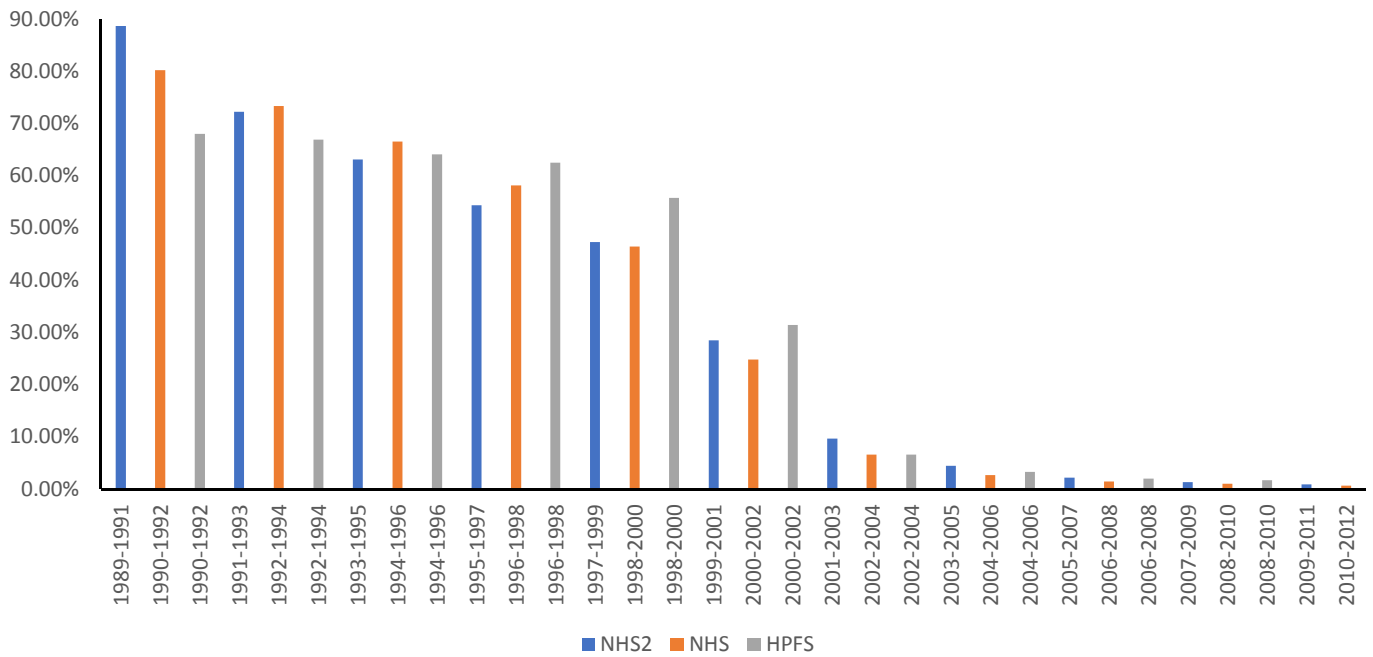Supplementary figure 1 Proportion of flexible sigmoidoscopies among all endoscopies performed in the study participants in the NHS (1992-2012), NHS2 (1989-2011), and HPFS (1992-2010) [a]

Abbreviations: NHS2, the Nurses' Health Study 2; NHS, the Nurses' Health Study; HPFS, the Health Professionals Follow-up Study.
[a] Proportion of flexible sigmoidoscopies among all endoscopies was presented. A greater proportion of flexible sigmoidoscopies was performed in the earlier years than in the latter years.

Supplementary Table 1 Basic characteristics of study participants in the three cohort studies (NHS, NHS2, HPFS) [a]

	Population before excluding missing data	Population after excluding missing data
No. of participants	165939	141143
Age, year	60.4±10.6	60.2±10.6
Sex		
Male	30880 (19)	28711 (20)
Female	135059 (81)	112432 (80)
Race		
Caucasian	155701 (94)	134001 (95)
non-Caucasian	10238 (6)	7142 (5)
Family history of colorectal cancer		
No	131092 (79)	111461 (79)
Yes	34847 (21)	29682 (21)
Pack-years of smoking	9.2±15.7	8.8±15.4
Never smokers	88247 (53)	76767 (55)
Past smokers		
<30 pack-years	55208 (33)	46408 (33)
≥30 pack-years	12777 (8)	10459 (7)
Current smokers		
<30 pack-years	4331 (3)	3289 (2)
≥30 pack-years	5376 (3)	4220 (3)
Body mass index, kg/m^2	26.6±5.3	26.6±5.3
<25	72930 (44)	62286 (44)
25-29.9	58311 (35)	49725 (35)
30-34.9	22734 (14)	19153 (14)
≥35	11964 (7)	9979 (7)
Physical activity, MET-hours/week [b]	21.8±21.0	21.8±20.7
<7.5	38549 (24)	31786 (22)
7.5-14.9	40273 (24)	34580 (25)
15-29.9	48321 (29)	41637 (30)
30-59.9	30234 (18)	25956 (18)
≥60	8562 (5)	7184 (5)
Alcohol intake, g/day	6.3±9.3	6.3±9.3
Height, cm	167.2±8.8	167.5±8.7
Regular aspirin use [c]		
No	108806 (66)	91616 (65)
Yes	57133 (34)	49527 (35)
Total fiber intake, g/day	19.5±5.5	19.6±5.4
Total folate intake, μg/day	530±218	527±212
Calcium intake, mg/day	1090±405	1086±392
Vitamin D intake, IU/day	416±220	415±214
Marine omega-3 fatty acid intake, g/day	0.25±0.20	0.25±0.20
Processed red meat intake, serving/week	1.70±1.68	1.68±1.60

Abbreviations: NHS, the Nurses' Health Study; NHS2, the Nurses' Health Study 2; HPFS, the Health Professionals Follow-up Study; MET, metabolic equivalent task.

[a] The presented data are based on repeatedly collected information for each participant up to polyp diagnosis (for cases) or the end of follow-up period (for controls). All variables are adjusted for age and sex except for age and sex themselves. Cumulative average values across person-endoscopies are presented. Mean ±SD is presented for continuous variables and number of participants (percentage) for categorical variables.

[b] Physical activity is represented by the product sum of the MET of each specific recreational activity and hours spent on that activity per week.

[c] A standard tablet contains 325 mg aspirin, and regular users were defined as those who used at least two tablets per week.

