

Table S1. Risks of colon and rectal cancer associated with replacement of 3% of energy from animal protein with vegetable protein, stratified by body mass index (≤ 25 and >25)

	Colon cancer	P for interaction	Rectal cancer	P for interaction ³
<i>Body mass index ≤ 25</i>	n. cases=157		n. cases =39	
Animal protein replaced with vegetable protein				
HR ¹ (95% CI)	1.21 (0.98-1.48)		0.68 (0.45-1.01)	
HR ² (95% CI)	1.28 (1.03-1.59)		0.58 (0.38-0.89)	
Animal protein replaced with vegetables protein from high GI foods				
HR ¹ (95% CI)	1.41 (1.13-1.77)		0.60 (0.38-0.95)	
HR ² (95% CI)	1.45 (1.15-1.84)		0.55 (0.34-0.88)	
Animal protein replaced with vegetable protein from low GI foods				
HR ¹ (95% CI)	0.91 (0.69-1.21)		0.83 (0.50-1.37)	
HR ² (95% CI)	0.97 (0.72-1.31)		0.68 (0.38-1.21)	
<i>Body mass index >25</i>	n. cases=281		n. cases =62	
Animal protein replaced with vegetable protein				
HR ¹ (95% CI)	1.07 (0.92-1.24)	0.898	0.83 (0.61-1.12)	0.294
HR ² (95% CI)	1.07 (0.92-1.24)	0.836	0.81 (0.58-1.13)	0.551
Animal protein replaced with vegetables protein from high GI foods				
HR ¹ (95% CI)	1.15 (0.98-1.35)	0.499	0.79 (0.56-1.12)	0.764
HR ² (95% CI)	1.14 (0.97-1.34)	0.540	0.78 (0.54-1.12)	0.870
Animal protein replaced with vegetable protein from low GI foods				
HR ¹ (95% CI)	0.95 (0.78-1.15)	0.153	0.92 (0.62-1.37)	0.265
HR ² (95% CI)	0.93 (0.75-1.15)	0.185	0.91 (0.59-1.40)	0.435

¹ Stratified by center, age, sex and adjusted for energy, alcohol and total fat intake. ² Additionally adjusted for BMI, waist-hip ratio, smoking, education, physical activity and fiber intake. ³ Test for heterogeneity comparing BMI ≤ 25 and BMI >25 .

Table S2. Risk of colon and rectal cancer associated with replacement of 3% of energy from animal protein and animal protein sources with plant protein, stratified by body mass index (≤ 25 and >25)				
	Colon cancer	P for interaction	Rectal cancer	P for interaction ³
<i>Body mass index ≤25</i>	n. cases=157		n. cases =39	
Animal sources replaced with vegetable protein				
<i>Processed and red meat</i>				
HR ¹ (95% CI)	1.15 (0.92-1.44)		0.62 (0.41-0.95)	
HR ² (95% CI)	1.23 (0.97-1.56)		0.53 (0.34-0.83)	
<i>Poultry</i>				
HR ¹ (95% CI)	1.17 (0.90-1.53)		0.67 (0.40-1.12)	
HR ² (95% CI)	1.20 (0.92-1.58)		0.62 (0.36-1.07)	
<i>Fish</i>				
HR ¹ (95% CI)	1.25 (0.92-1.68)		0.74 (0.42-1.31)	
HR ² (95% CI)	1.26 (0.93-1.71)		0.70 (0.39-1.25)	
<i>Egg and dairy products</i>				
HR ¹ (95% CI)	1.24 (1.01-1.53)		0.72 (0.48-1.10)	
HR ² (95% CI)	1.32 (1.05-1.66)		0.61 (0.40-0.96)	
Animal sources replaced with vegetable protein from high GI foods				
<i>Processed and red meat</i>				
HR ¹ (95% CI)	1.35 (1.06-1.72)		0.56 (0.35-0.90)	
HR ² (95% CI)	1.40 (1.09-1.80)		0.50 (0.31-0.82)	
<i>Poultry</i>				
HR ¹ (95% CI)	1.33 (1.01-1.75)		0.61 (0.36-1.06)	
HR ² (95% CI)	1.35 (1.02-1.79)		0.59 (0.33-1.05)	
<i>Fish</i>				
HR ¹ (95% CI)	1.43 (1.05-1.95)		0.68 (0.37-1.23)	
HR ² (95% CI)	1.44 (1.05-1.96)		0.66 (0.36-1.23)	
<i>Eggs and dairy products</i>				
HR ¹ (95% CI)	1.48 (1.17-1.87)		0.64 (0.39-1.04)	
HR ² (95% CI)	1.53 (1.20-1.97)		0.58 (0.35-0.95)	
Animal sources replaced with vegetable protein from low GI foods				
<i>Processed and red meat</i>				
HR ¹ (95% CI)	0.85 (0.63-1.15)		0.77 (0.45-1.31)	
HR ² (95% CI)	0.91 (0.66-1.25)		0.62 (0.34-1.13)	
<i>Poultry</i>				
HR ¹ (95% CI)	0.84 (0.60-1.18)		0.84 (0.45-1.58)	
HR ² (95% CI)	0.88 (0.62-1.25)		0.72 (0.36-1.44)	
<i>Fish</i>				
HR ¹ (95% CI)	0.90 (0.63-1.30)		0.93 (0.47-1.82)	
HR ² (95% CI)	0.93 (0.64-1.35)		0.81 (0.40-1.66)	
<i>Eggs and dairy products</i>				

