

SUPPLEMENTARY DATA

Supplementary Table 1. Baseline characteristics of participants according to toenail selenium level

	Sex-specific quintiles of toenail selenium									
	1st quintile		2nd quintile		3rd quintile		4th quintile		5th quintile	
	Male: <0.719 Female:<0.665		Male: 0.719- <0.788 Female:0.665- <0.726		Male: 0.788 - <0.858 Female:0.726- <0.784		Male: 0.858 - <0.950 Female:0.784- <0.859		Male: 0.950 ≤ Female:0.859 ≤	
	Mean or %	(SD)	Mean or %	(SD)	Mean or %	(SD)	Mean or %	(SD)	Mean or %	(SD)
HPFS (N)	699		700		726		706		704	
Toenail selenium (µg/g)	0.66	(0.05)	0.76	(0.02)	0.82	(0.02)	0.90	(0.03)	1.07	(0.12)
Age (years)	60.0	(8.9)	59.2	(8.6)	59.7	(8.9)	59.2	(8.6)	59.8	(8.6)
Dietary Intake										
Total energy (kcal/day)	2042.6	(639)	2032.4	(617)	2013.3	(611)	2039.9	(640)	2020.0	(630)
Saturated fat intake (g/day)	26.2	(6.0)	25.3	(6.4)	24.7	(6.1)	24.6	(6.2)	24.1	(6.4)
Polyunsaturated fat intake (g/day)	12.9	(3.5)	12.8	(3.4)	12.9	(3.2)	13.1	(3.5)	13.3	(3.8)
Trans fat intake (g/day)	2.9	(1.1)	3.0	(1.1)	2.9	(1.1)	2.9	(1.1)	2.9	(1.1)
Whole grain intake (g/day)	19.1	(16.9)	19.4	(16.8)	21.6	(19.0)	22.3	(20.0)	23.4	(20.1)
Coffee intake (serving/day)	1.0	(1.3)	1.0	(1.4)	0.9	(1.2)	0.8	(1.2)	0.9	(1.3)
Alcohol intake (g/day)	15.0	(20.0)	12.9	(15.8)	12.0	(15.2)	11.2	(14.7)	10.4	(15.2)
Selenium supplement use (yes, %)	4.3		4.3		5.4		5.7		10.7	
Multivitamin supplement use ^a (pills/week)										
None	57.5		57.6		56.9		56.4		50.9	
1 ~ 5	9.6		10.4		9.8		9.9		9.9	
6 ~ 9	21.0		19.3		19.8		19.6		21.5	
10 or more	3.0		4.0		5.8		3.8		6.1	
Geographic region ^b										
West	12.0		15.6		23.0		23.9		31.1	
Midwest/north	8.7		12.9		16.3		19.8		21.5	
South	20.3		18.9		16.1		15.9		15.2	