Supplementary table 2 Multivariable associations of CRC risk factors with risk of SPs and conventional adenomas in the NHS [a]

Risk factor	Case-control comparison					Case-case comparison (SPs-only compared to conventional adenomas-only) OR (95% CI)	Synchronous SPs and conventional adenomas	
	Non-polyp	SPs-only		conventional adenomas-only				
	No. of person-endoscopies	n	OR (95% CI)	n	OR (95% CI)		n	OR (95% CI)
Family history of colorectal cancer								
No	109532	2077	1(ref)	2481	1(ref)	1(ref)	659	1(ref)
Yes	35339	881	1.52(1.40-1.64)	988	1.44(1.33-1.55)	1.04(0.93-1.17)	266	1.50(1.30-1.73)
P			<.001		<.001	.45		<.001
Smoking status								
Never	70344	1166	1(ref)	1639	1(ref)	1(ref)	330	1(ref)
Past smokers								
<30 pack-years	53252	1084	1.22(1.12-1.33)	1240	1.01(0.93-1.09)	1.21(1.08-1.36)	328	1.32(1.13-1.54)
≥30 pack-years	14304	406	1.68(1.50-1.90)	399	1.11(0.99-1.24)	1.52(1.29-1.79)	154	1.99(1.63-2.43)
Current smokers								
<30 pack-years	1437	41	1.51(1.10-2.08)	32	0.91(0.64-1.30)	1.63(1.00-2.64)	16	2.51(1.51-4.16)
≥30 pack-years	5534	261	2.52(2.19-2.90)	159	1.07(0.91-1.27)	2.33(1.88-2.89)	97	3.50(2.77-4.42)
P for trend			<.001		.03	<.001		<.001
Body mass index, kg/m^2								
<25	65274	1155	1(ref)	1448	1(ref)	1(ref)	329	1(ref)
25-29.9	49391	1074	1.23(1.13-1.34)	1246	1.15(1.06-1.24)	1.08(0.97-1.22)	329	1.34(1.15-1.56)
30-34.9	20954	488	1.32(1.18-1.47)	546	1.20(1.08-1.33)	1.11(0.95-1.29)	179	1.76(1.46-2.12)
≥35	9252	241	1.41(1.22-1.63)	229	1.12(0.97-1.30)	1.29(1.05-1.58)	88	1.95(1.53-2.48)
P for trend			<.001		.002	.001		<.001
Physical activity, MET-hours/week								
<7.5	38505	826	1(ref)	977	1(ref)	1(ref)	271	1(ref)
7.5-14.9	40052	872	1.13(1.03-1.25)	992	1.05(0.96-1.15)	1.10(0.96-1.26)	248	1.00(0.84-1.20)
15-29.9	42478	813	1.05(0.95-1.16)	952	0.98(0.89-1.07)	1.09(0.95-1.25)	273	1.12(0.94-1.33)
30-59.9	20073	379	1.07(0.95-1.22)	474	1.05(0.94-1.18)	1.06(0.89-1.26)	114	1.06(0.84-1.32)
≥60	3763	68	1.06(0.82-1.36)	74	0.89(0.70-1.14)	1.25(0.88-1.78)	19	1.00(0.62-1.60)
P for trend			.68		.68	.31		.56
Alcohol intake, g/day								
Never	26257	487	1(ref)	620	1(ref)	1(ref)	133	1(ref)
<3.5	57742	1154	1.07(0.96-1.19)	1347	1.03(0.94-1.14)	1.01(0.88-1.17)	359	1.24(1.02-1.52)
3.5-6.9	21088	438	1.14(1.00-1.30)	499	1.08(0.96-1.22)	1.04(0.87-1.24)	153	1.54(1.22-1.95)
≥7	39784	879	1.17(1.04-1.31)	1003	1.14(1.02-1.26)	1.01(0.86-1.18)	280	1.41(1.14-1.75)
P for trend			.01		.008	.98		.01
Height, per 10cm	144871	2958	1.06(1.00-1.12)	3469	1.09(1.03-1.15)	0.97(0.90-1.05)	925	1.13(1.02-1.26)
P for trend			.06		.002	.50		.03
Regular aspirin use								
No	80998	1705	1(ref)	1961	1(ref)	1(ref)	540	1(ref)
Yes	63873	1253	0.92(0.86-1.00)	1508	0.94(0.88-1.01)	0.98(0.89-1.08)	385	0.83(0.73-0.95)
P			.04		.09	.70		.006

Total fiber intake								
Quartile 1	35924	894	1(ref)	948	1(ref)	1(ref)	270	1(ref)
Quartile 2	36190	787	1.01(0.91-1.11)	851	0.95(0.87-1.05)	1.07(0.94-1.23)	236	0.98(0.82-1.17)
Quartile 3	36220	708	0.99(0.90-1.10)	888	1.04(0.94-1.14)	0.97(0.84-1.11)	224	1.00(0.83-1.21)
Quartile 4	36537	569	0.87(0.77-0.97)	782	0.94(0.85-1.04)	0.93(0.79-1.08)	195	0.93(0.76-1.14)
P for trend			.02		.48	.20		.55
Total folate intake								
Quartile 1	35860	888	1(ref)	986	1(ref)	1(ref)	280	1(ref)
Quartile 2	36030	807	1.04(0.94-1.14)	936	1.02(0.93-1.12)	1.01(0.89-1.16)	259	0.99(0.83-1.18)
Quartile 3	36305	710	0.99(0.89-1.09)	825	0.95(0.87-1.05)	1.04(0.90-1.20)	222	0.90(0.75-1.08)
Quartile 4	36676	553	0.82(0.74-0.92)	722	0.87(0.78-0.96)	0.95(0.82-1.11)	164	0.70(0.57-0.86)
P for trend			<.001		.002	.61		<.001
Total calcium intake								
Quartile 1	35910	844	1(ref)	975	1(ref)	1(ref)	288	1(ref)
Quartile 2	36100	794	1.03(0.94-1.14)	923	1.00(0.91-1.10)	1.03(0.90-1.18)	226	0.84(0.70-1.00)
Quartile 3	36270	717	1.02(0.92-1.14)	852	0.98(0.89-1.08)	1.05(0.91-1.20)	231	0.93(0.78-1.11)
Quartile 4	36591	603	0.95(0.85-1.07)	719	0.87(0.79-0.97)	1.11(0.95-1.29)	180	0.78(0.64-0.94)
P for trend			.39		.009	.18		.03
Total vitamin D intake								
Quartile 1	35847	880	1(ref)	1022	1(ref)	1(ref)	264	1(ref)
Quartile 2	36073	798	0.99(0.90-1.09)	910	0.94(0.85-1.03)	1.06(0.93-1.21)	267	1.07(0.90-1.27)
Quartile 3	36292	717	0.96(0.86-1.06)	832	0.90(0.82-0.99)	1.07(0.93-1.23)	216	0.92(0.76-1.10)
Quartile 4	36659	563	0.81(0.72-0.90)	705	0.79(0.71-0.87)	1.03(0.89-1.19)	178	0.90(0.65-0.97)
P for trend			<.001		<.001	.71		.007
Marine omega-3 fatty acid intake								
Quartile 1	36036	821	1(ref)	917	1(ref)	1(ref)	244	1(ref)
Quartile 2	36236	771	0.96(0.87-1.06)	936	1.05(0.96-1.15)	0.91(0.79-1.04)	222	0.93(0.78-1.12)
Quartile 3	36137	746	0.96(0.87-1.06)	857	0.99(0.90-1.09)	0.94(0.82-1.08)	230	1.00(0.83-1.20)
Quartile 4	36462	620	0.82(0.73-0.91)	759	0.90(0.82-1.00)	0.89(0.77-1.03)	229	1.02(0.85-1.22)
P for trend			.001		.03	.17		.71
Processed red meat intake								
Quartile 1	36362	573	1(ref)	770	1(ref)	1(ref)	203	1(ref)
Quartile 2	36283	767	1.27(1.14-1.42)	896	1.14(1.03-1.26)	1.11(0.96-1.29)	228	1.05(0.87-1.28)
Quartile 3	36221	783	1.21(1.09-1.36)	875	1.08(0.98-1.20)	1.11(0.96-1.29)	239	1.04(0.86-1.26)
Quartile 4	36005	835	1.21(1.08-1.35)	928	1.10(1.00-1.22)	1.08(0.93-1.25)	255	1.02(0.84-1.24)
P for trend			.03		.22	.62		.95

Abbreviations: CRC, colorectal cancer; SP, serrated polyp; NHS, the Nurses' Health Study; OR, odd ratio; CI, confidence interval; MET, metabolic equivalent task.

