Supplementary Online Content

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eMethods. Statistical Analysis

We categorized participants into quintile categories according to percentage of energy from protein (total, animal and plant protein) and estimated HRs and their 95% CIs according to quintile categories, with the lowest quintile as reference. For total protein intake, we also divided participants into three categories based on the Dietary Reference Intakes for Japanese guideline [low (<13%), normal (13-20%) and high groups (>20%)], and estimated HRs for lower and higher intake groups compared to the recommended level intake group[1]. We conducted sensitivity analyses by further adjusting for diet quality score[2], other dietary and nutrient factors (including other dietary variables, including vegetables, fruits, pulses/soy foods, red and processed meat, fish, polyunsaturated fatty acids, folate, fiber and sodium), and history of hypertension, dyslipidemia and diabetes, and by excluding deaths that occurred in the first 5 years of follow-up. We conducted sub-group analyses by smoking status (never smoker, past/current smoker), alcohol drinking (never/occasional drinker vs regular drinker), body mass index (<25, ≥25 kg/m^2), age at baseline (<60, ≥60 years) and physical activity (by median of MET-hr/day value), and tested the significance of the interaction by the likelihood ratio test.

The assumption of proportionality of the hazard was assessed in all models through the Grambsch and Therneau test[3]. Variables for which the test was significant (that is, for which assuming that their effect on the hazard was not constant over time) were entered in the model as stratification factors. This is basically equivalent to specifying a different hazard for each stratum of the variable and thus to removing the proportionality constraint. In order to describe the potential non-linear effect of the exposure variable while avoiding overfitting, we first fitted three models corresponding to increasingly complex functional shapes of the effect: 1) linear effect, and non-linear effects modeled with natural cubic splines with 2) one knot at the first tertile, and 3) two knots at the tertiles of the distribution of the exposure variable. The best fitting model was then selected based on the likelihood ratio test. Because some of the models showed better fit with natural cubic spline with 1 knot for both plant and animal protein, we presented HRs in quintile categories in Table 2.

Among eligible study participants, some participants had missing information for covariates (2096 for body mass index; 4620 for smoking; 1666 for drinking; 2625 for physical activity; 3127 for green tea consumption; 4169 for green tea consumption; 2989 for occupation). We applied multiple imputation to impute missing values for these covariates and performed all analyses by including these participants in the study population. Fifteen imputed datasets were generated using the multiple imputation by chained equations procedure in which all variables of interest (exposure and covariates) as well as the outcome were used to impute missing values. Models were then fitted to each imputed dataset and results combined using Rubin's rule. Analyses were performed with the 'mice' R package.

Estimation of the hazard ratios associated with a substitution of 3% energy from several animal protein sources with plant protein was based on the partition model[4]. Briefly, a model including plant protein, the various sources of animal protein and adjusted for total energy intake, fat and carbohydrate intake - as well as other lifestyle variables included in footnote of Table 2 - was fitted. The substitution effect of plant protein for a particular source of animal protein was then estimated as the exponential of the difference between the coefficient associated with plant protein and the coefficient associated with that specific source of animal protein.

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We estimated absolute risk reduction at 15 years associated with a substitution of 3% energy from different types of animal protein sources with plant protein. Absolute risk reduction was defined as the difference after 15 years of follow-up between survival estimated in the study population and the counterfactual survival computed under the hypothesis of a 3% substitution for all individuals in the population. The population survival was estimated through the Kaplan-Meier estimator and the counterfactual survivals were computed by raising the population survival to the power of each of the 3%-substitution hazard ratios (Figure 1). For confidence interval estimation, population survival was considered known and only variability in the hazard ratio estimates was taken into account.