HR ¹ (95% CI)	0.93 (0.70-1.24)		0.87 (0.52-1.47)	
HR ² (95% CI)	1.00 (0.73-1.35)		0.70 (0.39-1.28)	
Body mass index>25	n. cases=281		n. cases =62	
Animal sources replaced with vegetable protein				
<i>Processed and red meat</i>				
HR ¹ (95% CI)	1.21 (1.03-1.43)	0.063	0.79 (0.57-1.10)	0.464
HR ² (95% CI)	1.22 (1.03-1.45)	0.072	0.78 (0.54-1.11)	0.411
<i>Poultry</i>				
HR ¹ (95% CI)	1.04 (0.87-1.25)	0.720	0.78 (0.53-1.14)	0.754
HR ² (95% CI)	1.02 (0.85-1.23)	0.595	0.78 (0.52-1.17)	0.776
<i>Fish</i>				
HR ¹ (95% CI)	0.99 (0.82-1.21)	0.376	0.90 (0.58-1.41)	0.650
HR ² (95% CI)	0.98 (0.81-1.20)	0.328	0.88 (0.55-1.41)	0.627
<i>Egg and dairy products</i>				
HR ¹ (95% CI)	1.02 (0.88-1.19)	0.195	0.85 (0.62-1.18)	0.927
HR ² (95% CI)	1.03 (0.88-1.20)	0.243	0.83 (0.59-1.18)	0.661
Animal sources replaced with vegetable protein from high GI foods				
<i>Processed and red meat</i>				
HR ¹ (95% CI)	1.30 (1.09-1.55)	0.066	0.76 (0.53-1.10)	0.286
HR ² (95% CI)	1.30 (1.09-1.56)	0.073	0.75 (0.51-1.10)	0.398
<i>Poultry</i>				
HR ¹ (95% CI)	1.11 (0.91-1.34)	0.732	0.75 (0.50-1.13)	0.757
HR ² (95% CI)	1.08 (0.89-1.31)	0.607	0.76 (0.49-1.16)	0.768
<i>Fish</i>				
HR ¹ (95% CI)	1.06 (0.86-1.30)	0.412	0.88 (0.55-1.40)	0.675
HR ² (95% CI)	1.04 (0.85-1.28)	0.356	0.85 (0.52-1.39)	0.640
<i>Eggs and dairy products</i>				
HR ¹ (95% CI)	1.11 (0.94-1.31)	0.190	0.81 (0.56-1.18)	0.932
HR ² (95% CI)	1.10 (0.93-1.31)	0.236	0.80 (0.54-1.17)	0.663
Animal sources replaced with vegetable protein from low GI foods				
<i>Processed and red meat</i>				
HR ¹ (95% CI)	1.06 (0.86-1.32)	0.060	0.88 (0.58-1.33)	0.303
HR ² (95% CI)	1.07 (0.85-1.34)	0.069	0.88 (0.53-1.46)	0.426
<i>Poultry</i>				
HR ¹ (95% CI)	0.91 (0.71-1.14)	0.759	0.87 (0.54-1.40)	0.781
HR ² (95% CI)	0.89 (0.69-1.13)	0.629	1.14 (0.69-1.90)	0.809
<i>Fish</i>				
HR ¹ (95% CI)	0.86 (0.68-1.10)	0.394	1.01 (0.60-1.68)	0.680
HR ² (95% CI)	0.86 (0.67-1.10)	0.342	0.99 (0.57-1.70)	0.649
<i>Eggs and dairy products</i>				
HR ¹ (95% CI)	0.91 (0.74-1.10)	0.189	0.94 (0.63-1.39)	0.932
HR ² (95% CI)	0.90 (0.73-1.12)	0.234	0.92 (0.60-1.42)	0.655

¹ Stratified by center, age, sex and adjusted for energy, alcohol and total fat intake. ² Additionally adjusted also for BMI, waist-hip ratio, smoking, education, physical activity and fiber intake. ³ Test for heterogeneity comparing BMI ≤ 25 and BMI > 25 .