[a] Multivariable logistic regression model was used with adjustment for time period of endoscopy (in 2-year intervals), number of prior endoscopies (continuous), time in years since the most recent endoscopy (continuous), reason for endoscopy (routine screening or symptom), race (Caucasian or non-Caucasian), age (continuous, per 10 years), family history of colorectal cancer (yes or no), pack-years of smoking (continuous), body mass index (continuous), physical activity (median in each category), alcohol consumption (median in each category), height (continuous, per 10 cm), regular aspirin use (yes or no). For dietary factors, test for trend was conducted using the median of each quartile as a continuous variable.

Supplementary table 3 Multivariable associations of CRC risk factors with risk of SPs and conventional adenomas in the NHS2 [a]

Risk factor	Case-control comparison					Case-case comparison (SPs-only compared to conventional adenomas-only) OR (95% CI)	Synchronous SPs and conventional adenomas	
	Non-polyp	SPs-only		conventional adenomas-only				
	No. of person-endoscopies	n	OR (95% CI)	n	OR (95% CI)		n	OR (95% CI)
Family history of colorectal cancer								
No	91827	2597	1(ref)	2209	1(ref)	1(ref)	514	1(ref)
Yes	21258	769	1.56(1.43-1.70)	602	1.51(1.37-1.66)	0.98(0.86-1.11)	168	1.89(1.58-2.26)
P			<.001		<.001	.71		<.001
Smoking status								
Never	73525	1851	1(ref)	1810	1(ref)	1(ref)	351	1(ref)
Past smokers								
<30 pack-years	30765	1026	1.29(1.20-1.40)	750	0.99(0.90-1.08)	1.29(1.14-1.45)	211	1.32(1.10-1.57)
≥30 pack-years	1503	58	1.53(1.16-2.00)	48	1.24(0.92-1.66)	1.22(0.83-1.80)	18	2.17(1.33-3.51)
Current smokers								
<30 pack-years	4947	272	2.02(1.77-2.30)	131	1.06(0.89-1.27)	1.86(1.49-2.32)	54	2.15(1.60-2.88)
≥30 pack-years	2345	159	2.57(2.17-3.05)	72	1.14(0.89-1.45)	2.13(1.59-2.84)	48	3.76(2.74-5.15)
P for trend			<.001		.07	<.001		<.001
Body mass index, kg/m²								
<25	51762	1360	1(ref)	1237	1(ref)	1(ref)	261	1(ref)
25-29.9	32385	991	1.19(1.09-1.29)	828	1.04(0.95-1.14)	1.12(0.99-1.27)	207	1.26(1.05-1.52)
30-34.9	16530	608	1.46(1.32-1.62)	425	1.05(0.93-1.17)	1.38(1.19-1.60)	111	1.38(1.10-1.73)
≥35	12408	407	1.33(1.18-1.49)	321	1.05(0.93-1.20)	1.23(1.04-1.47)	103	1.79(1.41-2.27)
P for trend			<.001		.15	.002		<.001
Physical activity, MET-hours/week								
<7.5	27336	793	1(ref)	711	1(ref)	1(ref)	159	1(ref)
7.5-14.9	28681	957	1.20(1.09-1.33)	778	1.05(0.95-1.17)	1.15(1.00-1.33)	189	1.18(0.95-1.46)
15-29.9	33050	955	1.06(0.96-1.17)	787	0.93(0.84-1.03)	1.17(1.01-1.35)	195	1.07(0.87-1.33)
30-59.9	18454	524	1.06(0.94-1.18)	437	0.94(0.83-1.06)	1.13(0.96-1.34)	111	1.12(0.87-1.44)
≥60	5564	137	0.91(0.75-1.10)	98	0.70(0.56-0.87)	1.34(1.01-1.78)	28	0.96(0.64-1.45)
P for trend			.10		<.001	.07		.86
Alcohol intake, g/day								
Never	29585	750	1(ref)	709	1(ref)	1(ref)	131	1(ref)
<3.5	46063	1390	1.21(1.11-1.33)	1152	1.05(0.95-1.15)	1.16(1.02-1.32)	263	1.26(1.02-1.56)
3.5-6.9	16582	506	1.24(1.10-1.40)	411	1.05(0.92-1.19)	1.19(1.01-1.41)	108	1.46(1.13-1.90)
≥7	20855	720	1.39(1.25-1.55)	539	1.10(0.98-1.24)	1.28(1.09-1.51)	180	1.89(1.49-2.39)
P for trend			<.001		.17	.01		<.001
Height, per 10cm	113085	3366	1.02(0.97-1.08)	2811	1.01(0.96-1.07)	1.00(0.93-1.08)	682	1.06(0.94-1.19)
P for trend			.43		.63	.97		.35
Regular aspirin use								
No	96598	2888	1(ref)	2417	1(ref)	1(ref)	583	1(ref)
Yes	16487	478	0.97(0.87-1.07)	394	0.96(0.86-1.07)	1.05(0.93-1.19)	99	0.92(0.74-1.15)
P			.51		.49	.39		.47
Total fiber intake								