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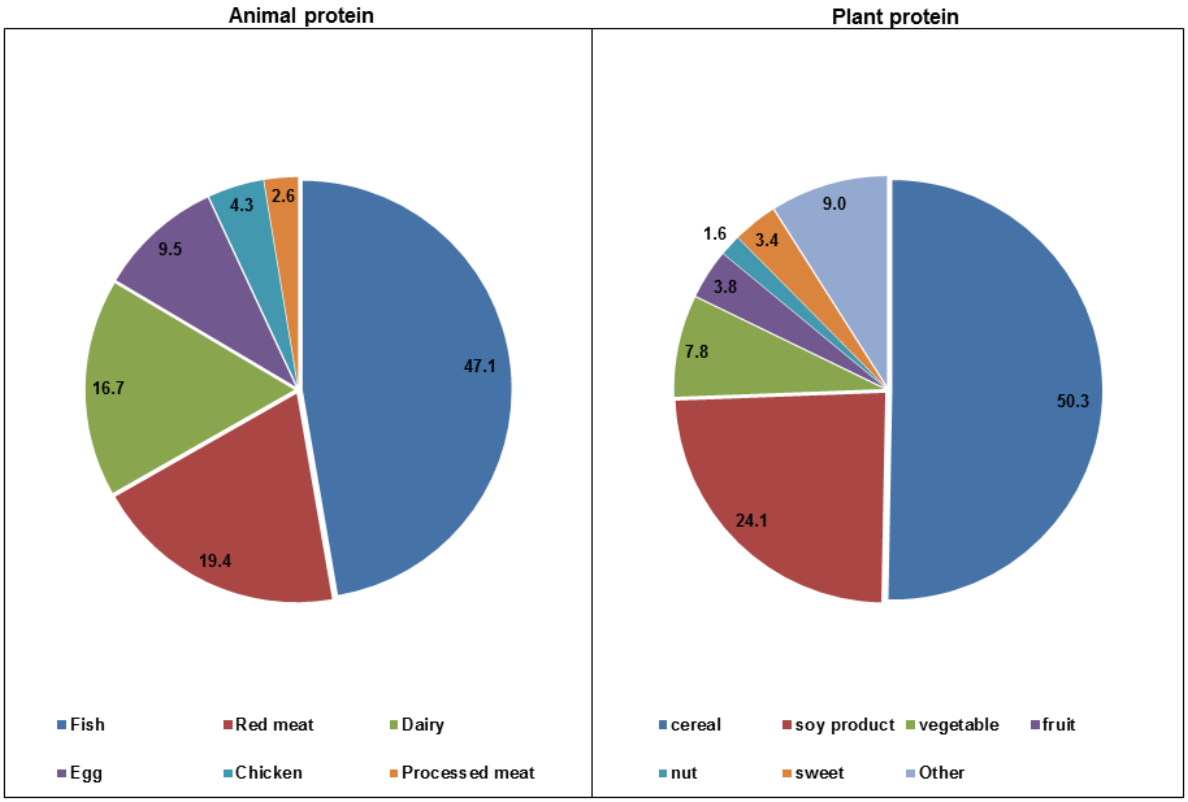
eFigure. Contribution of Specific Foods to Animal and Plant Protein Intake



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eTable 1. Hazard Ratios (HRs) and 95% CIs for Cancer-Specific Mortality According to Percentage of Energy From Animal and Plant Protein Intake