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Midwest/south	29.8		23.4		19.7		20.1		14.4	
Northeast and other	29.2		29.3		24.9		20.3		17.9	
Smoking status										
Never	33.8		35.6		42.2		44.6		43.2	
Former	40.3		48.0		45.3		45.2		47.3	
Current (1-14/d)	4.2		2.7		3.4		2.8		2.0	
Current (15-34/d)	13.2		8.0		4.0		2.8		2.8	
Current (35+/d)	5.7		2.1		0.7		0.9		1.6	
Physical activity^c	2.9	(1.4)	3.0	(1.4)	3.0	(1.4)	3.0	(1.4)	3.0	(1.4)
BMI (kg/m²)^a										
<22	10.4		6.4		10.9		11.2		11.5	
22 -<24	20.3		22.9		21.6		20.8		23.3	
24 -<27	42.2		43.7		39.9		39.1		38.9	
27 -<30	20.7		18.1		19.3		21.1		17.9	
>=30	6.3		8.9		8.3		7.8		8.4	
NHS (N)	730		727		729		714		730	
Toenail selenium (µg/g)	0.62	(0.04)	0.70	(0.02)	0.75	(0.02)	0.82	(0.02)	0.96	(0.10)
Age (years)	52.8	(5.9)	52.7	(6.7)	52.8	(6.1)	52.3	(6.3)	52.4	(6.8)
Dietary Intake										
Total energy (kcal/day)	1722.0	(525)	1754.7	(538)	1749.5	(528)	1744.5	(515)	1745.1	(525)
Saturated fat intake (g/day)	22.4	(5.0)	21.9	(4.8)	21.7	(4.7)	21.8	(4.8)	21.2	(4.6)
Polyunsaturated fat intake (g/day)	11.4	(3.1)	11.5	(3.1)	11.7	(3.2)	11.6	(3.3)	11.6	(3.0)
Trans fat intake (g/day)	3.3	(1.1)	3.3	(1.0)	3.4	(1.1)	3.4	(1.1)	3.3	(1.1)
Whole grain intake (g/day)	12.8	(12.2)	14.7	(14.7)	14.2	(12.6)	15.2	(13.5)	14.8	(12.6)
Coffee intake (serving/day)	2.4	(1.8)	2.1	(1.7)	2.0	(1.6)	1.8	(1.6)	1.8	(1.5)
Alcohol intake (g/day)	9.2	(14.6)	8.5	(13.7)	7.1	(11.2)	6.7	(11.9)	6.4	(11.3)
Selenium supplement use (yes, %)	1.6		1.7		1.5		2.9		6.2	
Multivitamin supplement use^a (pills/week)										

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None	58.6		57.6		60.2		59.4		54.8	
1 ~ 5	12.3		13.5		14.4		11.5		10.8	
6 ~ 9	23.0		20.1		18.4		21.2		22.5	
10 or more	2.3		3.6		3.6		3.8		6.4	
Geographic region ^b							4.2		5.5	
West	8.5		12.2		13.4		14.9		20.6	
Midwest/north	6.4		6.3		8.8		8.3		7.8	
South	5.2		7.6		6.7		9.1		8.8	
Midwest/south	15.6		11.4		10.4		10.1		7.0	
Northeast and other	64.3		62.5		60.6		57.7		55.9	
Smoking status										
Never	21.5		30.4		36.2		41.2		44.4	
Former	16.0		23.1		26.5		30.3		33.2	
Current (1-14/d)	14.3		11.6		12.9		8.8		9.3	
Current (15-34/d)	39.6		30.0		20.4		17.1		11.4	
Current (35+/d)	8.6		5.0		3.8		2.7		1.6	
Physical activity ^c	2.8	(1.4)	3.0	(1.4)	2.9	(1.4)	3.1	(1.4)	2.9	(1.4)
BMI (kg/m²) ^a										
<22	32.2		28.3		24.7		27.3		24.2	
22 -<24	22.4		22.7		20.0		16.1		18.1	
24 -<27	22.3		23.5		27.2		25.7		25.5	
27 -<30	11.5		13.6		15.4		14.1		14.5	
>=30	11.6		12.0		12.8		16.8		17.7	

a. There are missing data, so the total n's are not identical.

b. West: AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY, and HI

Midwest/north: IA, KS, MI, ND, NE, SD, WI, and MN

South: AL, FL, LA, MS, TN, TX, AR, GA, and OK

Midwest/south IL, IN, KY, MO, VA, SC, NC, OH, and WV

Northeast and other : DE, MD, NJ, DC, AK, CT, GU, MA, ME, MI, NH, NY, PA, PR, PI, VI, and VT

c. Physical activity levels were measured in different ways in the Nurse's Health Study (NHS) and the Health Professionals Follow-Up Study (HPFS). In the HPFS, metabolic equivalents (METs) per week were calculated. In the NHS, the average recreational physical activity levels were calculated using the criteria of Hu et al. (29) based on information from the 1980 and 1982 questionnaires. Reported values are the means of physical activity level quintiles in each study.