Quartile 1	28178	911	1(ref)	703	1(ref)	1(ref)	174	1(ref)
Quartile 2	28209	816	0.98(0.89-1.08)	747	1.09(0.98-1.22)	0.90(0.78-1.03)	201	1.26(1.03-1.55)
Quartile 3	28289	859	1.08(0.98-1.19)	692	1.03(0.93-1.15)	1.07(0.93-1.24)	164	1.07(0.86-1.33)
Quartile 4	28409	780	1.05(0.95-1.17)	669	1.05(0.94-1.18)	1.02(0.88-1.19)	143	1.02(0.81-1.28)
P for trend			.15		.58	.39		.72
Total folate intake								
Quartile 1	28277	828	1(ref)	695	1(ref)	1(ref)	165	1(ref)
Quartile 2	28109	890	1.20(1.08-1.32)	780	1.15(1.03-1.27)	1.10(0.95-1.27)	200	1.25(1.02-1.55)
Quartile 3	28274	858	1.21(1.09-1.33)	697	1.04(0.94-1.16)	1.18(1.01-1.36)	163	1.06(0.84-1.32)
Quartile 4	28425	790	1.16(1.05-1.29)	639	1.00(0.90-1.12)	1.22(1.04-1.42)	154	1.07(0.85-1.34)
P for trend			.01		.49	.01		.98
Total calcium intake								
Quartile 1	28244	818	1(ref)	715	1(ref)	1(ref)	171	1(ref)
Quartile 2	28181	921	1.20(1.09-1.32)	725	1.02(0.92-1.14)	1.18(1.02-1.36)	180	1.07(0.87-1.33)
Quartile 3	28217	897	1.23(1.11-1.35)	688	1.00(0.89-1.11)	1.25(1.08-1.45)	185	1.16(0.94-1.43)
Quartile 4	28443	730	1.08(0.97-1.19)	683	1.03(0.93-1.15)	1.07(0.92-1.24)	146	0.98(0.78-1.24)
P for trend			.22		.65	.43		.00
Total vitamin D intake								
Quartile 1	28158	894	1(ref)	737	1(ref)	1(ref)	186	1(ref)
Quartile 2	28217	873	1.03(0.94-1.14)	728	1.00(0.90-1.11)	1.03(0.89-1.18)	189	1.05(0.86-1.29)
Quartile 3	28255	848	1.05(0.96-1.16)	715	1.01(0.91-1.12)	1.05(0.91-1.21)	152	0.88(0.71-1.10)
Quartile 4	28455	751	0.97(0.88-1.07)	631	0.92(0.83-1.03)	1.06(0.91-1.23)	155	0.95(0.77-1.18)
P for trend			.60		.15	.43		.42
Marine omega-3 fatty acid intake								
Quartile 1	28087	875	1(ref)	756	1(ref)	1(ref)	162	1(ref)
Quartile 2	28410	837	0.95(0.86-1.04)	729	0.96(0.86-1.06)	0.99(0.86-1.14)	168	0.99(0.80-1.23)
Quartile 3	27940	864	1.01(0.92-1.12)	694	0.94(0.84-1.04)	1.09(0.95-1.26)	181	1.08(0.87-1.34)
Quartile 4	28648	790	0.95(0.86-1.05)	632	0.87(0.78-0.97)	1.12(0.96-1.30)	171	1.04(0.83-1.29)
P for trend			.59		.01	.07		.59
Processed red meat intake								
Quartile 1	30878	855	1(ref)	770	1(ref)	1(ref)	158	1(ref)
Quartile 2	25768	755	1.04(0.94-1.15)	615	0.92(0.83-1.03)	1.11(0.96-1.29)	167	1.18(0.94-1.47)
Quartile 3	28187	833	1.00(0.91-1.11)	694	0.94(0.84-1.04)	1.06(0.92-1.22)	184	1.14(0.92-1.42)
Quartile 4	28252	923	1.05(0.96-1.16)	732	0.96(0.87-1.07)	1.09(0.94-1.25)	173	0.98(0.78-1.23)
P for trend			.36		.76	.44		.46

Abbreviations: CRC, colorectal cancer; SP, serrated polyp; NHS2, the Nurses' Health Study 2; OR, odd ratio; CI, confidence interval; MET, metabolic equivalent task.

[a] Multivariable logistic regression model was used with adjustment for time period of endoscopy (in 2-year intervals), number of prior endoscopies (continuous), time in years since the most recent endoscopy (continuous), reason for endoscopy (routine screening or symptom), race (Caucasian or non-Caucasian), age (continuous, per 10 years), family history of colorectal cancer (yes or no), pack-years of smoking (continuous), body mass index (continuous), physical activity (median in each category), alcohol consumption (median in each category), height (continuous, per 10 cm), regular aspirin use (yes or no). For dietary factors, test for trend was conducted using the median of each quartile as a continuous variable.

Supplementary table 4 Multivariable associations of CRC risk factors with risk of SPs and conventional adenomas in the HPFS [a]

Risk factor	Case-control comparison					Case-case comparison (SPs-only compared to conventional adenomas-only) OR (95% CI)	Synchronous SPs and conventional adenomas	
	Non-polyp	SPs-only		conventional adenomas-only				
	No. of person-endoscopies	n	OR (95% CI)	n	OR (95% CI)		n	OR (95% CI)
Family history of colorectal cancer								
No	61805	1282	1(ref)	2310	1(ref)	1(ref)	619	1(ref)
Yes	12439	339	1.49(1.32-1.68)	622	1.51(1.38-1.66)	0.96(0.82-1.12)	156	1.43(1.20-1.71)
P			<.001		<.001	.61		<.001
Smoking status								
Never	37937	698	1(ref)	1440	1(ref)	1(ref)	283	1(ref)
Past smokers								
<30 pack-years	25164	550	1.15(1.03-1.30)	993	1.02(0.93-1.11)	1.13(0.98-1.31)	298	1.42(1.21-1.67)
≥30 pack-years	8371	253	1.72(1.47-2.01)	386	1.12(0.99-1.26)	1.51(1.24-1.83)	124	1.62(1.29-2.02)
Current smokers								
<30 pack-years	1166	41	1.55(1.12-2.15)	30	0.62(0.43-0.90)	2.50(1.54-4.08)	20	1.89(1.19-3.01)
≥30 pack-years	1606	79	2.34(1.83-2.99)	83	1.20(0.95-1.52)	1.93(1.39-2.67)	50	3.34(2.45-4.55)
P for trend			<.001		.04	<.001		<.001
Body mass index, kg/m^2								
<25	30444	569	1(ref)	1138	1(ref)	1(ref)	242	1(ref)
25-29.9	34823	811	1.15(1.03-1.28)	1396	1.05(0.96-1.13)	1.10(0.96-1.26)	397	1.34(1.14-1.57)
30-34.9	7265	194	1.21(1.02-1.44)	331	1.14(1.00-1.30)	1.09(0.88-1.34)	104	1.55(1.22-1.97)
≥35	1712	47	1.24(0.91-1.68)	67	0.97(0.75-1.25)	1.27(0.86-1.88)	32	2.12(1.45-3.10)
P for trend			.002		.04	.18		<.001
Physical activity, MET-hours/week								
<7.5	8904	207	1(ref)	371	1(ref)	1(ref)	102	1(ref)
7.5-14.9	12455	298	1.09(0.91-1.31)	537	1.08(0.94-1.24)	1.04(0.83-1.31)	152	1.13(0.88-1.46)
15-29.9	22608	511	1.07(0.91-1.27)	894	1.02(0.90-1.16)	1.10(0.89-1.36)	250	1.08(0.85-1.37)
30-59.9	22574	472	1.03(0.87-1.22)	854	1.00(0.88-1.14)	1.07(0.87-1.33)	206	0.92(0.72-1.17)
≥60	7703	133	0.86(0.68-1.07)	276	0.96(0.82-1.13)	0.93(0.70-1.22)	65	0.90(0.65-1.23)
P for trend			.05		.24	.56		.08
Alcohol intake, g/day								
Never	10621	180	1(ref)	380	1(ref)	1(ref)	90	1(ref)
<7	27849	559	1.21(1.02-1.44)	1114	1.19(1.05-1.34)	1.03(0.84-1.27)	231	1.02(0.80-1.31)
7-13.9	15537	355	1.39(1.16-1.67)	567	1.10(0.96-1.26)	1.25(0.99-1.56)	151	1.22(0.93-1.59)
≥14	20237	527	1.50(1.26-1.78)	871	1.26(1.11-1.43)	1.18(0.95-1.46)	303	1.70(1.34-2.17)
P for trend			<.001		.008	.05		<.001
Height, per 10cm	74244	1621	1.05(0.98-1.13)	2932	0.98(0.93-1.03)	1.06(0.97-1.17)	775	1.20(1.09-1.33)
P for trend			.18		.42	.20		<.001
Regular aspirin use								
No	37901	845	1(ref)	1534	1(ref)	1(ref)	374	1(ref)
Yes	36343	776	0.97(0.88-1.08)	1398	0.95(0.88-1.03)	1.02(0.90-1.16)	401	1.06(0.92-1.23)
P			.61		.22	.74		.41
Total fiber intake								