	Quintile (Q) category of intake					P trend
	Q1	Q2	Q3	Q4	Q5	
Animal protein						
Gastric cancer						
No. of deaths	185	130	144	130	127	
HR (95% CI)[a]	1 [Reference]	0.70 (0.55-0.90)	0.82 (0.63-1.06)	0.79 (0.58-1.08)	0.84 (0.57-1.23)	0.60
HR (95% CI)[b]	1 [Reference]	0.69 (0.53-0.89)	0.83 (0.62-1.10)	0.81 (0.58-1.14)	0.88 (0.58-1.33)	0.86
Colorectal cancer						
No. of deaths	128	114	112	119	107	
HR (95% CI)[a]	1 [Reference]	0.92 (0.70-1.20)	0.94 (0.70-1.28)	1.08 (0.77-1.51)	1.03 (0.68-1.57)	0.66
HR (95% CI)[b]	1 [Reference]	0.85 (0.63-1.15)	0.84 (0.61-1.18)	0.97 (0.67-1.42)	0.87 (0.55-1.38)	0.78
Liver cancer						
No. of deaths	77	98	78	90	86	
HR (95% CI)[a]	1 [Reference]	1.38 (1.00-1.90)	1.18 (0.81-1.70)	1.49 (0.99-2.24)	1.53 (0.93-2.53)	0.12
HR (95% CI)[b]	1 [Reference]	1.38 (0.97-1.95)	0.99 (0.66-1.49)	1.30 (0.82-2.05)	1.13 (0.64-1.98)	0.78
Pancreatic cancer						
No. of deaths	92	95	105	79	77	
HR (95% CI)[a]	1 [Reference]	1.07 (0.78-1.45)	1.23 (0.87-1.72)	0.95 (0.64-1.43)	1.03 (0.63-1.69)	0.92
HR (95% CI)[b]	1 [Reference]	1.10 (0.78-1.53)	1.23 (0.85-1.79)	0.99 (0.64-1.53)	1.08 (0.63-1.86)	0.94
Lung cancer						
No. of deaths	227	219	196	187	193	
HR (95% CI)[a]	1 [Reference]	0.94 (0.77-1.15)	0.87 (0.70-1.10)	0.88 (0.68-1.15)	0.92 (0.67-1.26)	0.54
HR (95% CI)[b]	1 [Reference]	1.06 (0.85-1.32)	1.01 (0.79-1.30)	1.00 (0.75-1.32)	1.11 (0.78-1.57)	0.74
Prostate cancer						
No. of deaths	38	28	32	24	25	
HR (95% CI)[a]	1 [Reference]	0.87 (0.51-1.47)	1.15 (0.64-2.04)	1.07 (0.53-2.13)	1.36 (0.59-3.15)	0.41
HR (95% CI)[b]	1 [Reference]	0.85 (0.47-1.54)	1.08 (0.57-2.05)	0.86 (0.39-1.88)	1.05 (0.42-2.66)	0.92
Breast cancer						
No. of deaths	23	19	28	28	25	
HR (95% CI)[a]	1 [Reference]	0.55 (0.29-1.03)	0.64 (0.34-1.21)	0.52 (0.26-1.06)	0.36 (0.15-0.86)	0.04
HR (95% CI)[b]	1 [Reference]	0.67 (0.33-1.35)	0.73 (0.36-1.50)	0.74 (0.34-1.62)	0.46 (0.17-1.25)	0.21
Plant protein						
Gastric cancer						
No. of deaths	118	174	147	150	127	
HR (95% CI)[a]	1 [Reference]	1.34 (1.04-1.71)	1.11 (0.85-1.46)	1.13 (0.84-1.51)	1.01 (0.70-1.46)	0.73
HR (95% CI)[b]	1 [Reference]	1.32 (0.99-1.75)	1.24 (0.89-1.71)	1.28 (0.89-1.85)	1.12 (0.70-1.78)	0.72
Colorectal cancer						
No. of deaths	140	111	111	114	104	
HR (95% CI)[a]	1 [Reference]	0.78 (0.60-1.02)	0.78 (0.59-1.04)	0.78 (0.57-1.06)	0.73 (0.50-1.08)	0.16
HR (95% CI)[b]	1 [Reference]	0.85 (0.63-1.15)	0.80 (0.56-1.12)	0.92 (0.62-1.35)	0.90 (0.56-1.46)	0.82
Liver cancer						
No. of deaths	98	89	78	90	74	
HR (95% CI)[a]	1 [Reference]	0.97 (0.72-1.32)	0.90 (0.64-1.26)	1.08 (0.76-1.55)	1.04 (0.66-1.64)	0.73
HR (95% CI)[b]	1 [Reference]	0.96 (0.67-1.38)	0.97 (0.64-1.46)	1.17 (0.74-1.86)	1.05 (0.59-1.86)	0.67
Pancreatic cancer						
No. of deaths	72	91	89	99	97	
HR (95% CI)[a]	1 [Reference]	1.16 (0.84-1.60)	1.09 (0.77-1.54)	1.17 (0.80-1.69)	1.14 (0.73-1.78)	0.62
HR (95% CI)[b]	1 [Reference]	1.24 (0.86-1.79)	1.15 (0.76-1.73)	1.26 (0.80-2.01)	1.24 (0.70-2.17)	0.51
Lung cancer						
No. of deaths	257	226	196	178	165	
HR (95% CI)[a]	1 [Reference]	0.92 (0.76-1.12)	0.86 (0.69-1.06)	0.82 (0.65-1.04)	0.89 (0.67-1.19)	0.30
HR (95% CI)[b]	1 [Reference]	1.03 (0.83-1.29)	1.01 (0.78-1.31)	0.98 (0.72-1.32)	1.09 (0.75-1.59)	0.79
Prostate cancer						
No. of deaths	38	26	33	23	27	
HR (95% CI)[a]	1 [Reference]	0.71 (0.42-1.19)	0.97 (0.58-1.63)	0.70 (0.38-1.27)	0.88 (0.44-1.77)	0.74

