

Supplementary Table A: Correlation between the top 5 contributors to gluten on the baseline semi-quantitative food frequency questionnaire (1986) and 7-day dietary recall.

Food	NHS^a	HPFS^b
<i>Dark Bread</i> Percentage of gluten• Correlation with dietary recall*	15% 0.77	14% 0.37
<i>Pasta</i> Percentage of gluten• Correlation with dietary recall*	15% 0.35	13% 0.70
<i>Cold cereal</i> Percentage of gluten• Correlation with dietary recall*	14% 0.79	15% 0.86
<i>White bread</i> Percentage of gluten• Correlation with dietary recall*	12% 0.71	9% 0.45
<i>Pizza</i> Percentage of gluten• Correlation with dietary recall*	9% Not measured	9% 0.42

NHS=Nurses' Health Study; HPFS=Health Professionals Follow-up Study

- Percentage of gluten was calculated as the proportion of total ingested gluten that was ingested in each food type.

*Pearson correlation coefficients are reported.

^a Salvini S, Hunter DJ, Sampson L, et al. Food-based validation of a dietary questionnaire: the effects of week-to-week variation in food consumption. *Int J Epidemiol.* 1989;18:858-67.

^b Feskanich D, Rimm EB, Giovannucci EL, et al. Reproducibility and validity of food intake measurements from a semiquantitative food frequency questionnaire. *J Am Diet Assoc.* 1993;93:790-6.

Supplementary Table B: Gluten and risk of fatal and non-fatal myocardial infarctions

Gluten Quintile	1 (lowest)	2	3	4	5 (highest)	p for trend
NHS (mean, median, range)	2.6, 2.8, 0-3.4	3.8, 3.8, 3.4-4.3	4.7, 4.7 4.3-5.1	5.6, 5.6, 5.1-6.2	7.5, 7.1, 6.2-26.7	
HPFS (mean, median, range)	3.3, 3.5, 0-4.3	4.9, 4.9, 4.3-5.5	6.0, 6.0, 5.5-6.6	7.3, 7.3, 6.6-8.1	10.0, 9.4, 8.1-38.4	
Fatal MI						
Number of events	612	433	429	392	420	
Person-years	404450	453285	469817	477459	468920	
Incidence per 100,000 person-years	151	96	91	82	90	
Multivariable-adjusted HR (95% CI) ^a	1.0 (reference)	0.89 (0.79 to 1.01)	0.93 (0.82 to 1.05)	0.89 (0.78 to 1.01)	0.93 (0.82 to 1.06)	0.08
Non-Fatal MI						
Number of events	810	805	914	835	879	
Person-years	404450	453285	469817	477459	468920	
Incidence per 100,000 person-years	200	178	195	175	187	
Non-Fatal MI: Multivariable-adjusted HR (95% CI) ^a	1.0 (reference)	0.94 (0.85 to 1.04)	1.04 (0.95 to 1.15)	0.94 (0.86 to 1.04)	1.01 (0.92 to 1.12)	0.83

^a Adjusted for age, race, BMI, height, history of diabetes, regular NSAID use, current use of multivitamin, alcohol intake (g/d), smoking (pack, years), aspirin use, statin use, parental history of myocardial infarction, history of hypertension, history of hypercholesterolemia, physical activity (MET, h/wk), menopausal status (NHS only) and menopausal hormone use (NHS only), trans fat, red meat, processed meat, polyunsaturated fats, fruits, and vegetables.

Supplementary Table C: Gluten and risk of coronary heart disease events (fatal and non-fatal myocardial infarctions) by deciles of energy-adjusted gluten intake