Quartile 1	18370	486	1(ref)	780	1(ref)	1(ref)	236	1(ref)
Quartile 2	18501	402	0.96(0.84-1.10)	780	1.06(0.96-1.18)	0.90(0.76-1.07)	214	1.04(0.86-1.26)
Quartile 3	18585	418	1.08(0.95-1.24)	712	0.99(0.88-1.10)	1.10(0.92-1.31)	188	0.99(0.81-1.20)
Quartile 4	18788	315	0.92(0.79-1.07)	660	0.96(0.85-1.07)	0.96(0.79-1.16)	137	0.83(0.67-1.03)
P for trend			.59		.25	.89		.08
Total folate intake								
Quartile 1	18435	435	1(ref)	765	1(ref)	1(ref)	224	1(ref)
Quartile 2	18512	431	1.10(0.96-1.27)	780	1.06(0.95-1.18)	1.02(0.86-1.21)	185	0.87(0.72-1.07)
Quartile 3	18584	384	1.03(0.89-1.19)	708	0.98(0.88-1.10)	1.03(0.86-1.23)	218	1.05(0.87-1.28)
Quartile 4	18713	371	1.06(0.92-1.23)	679	0.96(0.86-1.07)	1.10(0.92-1.33)	148	0.75(0.60-0.93)
P for trend			.67		.22	.29		.03
Total calcium intake								
Quartile 1	18424	431	1(ref)	838	1(ref)	1(ref)	204	1(ref)
Quartile 2	18606	387	0.96(0.83-1.11)	692	0.84(0.76-0.93)	1.12(0.94-1.34)	193	1.00(0.81-1.22)
Quartile 3	18518	409	1.07(0.93-1.23)	736	0.90(0.81-1.00)	1.17(0.98-1.39)	215	1.16(0.95-1.42)
Quartile 4	18696	394	1.08(0.94-1.25)	666	0.82(0.74-0.91)	1.30(1.09-1.56)	163	0.91(0.74-1.13)
P for trend			.14		.003	.004		.54
Total vitamin D intake								
Quartile 1	18404	438	1(ref)	815	1(ref)	1(ref)	216	1(ref)
Quartile 2	18582	418	1.03(0.90-1.19)	717	0.90(0.81-1.00)	1.14(0.96-1.35)	191	0.93(0.76-1.13)
Quartile 3	18535	407	1.08(0.94-1.24)	745	0.97(0.87-1.07)	1.10(0.93-1.31)	212	1.07(0.88-1.31)
Quartile 4	18723	358	1.00(0.86-1.15)	655	0.86(0.77-0.96)	1.17(0.97-1.40)	156	0.83(0.67-1.02)
P for trend			.98		.02	.15		.17
Marine omega-3 fatty acid intake								
Quartile 1	18317	450	1(ref)	836	1(ref)	1(ref)	211	1(ref)
Quartile 2	18573	422	0.97(0.84-1.11)	738	0.90(0.81-1.00)	1.05(0.89-1.25)	225	1.06(0.88-1.29)
Quartile 3	18616	406	0.98(0.85-1.12)	695	0.89(0.80-0.98)	1.10(0.92-1.30)	172	0.86(0.70-1.05)
Quartile 4	18738	343	0.90(0.78-1.04)	663	0.88(0.79-0.98)	1.02(0.85-1.22)	167	0.91(0.74-1.11)
P for trend			.19		.02	.68		.12
Processed red meat intake								
Quartile 1	19810	357	1(ref)	644	1(ref)	1(ref)	155	1(ref)
Quartile 2	17911	399	1.10(0.95-1.27)	682	1.11(0.99-1.24)	1.01(0.84-1.22)	185	1.10(0.89-1.37)
Quartile 3	18128	424	1.08(0.93-1.25)	786	1.22(1.09-1.36)	0.88(0.74-1.06)	202	1.08(0.87-1.34)
Quartile 4	18395	441	1.01(0.87-1.17)	820	1.18(1.05-1.31)	0.88(0.74-1.06)	233	1.08(0.87-1.33)
P for trend			.74		.009	.10		.71

Abbreviations: CRC, colorectal cancer; SP, serrated polyp; HPFS, the Health Professionals Follow-up Study; OR, odd ratio; CI, confidence interval; MET, metabolic equivalent task.

[a] Multivariable logistic regression model was used with adjustment for time period of endoscopy (in 2-year intervals), number of prior endoscopies (continuous), time in years since the most recent endoscopy (continuous), reason for endoscopy (routine screening or symptom), race (Caucasian or non-Caucasian), age (continuous, per 10 years), family history of colorectal cancer (yes or no), pack-years of smoking (continuous), body mass index (continuous), physical activity (median in each category), alcohol consumption (median in each category), height (continuous, per 10 cm), regular aspirin use (yes or no). For dietary factors, test for trend was conducted using the median of each quartile as a continuous variable.

Supplementary table 5 Multivariable associations of CRC risk factors with risk of proximal and large (≥10mm) SPs in the NHS, NHS2 and HPFS [a]

Risk factor	proximal and ≥10mm SPs	
	n	OR (95% CI)
Family history of colorectal cancer		
No	304	1(ref)
Yes	85	1.53(1.19-1.97)
P		.001
Smoking status		
Never	202	1(ref)
Past smokers	154	1.16(0.93-1.44)
Current smokers	33	1.80(1.25-2.60)
P for trend		.004
Body mass index, kg/m^2		
<25	169	1(ref)
25-29.9	115	0.88(0.69-1.12)
≥30	105	1.27(0.99-1.63)
P for trend		.75
Physical activity, MET-hours/week		
<7.5	83	1(ref)
7.5-14.9	86	0.91(0.67-1.23)
15-29.9	112	0.97(0.73-1.29)
30-59.9	89	1.27(0.93-1.72)
≥60	19	0.99(0.60-1.64)
P for trend		.21
Alcohol consumption, g/day		
Never	65	1(ref)
<7 for men, <3.5 for women	135	1.02(0.75-1.37)
7-13.9 for men, 3.5-6.9 for women	75	1.42(1.01-1.99)
≥14 for men, ≥7 for women	114	1.48(1.08-2.03)
P for trend		.002
Height, per 10cm	389	1.24(1.07-1.44)
P for trend		.005
Regular aspirin use		
No	299	1(ref)
Yes	90	0.69(0.54-0.88)
P		.003
Total fiber intake		
Quartile 1	84	1(ref)
Quartile 2	101	1.30(0.97-1.74)
Quartile 3	106	1.38(1.02-1.85)
Quartile 4	98	1.32(0.96-1.80)
P for trend		.10
Total folate intake		