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	HR (95% CI)[b]	1 [Reference]	0.85 (0.45-1.59)	1.22 (0.64-2.32)	1.03 (0.48-2.24)	1.25 (0.50-3.12)	0.56
Breast cancer							
	No. of deaths	19	18	28	21	37	
	HR (95% CI)[a]	1 [Reference]	0.65 (0.33-1.28)	0.82 (0.41-1.63)	0.51 (0.23-1.12)	0.73 (0.30-1.81)	0.43
	HR (95% CI)[b]	1 [Reference]	0.83 (0.39-1.80)	1.09 (0.49-2.41)	0.62 (0.25-1.53)	0.87 (0.30-2.54)	0.66

[a]adjusted for age (≤50, 51-55, 56-60, 61-65, 66-70, >70 years), gender and percentage of energy from saturated fat, monounsaturated fat, polyunsaturated fat, and other fat (all continuous).
[b]further adjusted for body mass index (<22.5, 22.5-<25.0, 25.0-<27.5, ≥27.5 kg/m^2), smoking (never, past, current smoker with ≤20 cigarettes/day, >20 cigarettes/day), alcohol use (non/occasional drinker, regular drinker of ethanol of <150, 150-<300, ≥300 g/day), physical activity (quartile category, MET-hr/day), occupation status (agriculture/forestry/fishery, salaried/professional, self-employed, housework/unemployed, or other) and intake of green tea (never, <1, 1, 2-3 or ≥4 cups/day), coffee (never, <1, 1, ≥2 cups/day) and total energy.

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eTable 2. Hazard Ratios (HRs) and 95% CIs for All-Cause and Cause-Specific Mortality According to Percentage of Energy From Total, Animal, and Plant Protein Intake (Using 83 647 Participants After Imputing Missing Values Based on the Multiple Imputation Method)

