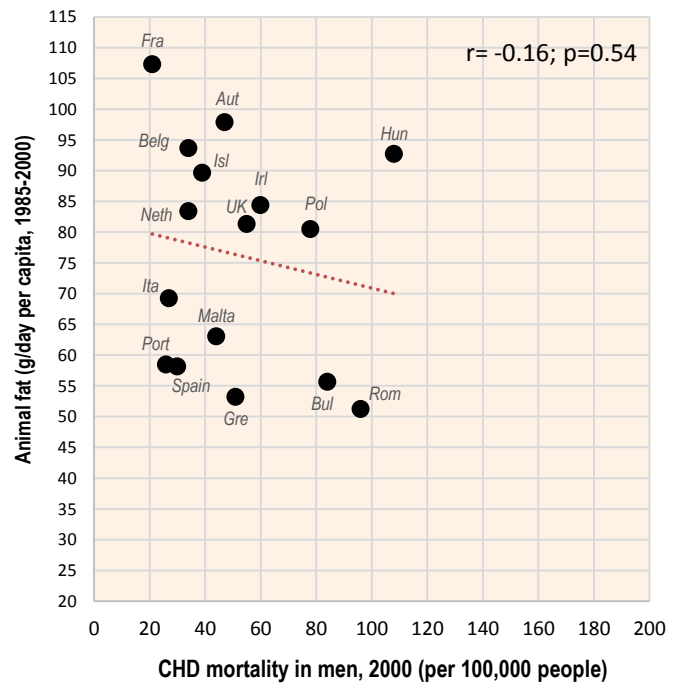
Supplementary Fig. 40. Correlation between the actual CHD mortality and the actual total CVD mortality in men ($r=0.85$; $p<0.001$).



Supplementary Fig. 41. Correlation between the actual CHD mortality and the actual total CVD mortality in women ($r=0.76$; $p<0.001$).

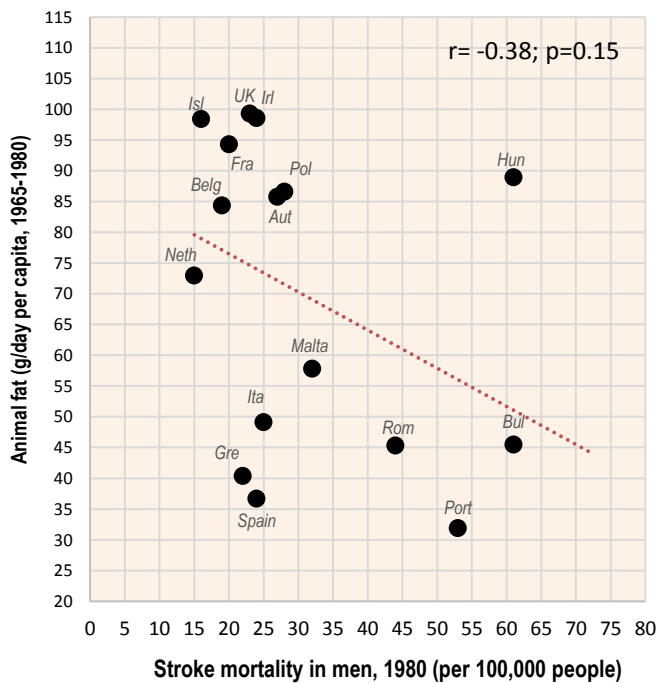


Supplementary Fig. 42. Historical correlation between the mean consumption of animal fat (1965-1980) and CHD mortality in men, for 1980 ($r=0.63$; $p=0.01$).

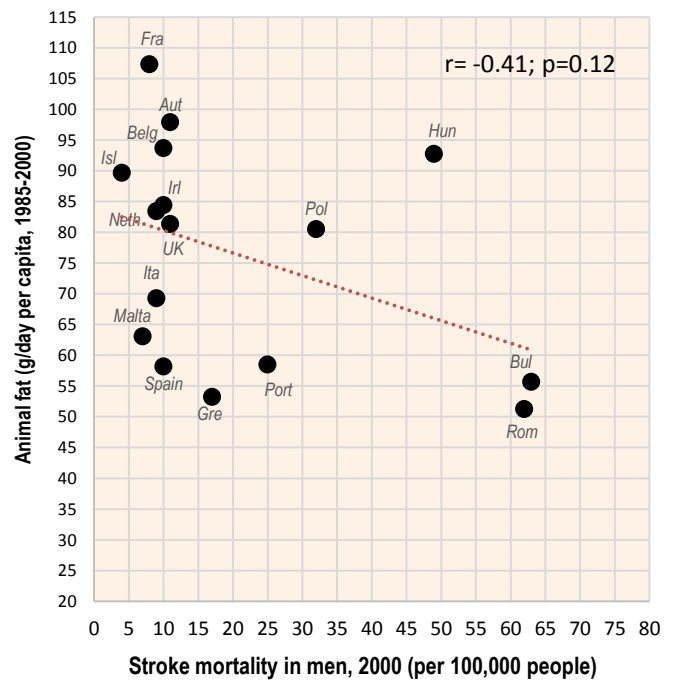


Supplementary Fig. 43. Historical correlation between the mean consumption of animal fat (1985-2000) and CHD mortality in men, for 2000 ($r=-0.16$; $p=0.54$).