Quartile 1	97	1(ref)
Quartile 2	102	1.17(0.88-1.55)
Quartile 3	98	1.16(0.87-1.55)
Quartile 4	92	1.10(0.82-1.46)
P for trend		.60
Total calcium intake		
Quartile 1	98	1(ref)
Quartile 2	92	0.99(0.74-1.33)
Quartile 3	100	1.13(0.84-1.51)
Quartile 4	99	1.15(0.86-1.55)
P for trend		.25
Total vitamin D intake		
Quartile 1	115	1(ref)
Quartile 2	103	0.96(0.73-1.25)
Quartile 3	87	0.86(0.65-1.13)
Quartile 4	84	0.86(0.64-1.14)
P for trend		.22
Marine omega-3 fatty acid intake		
Quartile 1	97	1(ref)
Quartile 2	107	1.13(0.86-1.49)
Quartile 3	107	1.18(0.89-1.57)
Quartile 4	78	0.92(0.67-1.27)
P for trend		.52
Processed red meat intake		
Quartile 1	99	1(ref)
Quartile 2	108	1.11(0.84-1.46)
Quartile 3	94	0.96(0.72-1.28)
Quartile 4	88	0.85(0.63-1.15)
P for trend		.15

Abbreviations: CRC, colorectal cancer; SP, serrated polyp; NHS, the Nurses' Health Study; NHS2, the Nurses' Health Study 2; HPFS, the Health Professionals Follow-up Study; OR, odd ratio; CI, confidence interval; MET, metabolic equivalent task.

[a] Multivariable logistic regression model was used with adjustment for cohort (NHS, NHS2, HPFS), time period of endoscopy (in 2-year intervals), number of prior endoscopies (continuous), time in years since the most recent endoscopy (continuous), reason for endoscopy (routine screening or symptom), race (Caucasian or non-Caucasian), age (continuous, per 10 years), family history of colorectal cancer (yes or no), pack-years of smoking (continuous), body mass index (continuous), physical activity (median in each category), alcohol consumption (median in each category), height (continuous, per 10 cm), regular aspirin use (yes or no). For dietary factors, test for trend was conducted using the median of each quartile as a continuous variable.

Supplementary table 6 Multivariable associations of CRC risk factors with risk of SPs and conventional adenomas after excluding mixed/serrated adenoma in the NHS, NHS2 and HPFS [a]

Risk factor	Case-control comparison					Case-case comparison (SPs-only compared to conventional adenomas-only) OR (95% CI)	Synchronous SPs and conventional adenomas	
	Non-polyp	SPs-only		conventional adenomas-				
	No. of person-endoscopies	n	OR (95% CI)	n	OR (95% CI)		n	OR (95% CI)
Family history of colorectal cancer								
No	263164	5212	1(ref)	7000	1(ref)	1(ref)	1726	1(ref)
Yes	69036	1771	1.52(1.44-1.61)	2212	1.46(1.39-1.54)	1.00(0.93-1.08)	564	1.53(1.39-1.69)
P			<.001		<.001	.97		<.001
Smoking status								
Never	181806	3280	1(ref)	4889	1(ref)	1(ref)	925	1(ref)
Past smokers								
<30 pack-years	109181	2349	1.25(1.18-1.32)	2983	1.01(0.96-1.06)	1.22(1.14-1.32)	803	1.35(1.23-1.49)
≥30 pack-years	24178	623	1.71(1.56-1.87)	833	1.12(1.03-1.21)	1.51(1.33-1.70)	289	1.86(1.62-2.15)
Current smokers								
<30 pack-years	7550	310	1.83(1.62-2.06)	193	0.92(0.79-1.07)	1.85(1.53-2.24)	87	2.19(1.75-2.74)
≥30 pack-years	9485	421	2.41(2.17-2.68)	314	1.13(1.00-1.27)	2.06(1.76-2.41)	186	3.44(2.93-4.05)
P for trend			<.001		<.001	<.001		<.001
Body mass index, kg/m^2								
<25	147480	2733	1(ref)	3823	1(ref)	1(ref)	797	1(ref)
25-29.9	116599	2499	1.19(1.12-1.26)	3470	1.08(1.03-1.13)	1.09(1.02-1.18)	908	1.34(1.21-1.47)
30-34.9	44749	1120	1.35(1.26-1.45)	1302	1.13(1.06-1.21)	1.19(1.08-1.31)	377	1.59(1.40-1.80)
≥35	23372	631	1.37(1.25-1.50)	617	1.07(0.98-1.17)	1.28(1.12-1.45)	208	1.86(1.59-2.18)
P for trend			<.001		<.001	<.001		<.001
Physical activity, MET-hours/week								
<7.5	74745	1601	1(ref)	2059	1(ref)	1(ref)	508	1(ref)
7.5-14.9	81188	1868	1.16(1.08-1.24)	2307	1.05(0.99-1.12)	1.12(1.02-1.23)	565	1.09(0.97-1.23)
15-29.9	98136	2013	1.08(1.01-1.15)	2633	0.97(0.92-1.03)	1.15(1.05-1.26)	697	1.11(0.99-1.25)
30-59.9	61101	1210	1.08(1.00-1.17)	1765	0.99(0.93-1.06)	1.12(1.01-1.25)	410	1.01(0.88-1.16)
≥60	17030	291	0.92(0.81-1.05)	448	0.87(0.78-0.97)	1.12(0.95-1.33)	110	0.97(0.78-1.20)
P for trend			.16		.005	.15		.46
Alcohol consumption, g/day								
Never	66463	1251	1(ref)	1709	1(ref)	1(ref)	342	1(ref)
<7 for men, <3.5 for women	131654	2746	1.18(1.10-1.26)	3613	1.08(1.02-1.15)	1.09(1.00-1.20)	812	1.19(1.04-1.35)
7-13.9 for men, 3.5-6.9 for women	53207	1126	1.24(1.15-1.35)	1477	1.07(1.00-1.15)	1.17(1.04-1.30)	401	1.44(1.24-1.67)
≥14 for men, ≥7 for women	80876	1860	1.35(1.25-1.45)	2413	1.17(1.10-1.25)	1.16(1.05-1.28)	735	1.66(1.45-1.90)
P for trend			<.001		<.001	.02		<.001
Height, per 10cm	332200	6983	1.03(1.00-1.07)	9212	1.03(0.99-1.06)	0.99(0.95-1.05)	2290	1.12(1.05-1.19)
P for trend			.08		.10	.84		.001
Regular aspirin use								
No	215497	4800	1(ref)	5912	1(ref)	1(ref)	1432	1(ref)
Yes	116703	2183	0.96(0.91-1.01)	3300	0.96(0.92-1.00)	1.01(0.93-1.08)	858	0.95(0.87-1.04)
P			.13		.08	.89		.24

