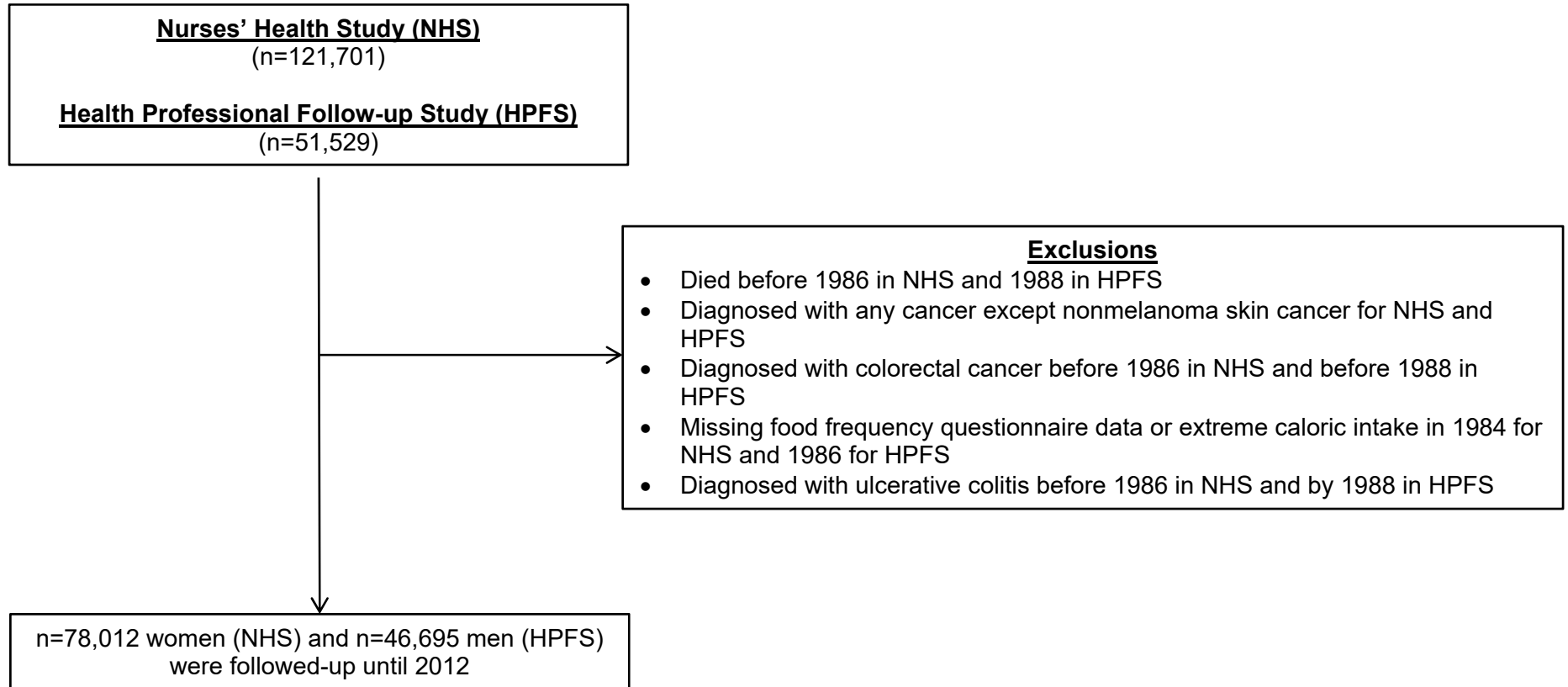


**Supplemental Figure 1.** Participant flow chart



**Supplemental Table 1. Comparison of dietary components included in the Dietary Approaches to Stop Hypertension (DASH, Alternative Mediterranean Diet (AMED), and Alternative Healthy Eating Index-2010 (AHEI-2010) dietary indices and criteria for minimum and maximum points**