	Quintile (Q) category of intake					P trend
	Q1	Q2	Q3	Q4	Q5	
Total protein						
Total mortality						
No. of deaths	3896	3181	2991	2868	3128	
HR (95% CI)[a]	1 [Reference]	0.91 (0.86-0.96)	0.91 (0.86-0.96)	0.89 (0.84-0.95)	0.98 (0.91-1.06)	0.56
HR (95% CI)[b]	1 [Reference]	0.95 (0.90-1.00)	0.95 (0.89-1.01)	0.94 (0.87-1.00)	1.00 (0.92-1.09)	0.89
Cancer mortality						
No. of deaths	1539	1254	1200	1152	1218	
HR (95% CI)[a]	1 [Reference]	0.89 (0.82-0.97)	0.91 (0.83-0.99)	0.89 (0.80-0.98)	0.96 (0.85-1.08)	0.54
HR (95% CI)[b]	1 [Reference]	0.94 (0.86-1.02)	0.96 (0.87-1.06)	0.93 (0.84-1.04)	1.01 (0.89-1.15)	0.89
Cardiovascular disease mortality						
No. of deaths	997	790	717	728	813	
HR (95% CI)[a]	1 [Reference]	0.89 (0.80-0.99)	0.86 (0.76-0.96)	0.89 (0.78-1.01)	0.98 (0.85-1.14)	0.83
HR (95% CI)[b]	1 [Reference]	0.91 (0.81-1.02)	0.87 (0.76-0.99)	0.93 (0.81-1.08)	0.99 (0.84-1.17)	0.95
Heart disease mortality						
No. of deaths	517	413	352	361	412	
HR (95% CI)[a]	1 [Reference]	0.92 (0.80-1.06)	0.84 (0.72-0.99)	0.89 (0.75-1.07)	1.01 (0.82-1.25)	0.99
HR (95% CI)[b]	1 [Reference]	0.90 (0.76-1.05)	0.82 (0.69-0.99)	0.90 (0.74-1.10)	0.99 (0.79-1.25)	0.97
Cerebrovascular disease mortality						
No. of deaths	404	294	290	294	328	.
HR (95% CI)[a]	1 [Reference]	0.79 (0.67-0.93)	0.80 (0.67-0.96)	0.81 (0.66-0.99)	0.89 (0.70-1.12)	0.46
HR (95% CI)[b]	1 [Reference]	0.85 (0.71-1.02)	0.85 (0.70-1.04)	0.93 (0.75-1.17)	0.95 (0.73-1.24)	0.99
Animal protein						
Total mortality						
No. of deaths	3760	3107	3050	2978	3169	.
HR (95% CI)[a]	1 [Reference]	0.93 (0.88-0.98)	0.94 (0.89-1.00)	0.96 (0.90-1.02)	1.00 (0.92-1.08)	0.77
HR (95% CI)[b]	1 [Reference]	0.94 (0.89-1.00)	0.96 (0.90-1.02)	0.99 (0.92-1.06)	1.00 (0.91-1.09)	0.70
Cancer mortality						
No. of deaths	1462	1218	1238	1200	1245	
HR (95% CI)[a]	1 [Reference]	0.90 (0.83-0.97)	0.93 (0.85-1.02)	0.93 (0.84-1.03)	0.94 (0.83-1.07)	0.56
HR (95% CI)[b]	1 [Reference]	0.92 (0.84-1.00)	0.95 (0.86-1.04)	0.96 (0.86-1.07)	0.96 (0.84-1.11)	0.85
Cardiovascular disease mortality						
No. of deaths	967	793	720	756	809	.
HR (95% CI)[a]	1 [Reference]	0.96 (0.87-1.06)	0.91 (0.81-1.02)	1.00 (0.88-1.14)	1.05 (0.89-1.22)	0.49
HR (95% CI)[b]	1 [Reference]	0.94 (0.84-1.05)	0.92 (0.81-1.04)	1.03 (0.89-1.18)	1.02 (0.85-1.21)	0.55
Heart disease mortality						
No. of deaths	488	418	354	387	408	.
HR (95% CI)[a]	1 [Reference]	1.03 (0.89-1.19)	0.92 (0.78-1.09)	1.07 (0.89-1.28)	1.12 (0.89-1.39)	0.33
HR (95% CI)[b]	1 [Reference]	1.01 (0.86-1.18)	0.92 (0.77-1.10)	1.06 (0.87-1.30)	1.08 (0.84-1.38)	0.47
Cerebrovascular disease mortality						
No. of deaths	403	304	285	294	324	.
HR (95% CI)[a]	1 [Reference]	0.85 (0.72-0.99)	0.81 (0.68-0.97)	0.86 (0.70-1.05)	0.90 (0.70-1.16)	0.52
HR (95% CI)[b]	1 [Reference]	0.85 (0.71-1.02)	0.84 (0.69-1.02)	0.93 (0.75-1.16)	0.91 (0.69-1.20)	0.76
Plant protein						
Total mortality						
No. of deaths	3592	3145	3098	2978	3251	.
HR (95% CI)[a]	1 [Reference]	0.86 (0.82-0.91)	0.83 (0.78-0.87)	0.77 (0.72-0.82)	0.81 (0.76-0.87)	<0.001
HR (95% CI)[b]	1 [Reference]	0.89 (0.84-0.95)	0.88 (0.82-0.94)	0.84 (0.78-0.91)	0.87 (0.80-0.95)	0.002
Cancer mortality						
No. of deaths	1413	1317	1209	1204	1220	
HR (95% CI)[a]	1 [Reference]	0.93 (0.86-1.01)	0.85 (0.78-0.93)	0.84 (0.76-0.92)	0.85 (0.76-0.95)	0.001
HR (95% CI)[b]	1 [Reference]	0.99 (0.90-1.08)	0.94 (0.85-1.05)	0.96 (0.86-1.08)	0.98 (0.85-1.13)	0.69