Total fiber intake								
Quartile 1	82802	1955	1(ref)	2279	1(ref)	1(ref)	598	1(ref)
Quartile 2	83047	1838	1.05(0.98-1.12)	2217	0.99(0.93-1.05)	1.06(0.97-1.16)	580	1.07(0.95-1.20)
Quartile 3	82936	1727	1.04(0.97-1.11)	2346	1.03(0.97-1.09)	1.02(0.93-1.12)	600	1.11(0.99-1.25)
Quartile 4	83415	1463	0.96(0.89-1.04)	2370	0.98(0.91-1.04)	0.98(0.89-1.09)	512	0.93(0.81-1.06)
P for trend			.27		.61	.55		.28
Total folate intake								
Quartile 1	82759	1840	1(ref)	2388	1(ref)	1(ref)	629	1(ref)
Quartile 2	82649	1863	1.16(1.08-1.24)	2460	1.07(1.01-1.14)	1.08(0.98-1.18)	614	1.03(0.92-1.16)
Quartile 3	83260	1670	1.09(1.02-1.17)	2249	1.01(0.95-1.07)	1.07(0.98-1.18)	532	0.93(0.83-1.05)
Quartile 4	83532	1610	1.07(1.00-1.15)	2115	0.93(0.87-0.99)	1.16(1.05-1.28)	515	0.91(0.80-1.03)
P for trend			.27		.002	.005		.05
Total calcium intake								
Quartile 1	82432	1759	1(ref)	2603	1(ref)	1(ref)	695	1(ref)
Quartile 2	82846	1814	1.10(1.03-1.18)	2458	1.02(0.96-1.08)	1.07(0.98-1.17)	586	0.94(0.84-1.05)
Quartile 3	83078	1814	1.14(1.06-1.22)	2218	0.98(0.92-1.04)	1.15(1.05-1.26)	560	0.97(0.87-1.09)
Quartile 4	83844	1596	1.04(0.96-1.11)	1933	0.90(0.85-0.96)	1.15(1.05-1.27)	449	0.86(0.76-0.97)
P for trend			.39		<.001	.002		.03
Total vitamin D intake								
Quartile 1	82435	1937	1(ref)	2560	1(ref)	1(ref)	632	1(ref)
Quartile 2	82921	1818	1.02(0.95-1.09)	2331	0.94(0.89-0.99)	1.08(0.99-1.18)	626	1.04(0.93-1.16)
Quartile 3	83174	1690	1.01(0.94-1.08)	2249	0.93(0.88-0.99)	1.07(0.98-1.17)	540	0.93(0.83-1.05)
Quartile 4	83670	1538	0.95(0.89-1.02)	2072	0.85(0.80-0.90)	1.12(1.02-1.23)	492	0.86(0.76-0.97)
P for trend			.13		<.001	.02		.003
Marine omega-3 fatty acid intake								
Quartile 1	82527	1960	1(ref)	2352	1(ref)	1(ref)	532	1(ref)
Quartile 2	83076	1852	1.01(0.94-1.07)	2386	1.01(0.95-1.07)	1.01(0.92-1.10)	567	1.02(0.91-1.15)
Quartile 3	83160	1736	0.99(0.93-1.06)	2272	0.95(0.89-1.01)	1.04(0.95-1.14)	593	1.04(0.92-1.17)
Quartile 4	83437	1435	0.89(0.83-0.95)	2202	0.89(0.84-0.95)	1.00(0.91-1.11)	598	1.03(0.91-1.17)
P for trend			.002		<.001	.72		.58
Processed red meat intake								
Quartile 1	85044	1601	1(ref)	2225	1(ref)	1(ref)	501	1(ref)
Quartile 2	81533	1748	1.09(1.02-1.17)	2135	0.99(0.93-1.06)	1.10(1.01-1.21)	565	1.09(0.97-1.24)
Quartile 3	83076	1742	1.03(0.96-1.10)	2340	1.04(0.98-1.11)	0.99(0.91-1.09)	571	1.02(0.90-1.15)
Quartile 4	82547	1892	1.06(0.99-1.14)	2512	1.04(0.98-1.10)	1.03(0.94-1.13)	653	1.01(0.89-1.14)
P for trend			.40		.13	.85		.65

Abbreviations: CRC, colorectal cancer; SP, serrated polyp; NHS, the Nurses' Health Study; NHS2, the Nurses' Health Study 2; HPFS, the Health Professionals Follow-up Study; OR, odd ratio; CI, confidence interval; MET, metabolic equivalent task.

[a] Multivariable logistic regression model was used with adjustment for cohort (NHS, NHS2, HPFS), time period of endoscopy (in 2-year intervals), number of prior endoscopies (continuous), time in years since the most recent endoscopy (continuous), reason for endoscopy (routine screening or symptom), race (Caucasian or non-Caucasian), age (continuous, per 10 years), family history of colorectal cancer (yes or no), pack-years of smoking (continuous), body mass index (continuous), physical activity (median in each category), alcohol consumption (median in each category), height (continuous, per 10 cm), regular aspirin use (yes or no). For dietary factors, test for trend was conducted using the median of each quartile as a continuous variable.

Supplementary table 7 Multivariable associations of CRC risk factors with risk of SPs and conventional adenomas among participants who had colonoscopies in the NHS, NHS2 and HPFS [a]

Risk factor	Case-control comparison					Case-case comparison (SPs-only compared to conventional adenomas-only) OR (95% CI)	Synchronous SPs and conventional adenomas	
	Non-polyp	SPs-only		conventional adenomas-only				
	No. of person-endoscopies	n	OR (95% CI)	n	OR (95% CI)		n	OR (95% CI)
Family history of colorectal cancer								
No	176555	4506	1(ref)	5277	1(ref)	1(ref)	1352	1(ref)
Yes	47153	1438	1.29(1.22-1.38)	1568	1.26(1.19-1.33)	1.02(0.94-1.12)	422	1.36(1.22-1.53)
P			<.001		<.001	.61		<.001
Smoking status								
Never	125443	2866	1(ref)	3753	1(ref)	1(ref)	725	1(ref)
Past smokers								
<30 pack-years	72979	2026	1.27(1.20-1.35)	2207	1.00(0.94-1.06)	1.25(1.15-1.36)	633	1.39(1.25-1.55)
≥30 pack-years	14931	459	1.59(1.43-1.77)	537	1.06(0.96-1.16)	1.49(1.30-1.72)	201	1.86(1.57-2.20)
Current smokers								
<30 pack-years	4772	260	1.86(1.63-2.13)	146	0.95(0.80-1.12)	1.87(1.51-2.32)	71	2.33(1.82-2.99)
≥30 pack-years	5583	333	2.49(2.21-2.81)	202	1.08(0.94-1.26)	2.18(1.81-2.62)	144	3.87(3.22-4.65)
P for trend			<.001		.18	<.001		<.001
Body mass index, kg/m^2								
<25	95872	2286	1(ref)	2858	1(ref)	1(ref)	613	1(ref)
25-29.9	77889	2108	1.19(1.12-1.26)	2545	1.05(0.99-1.11)	1.11(1.03-1.21)	672	1.28(1.15-1.44)
30-34.9	32191	1001	1.36(1.26-1.47)	963	1.04(0.96-1.12)	1.30(1.17-1.45)	312	1.60(1.39-1.84)
≥35	17756	549	1.31(1.19-1.44)	479	0.99(0.89-1.09)	1.31(1.14-1.51)	177	1.84(1.55-2.19)
P for trend			<.001		.22	<.001		<.001
Physical activity, MET-hours/week								
<7.5	48549	1289	1(ref)	1474	1(ref)	1(ref)	376	1(ref)
7.5-14.9	55487	1627	1.20(1.11-1.29)	1750	1.07(0.99-1.15)	1.15(1.03-1.27)	440	1.11(0.96-1.27)
15-29.9	67389	1734	1.09(1.01-1.18)	2025	0.99(0.93-1.06)	1.14(1.03-1.26)	554	1.16(1.01-1.33)
30-59.9	41149	1038	1.11(1.01-1.21)	1279	0.97(0.89-1.05)	1.16(1.03-1.30)	328	1.08(0.93-1.27)
≥60	11134	256	1.00(0.87-1.15)	317	0.84(0.74-0.96)	1.24(1.03-1.50)	76	0.93(0.72-1.19)
P for trend			.63		.001	.03		.65
Alcohol consumption, g/day								
Never	43367	1043	1(ref)	1245	1(ref)	1(ref)	251	1(ref)
<7 for men, <3.5 for women	90723	2355	1.17(1.08-1.26)	2720	1.08(1.01-1.16)	1.07(0.96-1.18)	651	1.26(1.08-1.46)
7-13.9 for men, 3.5-6.9 for women	35985	985	1.28(1.17-1.40)	1113	1.10(1.01-1.19)	1.17(1.03-1.32)	291	1.42(1.19-1.69)
≥14 for men, ≥7 for women	53633	1561	1.36(1.25-1.48)	1767	1.19(1.10-1.28)	1.14(1.01-1.28)	581	1.82(1.56-2.13)
P for trend			<.001		<.001	.05		<.001
Height, per 10cm	223708	5944	1.04(1.00-1.09)	6845	1.04(1.00-1.08)	1.01(0.95-1.07)	1774	1.10(1.02-1.18)
P for trend			.04		.07	.74		.01
Regular aspirin use								
No	149424	4200	1(ref)	4502	1(ref)	1(ref)	1144	1(ref)
Yes	74284	1744	0.94(0.89-1.00)	2343	0.97(0.92-1.02)	0.97(0.89-1.05)	630	0.95(0.85-1.05)
P			.06		.22	.44		.29