Dietary Component	DASH <sup>1</sup>	AMED <sup>2</sup>	AHEI-2010 <sup>3</sup>
Fruits	Quintiles (1pt=Q1, 5pt=Q5)	High vs. low (0pt=below median, 1pt=above median)	Absolute cutoffs (0pt=0 serv/day, 10pt= $\geq$ 4 serv/day)
Vegetables	Quintiles (1pt=Q1, 5pt=Q5)	High vs. low (0pt=below median, 1pt=above median)	Absolute cutoffs (0pt=0 serv/day, 10pt= $\geq$ 5 serv/day)
Whole grains	Quintiles (1pt=Q1, 5pt=Q5)	High vs. low (0pt=below median, 1pt=above median)	Absolute cutoffs (0pt=0 serv/day, 10pt= $\geq$ 75 g/day for women and $\geq$ 90 g/day for men)
Nuts <sup>4</sup>	Quintiles (1pt=Q1, 5pt=Q5)	High vs. low (0pt=below median, 1pt=above median)	Absolute cutoffs (0pt=0 serv/day, 10pt= $\geq$ 1 serv/day)
Legumes <sup>4</sup>	Quintiles (1pt=Q1, 5pt=Q5)	High vs. low (0pt=below median, 1pt=above median)	
Low-fat dairy	Quintiles (1pt=Q1, 5pt=Q5)	--	--
Red/processed meat	Quintiles (1pt=Q5, 5pt=Q1)	High vs. low (0pt=below median, 1pt=above median)	Absolute cutoffs (0pt= $\geq$ 1.5 serv/day, 10pt=0 serv/day)
Sugar-sweetened beverage <sup>5</sup>	Quintiles (1pt=Q5, 5pt=Q1)	--	Absolute cutoffs (0pt= $\geq$ 1 serv/day, 10pt=0 serv/day)
Sodium intake	Quintiles (1pt=Q5, 5pt=Q1)	--	Absolute cutoffs (0pt=highest decile, 10pt=lowest decile)
Alcohol	--	Moderate vs. not moderate (0pt=not moderate, 1pt=moderate)	Absolute cutoffs (0pt= $\geq$ 2.5 drinks/day for women and $\geq$ 3.5 drinks/day for men, 10pt=0.5-1.5 drinks/day for women and 0.5-2.0 drinks/day for men)
Fish	--	High vs. low (0pt=below median, 1pt=above median)	--
MUFA: SFA ratio	--	High vs. low (0pt=below median, 1pt=above median)	--
Polyunsaturated fat	--	--	Absolute cutoffs (0pt= $\leq$ 2% energy, 10pt= $\geq$ 10% energy)
Omega-3 fatty acid	--	--	Absolute cutoffs (0pt=0mg/day, 10pt=250 mg/day)
Trans fat	--	--	Absolute cutoffs (0pt= $\geq$ 4% energy, 10pt= $\leq$ 0.5% energy)

DASH, Dietary Approaches to Stop Hypertension; AMED, Alternative Mediterranean Diet; AHEI-2010, Alternative Healthy Eating Index-2010; MUFA, monounsaturated fat; SFA, saturated fat

<sup>1</sup>For fruit, vegetable, whole grain, nut and legume, and low-fat dairy intake, the lowest quintile of intake received 1 point and each increasing quintile received an additional point. For red and processed meat, sugar-sweetened beverage, and sodium intake, the highest quintile of intake received 1 point and each decreasing quintile received an additional point.

<sup>2</sup>For all components except alcohol and red and processed meat intake, individuals with intake below the median received 0 points, and individuals with intake above the median received 1 point. For red and processed meat intake, individuals with intake above the median received 0 points, and individuals with intake below the median received 1 point. For alcohol intake, individuals with 5-15g/day of alcohol intake received 1 point and individuals with intake <5 or >15g/day of alcohol intake received 0 points.

<sup>3</sup>Intake between the minimum and maximum cutoffs was given a score between 0 and 10 proportional to intake (e.g. for fruit intake, 2 servings/day was given a score 0.5, and 3 servings/day was given a score of 0.75).

<sup>4</sup>Nut and legume intake were combined into one category in the DASH and AHEI-2010 diets, but were separate components in the AMED diet.