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		Quintile (Q) category of intake					P trend
		Q1	Q2	Q3	Q4	Q5	
Cardiovascular disease mortality							
	No. of deaths	906	775	765	736	863	.
	HR (95% CI)[a]	1 [Reference]	0.80 (0.73-0.89)	0.75 (0.67-0.83)	0.67 (0.60-0.76)	0.73 (0.63-0.83)	<0.001
	HR (95% CI)[b]	1 [Reference]	0.82 (0.73-0.92)	0.78 (0.68-0.88)	0.72 (0.62-0.83)	0.75 (0.63-0.90)	0.001
Heart disease mortality							
	No. of deaths	460	408	384	371	432	.
	HR (95% CI)[a]	1 [Reference]	0.85 (0.74-0.98)	0.77 (0.66-0.90)	0.71 (0.60-0.83)	0.78 (0.64-0.95)	0.003
	HR (95% CI)[b]	1 [Reference]	0.85 (0.72-0.99)	0.78 (0.65-0.94)	0.74 (0.60-0.91)	0.78 (0.61-1.01)	0.04
Cerebrovascular disease mortality							
	No. of deaths	369	274	311	296	360	.
	HR (95% CI)[a]	1 [Reference]	0.66 (0.56-0.78)	0.69 (0.58-0.81)	0.59 (0.49-0.71)	0.62 (0.50-0.77)	<0.001
	HR (95% CI)[b]	1 [Reference]	0.71 (0.59-0.86)	0.75 (0.61-0.92)	0.67 (0.53-0.85)	0.69 (0.52-0.92)	0.001

[a]adjusted for age (≤50, 51-55, 56-60, 61-65, 66-70, >70 years), gender, and percentage of energy from saturated fat, monounsaturated fat, polyunsaturated fat, and other fat (all continuous).
[b]further adjusted for body mass index (<22.5, 22.5-<25.0, 25.0-<27.5, ≥27.5 kg/m^2), smoking (never, past, current smoker with ≤20 cigarettes/day, >20 cigarettes/day), alcohol use (non/occasional drinker, regular drinker of ethanol of <150, 150-<300, ≥300 g/day), physical activity (quartile category, MET-hr/day), occupation status (agriculture/forestry/fishery, salaried/professional, self-employed, housework/unemployed, or other) and intake of green tea (never, <1, 1, 2-3 or ≥4 cups/day), coffee (never, <1, 1, ≥2 cups/day) and total energy.
Mutual adjustment was done for animal protein and plant protein in the respective analysis.

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eTable 3. Hazard Ratios (HRs) and 95% CI for All-Cause Mortality According to Percentage of Energy From Plant Protein Intake Stratified by Lifestyle Factors