Gluten Decile	1 (lowest)	2	3	4	5	6	7	8	9	10 (highest)	p for trend
Median (range) gluten intake, women (g/d) ^a	2.3 (0-2.8)	3.1 (2.8-3.4)	3.6 (3.4-3.8)	4.1 (3.8-4.3)	4.5 (4.3-4.7)	4.9 (4.7-5.1)	5.3 (5.1-5.6)	5.8 (5.6-6.2)	6.5 (6.2-7.1)	8.0 (7.1-26.7)	
Median (range) gluten intake, men (g/d) ^a	2.8 (0-3.5)	3.9 (3.5-4.3)	4.6 (4.3-4.9)	5.2 (4.9-5.5)	5.8 (5.5-6.0)	6.3 (6.0-6.6)	6.9 (6.6-7.3)	7.6 (7.3-8.1)	8.6 (8.1-9.4)	10.6 (9.4-38.4)	
Number of Events	716	706	622	616	698	645	600	627	660	639	
Person-years	188727	215722	223746	229540	233180	236637	238032	239427	238120	230801	
Incidence per 100,000 person-years	379	327	278	268	299	273	252	262	277	277	
Multivariable-adjusted HR (95% CI) ^b	1 (ref)	0.96 (0.86 to 1.06)	0.87 (0.78 to 0.97)	0.86 (0.77 to 0.96)	0.98 (0.88 to 1.09)	0.90 (0.81 to 1.00)	0.84 (0.75 to 0.94)	0.89 (0.79 to 0.99)	0.95 (0.85 to 1.06)	0.91 (0.81 to 1.01)	0.15

^aEnergy-adjusted, at baseline (1986)

^b Adjusted for age, race, BMI, height, history of diabetes, regular NSAID use, current use of multivitamin, alcohol intake (g/d), smoking (pack, years), aspirin use, statin use, parental history of myocardial infarction, history of hypertension, history of hypercholesterolemia, physical activity (MET, h/wk), menopausal status (NHS only) and menopausal hormone use (NHS only), trans fat, red meat, processed meat, polyunsaturated fats, fruits, and vegetables.

Supplementary Table D1: Gluten and risk of coronary heart disease (fatal and non-fatal myocardial infarctions), during the years 1986-1997

	Quintile of energy-adjusted gluten intake					p for trend
	1 (lowest)	2	3	4	5 (highest)	
NHS						
Daily gluten intake (g/d)						
Mean, median	2.6, 2.8	3.8, 3.8	4.7, 4.7	5.6, 5.6	7.5, 7.1	
Range	0-3.4	3.4-4.3	4.3-5.1	5.1-6.2	6.2-26.7	
Number of Events	246	206	219	219	210	
Person-years	255378	283760	291502	296797	293159	
Incidence per 100,000 person-years	96	73	75	74	72	
Age-adjusted HR (95% CI) ^a	1.0 (reference)	0.82 (0.68 to 0.98)	0.87 (0.72 to 1.04)	0.86 (0.72 to 1.03)	0.82 (0.68 to 0.98)	0.09
Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	0.91 (0.76 to 1.10)	0.99 (0.83 to 1.19)	1.00 (0.83 to 1.20)	0.92 (0.76 to 1.10)	0.58
Full Model ^c	1.0 (reference)	0.90 (0.75 to 1.09)	0.98 (0.82 to 1.18)	0.99 (0.82 to 1.19)	0.91 (0.75 to 1.10)	0.54
HPFS						
Daily gluten intake (g/d)						
Mean, median	3.3, 3.5	4.9, 4.9	6.0, 6.0	7.3, 7.3	10.0, 9.4	
Range	0-4.3	4.3-5.5	5.5-6.6	6.6-8.1	8.1-38.4	
Number of Events	441	373	402	352	354	
Person-years	165937	178215	184177	185195	181380	
Incidence per 100,000 person-years	266	209	218	190	195	
Age-adjusted HR (95% CI) ^a	1.0 (reference)	0.88 (0.77 to 1.01)	0.97 (0.84 to 1.11)	0.85 (0.74 to 0.98)	0.88 (0.77 to 1.02)	0.08
Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	0.92 (0.80 to 1.05)	1.03 (0.90 to 1.18)	0.92 (0.80 to 1.06)	0.94 (0.82 to 1.08)	0.41
Full Model ^c	1.0 (reference)	0.91 (0.79 to 1.04)	1.02 (0.89 to 1.17)	0.91 (0.79 to 1.04)	0.92 (0.80 to 1.07)	0.27
Pooled						
Number of Events	687	579	621	571	564	
Person-years	421315	461975	475679	481992	474538	
Incidence per 100,000 person-years	163	125	131	118	119	
Age-adjusted HR (95% CI)	1.0 (reference)	0.85 (0.76 to 0.95)	0.92 (0.83 to 1.03)	0.85 (0.76 to 0.95)	0.84 (0.75 to 0.94)	0.0076

Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	0.91 (0.82 to 1.02)	1.01 (0.90 to 1.12)	0.94 (0.84 to 1.05)	0.92 (0.82 to 1.03)	0.20
Full Model HR (95% CI) ^c	1.0 (reference)	0.90 (0.80 to 1.00)	0.98 (0.88 to 1.10)	0.91 (0.81 to 1.01)	0.89 (0.79 to 0.99)	0.05

NHS=Nurses' Health Study; HPFS=Health Professionals Follow-up Study

a: Age-adjusted only

b: Above model additionally adjusted for race, BMI, height, history of diabetes, regular NSAID use, current use of multivitamin, alcohol intake (g/d), smoking (pack, years), aspirin use, statin use, parental history of myocardial infarction, history of hypertension, history of hypercholesterolemia, physical activity (MET, h/wk), menopausal status (NHS only) and menopausal hormone use (NHS only).

c: Above model additionally adjusted trans fat, red meat, processed meat, polyunsaturated fats, fruits, and vegetables.

Supplementary Table D2: Gluten and risk of coronary heart disease (fatal and non-fatal myocardial infarctions), during the years 1998-2012

	Quintile of energy-adjusted gluten intake					p for trend
	1 (lowest)	2	3	4	5 (highest)	
NHS						
Daily gluten intake (g/d)						
Mean, median	2.6, 2.8	3.8, 3.8	4.7, 4.7	5.6, 5.6	7.5, 7.1	
Range	0-3.4	3.4-4.3	4.3-5.1	5.1-6.2	6.2-26.7	
Number of Events	246	264	275	252	294	
Person-years	106777	129998	137173	141358	139346	
Incidence per 100,000 person-years	230	203	200	178	211	
Age-adjusted HR (95% CI) ^a	1.0 (reference)	0.94 (0.79 to 1.11)	0.94 (0.79 to 1.12)	0.83 (0.70 to 0.99)	0.96 (0.81 to 1.14)	0.44
Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	1.03 (0.86 to 1.22)	1.05 (0.88 to 1.25)	0.94 (0.78 to 1.12)	1.07 (0.90 to 1.27)	0.71
Full Model ^c	1.0 (reference)	1.02 (0.86 to 1.22)	1.06 (0.89 to 1.26)	0.94 (0.79 to 1.13)	1.09 (0.91 to 1.30)	0.54
HPFS						
Daily gluten intake (g/d)						
Mean, median	3.3, 3.5	4.9, 4.9	6.0, 6.0	7.3, 7.3	10.0, 9.4	
Range	0-4.3	4.3-5.5	5.5-6.6	6.6-8.1	8.1-38.4	
Number of Events	489	395	447	404	441	
Person-years	62823	74218	79556	80480	77654	
Incidence per 100,000 person-years	778	532	562	502	568	
Age-adjusted HR (95% CI) ^a	1.0 (reference)	0.75 (0.66 to 0.86)	0.83 (0.73 to 0.94)	0.76 (0.67 to 0.87)	0.88 (0.77 to 1.00)	0.13
Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	0.81 (0.71 to 0.93)	0.91 (0.80 to 1.04)	0.85 (0.75 to 0.98)	1.00 (0.87 to 1.14)	0.74
Full Model ^c	1.0 (reference)	0.81 (0.71 to 0.92)	0.90 (0.79 to 1.02)	0.84 (0.73 to 0.96)	0.97 (0.85 to 1.11)	0.96
Pooled						
Number of Events	735	659	722	656	735	
Person-years	169601	204216	216729	221838	217000	
Incidence per 100,000 person-years	433	323	333	296	339	
Age-adjusted HR (95% CI)	1.0 (reference)	0.81 (0.73 to 0.90)	0.86 (0.78 to 0.96)	0.77 (0.69 to 0.86)	0.88 (0.80 to 0.98)	0.06
Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	0.88 (0.79 to 0.98)	0.96 (0.86 to 1.06)	0.88 (0.79 to 0.98)	1.02 (0.92 to 1.13)	0.46