Note: This comparison uses only the sample of 16 countries, for which all data in 1980 are available.

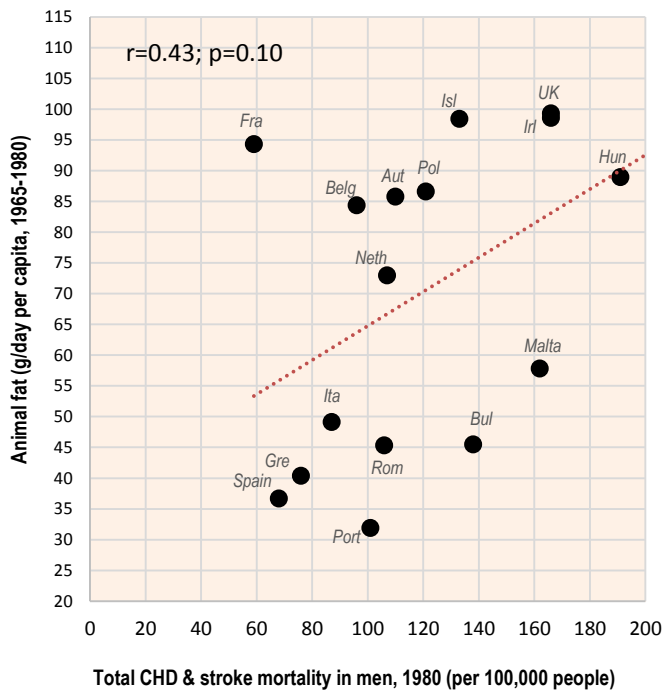


Supplementary Fig. 44. Historical correlation between the mean consumption of animal fat (1965-1980) and stroke mortality in men, for 1980 ($r=-0.38$; $p=0.15$).

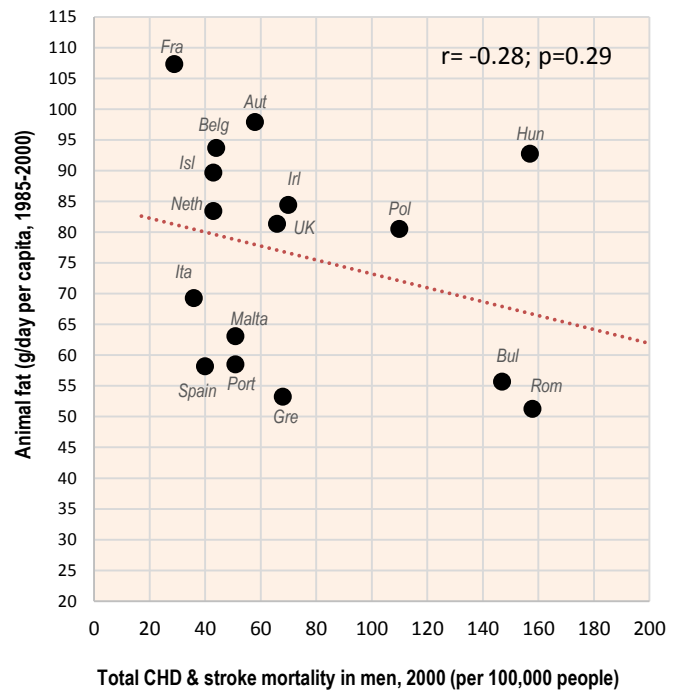


Supplementary Fig. 45. Historical correlation between the mean consumption of animal fat (1985-2000) and stroke mortality in men, for 2000 ($r=-0.41$; $p=0.12$).

Note: This comparison uses only the sample of 16 countries, for which all data in 1980 are available.



Supplementary Fig. 46. Historical correlation between the mean consumption of animal fat (1965-1980) and total CHD & stroke mortality in men, for 1980 ($r=0.43$; $p=0.10$).



Supplementary Fig. 47. Historical correlation between the mean consumption of animal fat (1985-2000) and total CHD & stroke mortality in men, for 2000 ($r= -0.28$; $p=0.29$).

Note: This comparison uses only the sample of 16 countries, for which all data in 1980 are available.