	Quintile (Q) category of intake					P trend	P int.
	Q1	Q2	Q3	Q4	Q5		
Smoking Status							
Never, n	1120	1158	1329	1392	1588		
HR (95 % CI)	1 [Reference]	0.82 (0.74-0.91)	0.84 (0.75-0.94)	0.78 (0.69-0.89)	0.80 (0.69-0.93)	0.01	
Past/current, n	1618	1317	1098	928	833		.
HR (95 % CI)	1 [Reference]	0.93 (0.85-1.02)	0.91 (0.82-1.02)	0.92 (0.81-1.05)	0.96 (0.82-1.14)	0.67	0.11
Alcohol use							
Non-drinker, n	851	1166	1425	1537	1857		.
HR (95 % CI)	1 [Reference]	0.94 (0.84-1.05)	0.92 (0.82-1.03)	0.86 (0.76-0.98)	0.90 (0.77-1.05)	0.10	
Past/current, n	1887	1309	1002	783	564		.
HR (95 % CI)	1 [Reference]	0.83 (0.76-0.91)	0.80 (0.72-0.89)	0.80 (0.71-0.90)	0.84 (0.72-0.98)	0.03	0.01
Body mass index							
< 25 Kg/m2, n	1991	1853	1773	1666	1674		.
HR (95 % CI)	1 [Reference]	0.89 (0.83-0.96)	0.87 (0.80-0.94)	0.82 (0.75-0.90)	0.86 (0.76-0.97)	0.01	
≥ 25 Kg/m2, n	747	622	654	654	747		.
HR (95 % CI)	1 [Reference]	0.87 (0.77-0.99)	0.95 (0.83-1.10)	0.88 (0.75-1.04)	0.94 (0.77-1.14)	0.61	0.02
Physical activity							
< 31.8 mets, n	1177	1012	1048	1008	1025		.
HR (95 % CI)	1 [Reference]	0.84 (0.76-0.93)	0.85 (0.76-0.95)	0.83 (0.73-0.94)	0.82 (0.70-0.96)	0.02	
≥ 31.8 mets, n	1561	1463	1379	1312	1396		.
HR (95 % CI)	1 [Reference]	0.91 (0.84-0.99)	0.89 (0.81-0.98)	0.83 (0.74-0.92)	0.89 (0.78-1.02)	0.04	0.47
Age at baseline							
< 60 years, n	1222	1039	951	842	811		
HR (95 % CI)	1 [Reference]	0.89 (0.81-0.99)	0.87 (0.78-0.98)	0.83 (0.73-0.95)	0.87 (0.73-1.02)	0.07	
≥ 60 years, n	1516	1436	1476	1478	1610		
HR (95 % CI)	1 [Reference]	0.89 (0.81-0.97)	0.87 (0.79-0.96)	0.84 (0.75-0.94)	0.87 (0.76-0.99)	0.04	0.26

Adjusted for gender, total energy, percentage of energy from saturated fat, monounsaturated fat, polyunsaturated fat, other fat and animal protein (all continuous), green tea and coffee intake and occupation status. Also adjusted for age (≤50, 51-55, 56-60, 61-65, 66-70, >70 years), body mass index (<22.5, 22.5-<25.0, 25.0-<27.5, ≥27.5 kg/m^2), smoking (never, past, current smoker with ≤20 cigarettes/day, >20 cigarettes/day), alcohol use (non/occasional drinker, regular drinker of ethanol of <150, 150-<300, ≥300 g/day) and physical activity (quartile category, MET-hr/day) other than the stratifying variable of interest.

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eTable 4. Absolute Risk Reduction (ARR) for Substitution of 3% Energy From Plant Protein for Equal Amount of Energy From Animal Protein of Various Sources

	ARR (95% CI)
All-cause mortality	
Red meat	-3.60 (-4.86, -2.10)
Processed meat	-4.95 (-6.65, -2.62)
Chicken	-1.29 (-3.49, 1.49)
Egg	-1.86 (-3.20, -0.31)
Dairy	0.75 (-1.06, 2.86)
Fish	-1.25 (-2.24, -0.15)
Cancer mortality	
Red meat	-1.92 (-2.71, -0.87)
Processed meat	-2.45 (-3.48, -0.72)
Chicken	-0.20 (-1.83, 2.25)
Egg	-0.69 (-1.65, 0.54)
Dairy	-0.54 (-1.60, 0.85)
Fish	-0.46 (-1.19, 0.40)
Cardiovascular disease mortality	
Red meat	-1.16 (-1.68, -0.39)
Processed meat	-1.16 (-1.95, 0.37)
Chicken	-0.43 (-1.38, 1.15)
Egg	-0.57 (-1.20, 0.29)
Dairy	-0.51 (-1.20, 0.49)
Fish	-0.38 (-0.86, 0.22)

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eTable 5. Hazard Ratios (HRs) and 95% CIs for Mortality Associated With Isocaloric Substitution of 3% Energy From Other Plant Protein For Cereal and Soy-Plant Protein

	Plant protein source	HR (95% CI)
All-cause mortality		
	Soy foods	0.82 (0.62-1.08)
	Cereals	0.84 (0.68-1.03)
Cancer mortality		
	Soy foods	1.05 (0.67-1.63)
	Cereals	1.15 (0.82-1.61)
Cardiovascular disease mortality		
	Soy foods	0.53 (0.31-0.93)
	Cereals	0.52 (0.34-0.79)

Other plant protein includes all green and leafy vegetables and fruits (other than cereals and soy foods groups, eFigure 1).