Full Model HR (95% CI) ^c	1.0 (reference)	0.87 (0.78 to 0.97)	0.94 (0.85 to 1.04)	0.86 (0.77 to 0.96)	0.99 (0.89 to 1.10)	0.84
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a: Age-adjusted only

b: Above model additionally adjusted for race, BMI, height, history of diabetes, regular NSAID use, current use of multivitamin, alcohol intake (g/d), smoking (pack, years), aspirin use, statin use, parental history of myocardial infarction, history of hypertension, history of hypercholesterolemia, physical activity (MET, h/wk), menopausal status (NHS only) and menopausal hormone use (NHS only).

c: Above model additionally adjusted trans fat, red meat, processed meat, polyunsaturated fats, fruits, and vegetables.

Supplementary Table E: Gluten and risk of coronary heart disease (fatal and non-fatal myocardial infarctions), now not suspending dietary data after a diagnosis of diabetes, cardiovascular disease or cancer.

	Quintile of energy-adjusted gluten intake					p for trend
	1 (lowest)	2	3	4	5 (highest)	
NHS						
Daily gluten intake (g/d)						
Mean, median	2.6, 2.8	3.8, 3.8	4.7, 4.7	5.6, 5.6	7.5, 7.1	
Range	0-3.4	3.4-4.3	4.3-5.1	5.1-6.2	6.2-26.7	
Number of events	475	489	488	463	516	
Person-years	265305	280725	285856	287862	287780	
Incidence per 100,000 person-years	179	174	171	161	179	
Age-adjusted HR (95% CI) ^a	1.0 (reference)	1.01 (0.89 to 1.15)	0.99 (0.88 to 1.13)	0.94 (0.82 to 1.06)	1.02 (0.90 to 1.16)	0.85
Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	1.03 (0.90 to 1.17)	1.01 (0.89 to 1.14)	0.94 (0.82 to 1.07)	1.01 (0.89 to 1.15)	0.69
Full Model ^c	1.0 (reference)	1.02 (0.90 to 1.16)	1.01 (0.89 to 1.14)	0.94 (0.82 to 1.07)	1.03 (0.90 to 1.17)	0.91
HPFS						
Daily gluten intake (g/d)						
Mean, median	3.3, 3.5	4.9, 4.9	6.0, 6.0	7.3, 7.3	10.0, 9.4	
Range	0-4.3	4.3-5.5	5.5-6.6	6.6-8.1	8.1-38.4	
Number of events	863	827	851	770	787	
Person-years	163420	173056	176357	177322	176235	
Incidence per 100,000 person-years	528	478	483	434	447	
Age-adjusted HR (95% CI) ^a	1.0 (reference)	0.94 (0.86 to 1.04)	0.98 (0.89 to 1.08)	0.90 (0.82 to 0.99)	0.95 (0.86 to 1.05)	0.18
Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	0.97 (0.88 to 1.07)	1.03 (0.94 to 1.14)	0.96 (0.87 to 1.06)	1.02 (0.93 to 1.13)	0.85
Full Model ^c	1.0 (reference)	0.96 (0.88 to 1.06)	1.02 (0.93 to 1.12)	0.94 (0.85 to 1.04)	1.00 (0.91 to 1.10)	0.79
Pooled						
Number of events	1338	1316	1339	1233	1303	
Person-years	428725	453781	462213	465184	464015	
Incidence per 100,000 person-years	312	290	290	265	281	
Age-adjusted HR (95% CI)	1.0 (reference)	0.97 (0.90 to 1.05)	0.99 (0.92 to 1.07)	0.91 (0.84 to 0.99)	0.96 (0.89 to 1.04)	0.16

Multivariable-adjusted HR (95% CI) ^b	1.0 (reference)	1.00 (0.92 to 1.08)	1.03 (0.95 to 1.11)	0.95 (0.88 to 1.03)	1.02 (0.95 to 1.10)	0.99
Full Model HR (95% CI) ^c	1.0 (reference)	0.98 (0.91 to 1.06)	1.00 (0.93 to 1.08)	0.93 (0.86 to 1.00)	0.99 (0.92 to 1.07)	0.44

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c: Above model additionally adjusted trans fat, red meat, processed meat, polyunsaturated fats, fruits, and vegetables.