Total fiber intake								
Quartile 1	52785	1595	1(ref)	1620	1(ref)	1(ref)	450	1(ref)
Quartile 2	56745	1530	1.02(0.95-1.10)	1677	1.03(0.96-1.10)	1.01(0.91-1.11)	463	1.12(0.98-1.28)
Quartile 3	57976	1514	1.05(0.97-1.13)	1807	1.08(1.00-1.16)	0.98(0.88-1.09)	486	1.18(1.03-1.35)
Quartile 4	56202	1305	1.01(0.93-1.09)	1741	1.02(0.94-1.10)	1.00(0.90-1.12)	375	0.94(0.81-1.10)
P for trend			.78		.57	.97		.48
Total folate intake								
Quartile 1	43887	1335	1(ref)	1515	1(ref)	1(ref)	432	1(ref)
Quartile 2	55581	1614	1.18(1.09-1.27)	1858	1.10(1.02-1.18)	1.07(0.96-1.19)	476	1.01(0.88-1.15)
Quartile 3	61189	1530	1.11(1.03-1.20)	1787	1.03(0.96-1.11)	1.07(0.96-1.19)	440	0.92(0.81-1.06)
Quartile 4	63051	1465	1.07(0.99-1.16)	1685	0.95(0.88-1.02)	1.15(1.03-1.28)	426	0.90(0.78-1.04)
P for trend			.50		.01	.02		.08
Total calcium intake								
Quartile 1	46692	1338	1(ref)	1713	1(ref)	1(ref)	483	1(ref)
Quartile 2	54403	1497	1.07(0.99-1.16)	1799	1.02(0.96-1.10)	1.06(0.95-1.17)	462	0.96(0.84-1.09)
Quartile 3	59185	1631	1.14(1.06-1.23)	1746	1.01(0.94-1.08)	1.15(1.03-1.27)	446	0.96(0.84-1.10)
Quartile 4	63428	1478	1.04(0.96-1.12)	1587	0.94(0.87-1.01)	1.12(1.01-1.25)	383	0.88(0.76-1.02)
P for trend			.41		.04	.02		.10
Total vitamin D intake								
Quartile 1	49349	1549	1(ref)	1762	1(ref)	1(ref)	461	1(ref)
Quartile 2	55789	1550	1.00(0.93-1.08)	1762	0.96(0.90-1.03)	1.04(0.94-1.15)	515	1.09(0.96-1.24)
Quartile 3	59568	1544	1.02(0.95-1.10)	1734	0.94(0.88-1.01)	1.09(0.98-1.20)	408	0.88(0.76-1.00)
Quartile 4	59002	1301	0.92(0.85-0.99)	1587	0.88(0.82-0.94)	1.05(0.95-1.17)	390	0.89(0.77-1.02)
P for trend			.03		<.001	.30		.01
Marine omega-3 fatty acid intake								
Quartile 1	56981	1703	1(ref)	1788	1(ref)	1(ref)	428	1(ref)
Quartile 2	56589	1573	0.99(0.92-1.06)	1816	1.02(0.96-1.09)	0.98(0.89-1.08)	442	1.00(0.88-1.15)
Quartile 3	55604	1487	1.02(0.95-1.10)	1668	0.96(0.89-1.03)	1.06(0.96-1.17)	447	1.03(0.90-1.18)
Quartile 4	54534	1181	0.90(0.83-0.98)	1573	0.90(0.84-0.97)	1.00(0.89-1.11)	457	1.08(0.94-1.24)
P for trend			.05		.001	.66		.27
Processed red meat intake								
Quartile 1	55815	1370	1(ref)	1654	1(ref)	1(ref)	372	1(ref)
Quartile 2	56558	1493	1.06(0.99-1.15)	1647	0.99(0.93-1.07)	1.07(0.97-1.19)	461	1.15(1.00-1.32)
Quartile 3	57260	1524	1.03(0.96-1.11)	1754	1.02(0.95-1.10)	1.02(0.92-1.13)	458	1.05(0.91-1.21)
Quartile 4	54075	1557	1.05(0.97-1.13)	1790	1.01(0.94-1.09)	1.04(0.94-1.15)	483	1.00(0.87-1.16)
P for trend			.47		.59	.77		.43

Abbreviations: CRC, colorectal cancer; SP, serrated polyp; NHS, the Nurses' Health Study; NHS2, the Nurses' Health Study 2; HPFS, the Health Professionals Follow-up Study; OR, odd ratio; CI, confidence interval; MET, metabolic equivalent task.

[a] Multivariable logistic regression model was used with adjustment for cohort (NHS, NHS2, HPFS), time period of endoscopy (in 2-year intervals), number of prior endoscopies (continuous), time in years since the most recent endoscopy (continuous), reason for endoscopy (routine screening or symptom), race (Caucasian or non-Caucasian), age (continuous, per 10 years), family history of colorectal cancer (yes or no), pack-years of smoking (continuous), body mass index (continuous), physical activity (median in each category), alcohol consumption (median in each category), height (continuous, per 10 cm), regular aspirin use (yes or no). For dietary factors, test for trend was conducted using the median of each quartile as a continuous variable.