Model includes soy protein, cereal protein, other plant protein and animal protein and is adjusted for total energy, percent of energy from fats (saturated fat, monounsaturated fat, polyunsaturated fat, and other fat) and carbohydrate (all continuous), age (≤50, 51-55, 56-60, 61-65, 66-70, >70 years), gender, body mass index (<22.5, 22.5-<25.0, 25.0-<27.5, ≥27.5 kg/m^2), smoking (never, past, current smoker with ≤20 cigarettes/day, >20 cigarettes/day), alcohol use (non/occasional drinker, regular drinker of ethanol of <150, 150-<300, ≥300 g/day), physical activity (quartile category, MET-hr/day), occupation status (agriculture/forestry/fishery, salaried/professional, self-employed, housework/unemployed, or other) and intake of green tea (never, <1, 1, 2-3 or ≥4 cups/day), coffee (never, <1, 1, ≥2 cups/day).

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eTable 6. Hazard Ratios (HRs) and 95% CIs for All-Cause and Cause-Specific Mortality According to Percentage of Energy From Total Protein (Classification Based on the Dietary Reference Intakes for Japanese Guideline)

	% of energy from total protein		
	<13	13-20	>20
All-cause mortality			
No. of deaths	4073	8023	285
HR (95% CI)[a]	1.05 (0.99-1.13)	1 [Reference]	1.21 (1.03-1.43)
HR (95% CI)[b]	1.09 (1.01-1.17)	1 [Reference]	1.13 (0.94-1.35)
HR (95% CI)[c]	1.05 (0.98-1.12)	1 [Reference]	1.18 (1.00-1.39)
Cancer mortality			
No. of deaths	1642	3305	108
HR (95% CI)[a]	1.01 (0.91-1.11)	1 [Reference]	1.25 (0.97-1.60)
HR (95% CI)[b]	1.04 (0.93-1.16)	1 [Reference]	1.16 (0.88-1.53)
HR (95% CI)[c]	1.00 (0.91-1.11)	1 [Reference]	1.22 (0.95-1.57)
Cardiovascular disease mortality			
No. of deaths	1003	1950	72
HR (95% CI)[a]	1.11 (0.97-1.27)	1 [Reference]	1.09 (0.78-1.51)
HR (95% CI)[b]	1.17 (1.00-1.36)	1 [Reference]	0.97 (0.68-1.40)
HR (95% CI)[c]	1.11 (0.97-1.27)	1 [Reference]	1.06 (0.76-1.47)
Heart disease mortality			
No. of deaths	505	993	30
HR (95% CI)[a]	1.11 (0.91-1.34)	1 [Reference]	0.85 (0.52-1.40)
HR (95% CI)[b]	1.16 (0.93-1.44)	1 [Reference]	0.77 (0.45-1.32)
HR (95% CI)[c]	1.11 (0.91-1.34)	1 [Reference]	0.84 (0.51-1.38)
Cerebrovascular disease mortality			
No. of deaths	406	759	33
HR (95% CI)[a]	1.14 (0.92-1.41)	1 [Reference]	1.29 (0.79-2.12)
HR (95% CI)[b]	1.20 (0.95-1.52)	1 [Reference]	1.14 (0.66-1.98)
HR (95% CI)[c]	1.13 (0.91-1.40)	1 [Reference]	1.22 (0.74-2.01)

[a]adjusted for age, gender, body mass index, smoking, alcohol use, physical activity, occupation status and intake of green tea, coffee, total energy and percentage of energy from saturated fat, monounsaturated fat, polyunsaturated fat, and other fat.
[b]Further adjusted for animal protein.
[c]Further adjusted for plant protein.

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