<sup>5</sup>Sugar-sweetened beverage intake included fruit juice in the AHEI-2010 diet but not in the DASH diet.

**Supplemental Table 2. Associations (multivariable hazard ratios, 95% confidence intervals) between quintiles of AMED and AHEI-2010 scores without alcohol and risk of colorectal cancer outcomes in the Nurses' Health Study and Health Professionals Follow-up Study**

	Q1	Q2	Q3	Q4	Q5	P for trend <sup>1</sup>
<b>Total colorectal cancer</b>						
Men <sup>2</sup>						
No. cases (AMED/AHEI-2010)	(236/218)	(238/248)	(241/240)	(231/227)	(216/229)	
AMED	1.00 (ref)	0.96 (0.80, 1.15)	0.89 (0.74, 1.08)	0.97 (0.80, 1.17)	0.80 (0.65, 0.98)	0.03
AHEI-2010	1.00 (ref)	1.09 (0.90, 1.31)	1.02 (0.84, 1.23)	0.92 (0.76, 1.12)	0.86 (0.71, 1.05)	0.06
Women <sup>3</sup>						
No. cases (AMED/AHEI-2010)	(324/274)	(275/296)	(311/303)	(300/335)	(318/320)	
AMED	1.00 (ref)	0.91 (0.77, 1.07)	0.89 (0.75, 1.04)	0.95 (0.80, 1.12)	0.95 (0.79, 1.13)	0.85
AHEI-2010	1.00 (ref)	1.02 (0.87, 1.19)	1.02 (0.87, 1.19)	1.08 (0.92, 1.27)	1.00 (0.84, 1.20)	0.76
<b>Total colon cancer</b>						
Men <sup>2</sup>						
No. cases (AMED/AHEI-2010)	(180/174)	(179/190)	(195/190)	(195/186)	(172/181)	
AMED	1.00 (ref)	0.93 (0.75, 1.15)	0.94 (0.76, 1.17)	1.08 (0.87, 1.33)	0.83 (0.66, 1.04)	0.27
AHEI-2010	1.00 (ref)	1.03 (0.84, 1.27)	0.98 (0.80, 1.22)	0.94 (0.76, 1.17)	0.85 (0.68, 1.06)	0.16
Women <sup>3</sup>						
No. cases (AMED/AHEI-2010)	(247/223)	(215/235)	(244/221)	(241/269)	(257/256)	
AMED	1.00 (ref)	0.94 (0.78, 1.13)	0.90 (0.75, 1.09)	1.01 (0.83, 1.22)	1.01 (0.82, 1.23)	0.72
AHEI-2010	1.00 (ref)	0.98 (0.82, 1.16)	0.97 (0.81, 1.16)	1.06 (0.83, 1.27)	1.01 (0.83, 1.23)	0.61
<b>Proximal colon cancer</b>						
Men <sup>2</sup>						
No. cases (AMED/AHEI-2010)	(70/71)	(75/83)	(82/66)	(86/95)	(83/81)	
AMED	1.00 (ref)	0.95 (0.68, 1.33)	0.95 (0.67, 1.32)	1.13 (0.82, 1.57)	0.92 (0.65, 1.31)	0.79
AHEI-2010	1.00 (ref)	1.05 (0.76, 1.46)	0.82 (0.58, 1.16)	1.12 (0.81, 1.54)	0.89 (0.64, 1.26)	0.80
Women <sup>3</sup>						
No. cases (AMED/AHEI-2010)	(160/145)	(144/143)	(154/144)	(140/155)	(157/168)	
AMED	1.00 (ref)	0.92 (0.73, 1.15)	0.83 (0.66, 1.05)	0.83 (0.65, 1.05)	0.86 (0.67, 1.11)	0.40

AHEI-2010	1.00 (ref)	0.84 (0.67, 1.06)	0.94 (0.75, 1.17)	0.97 (0.77, 1.22)	0.92 (0.72, 1.18)	0.65
<b>Distal colon cancer</b>						
Men <sup>2</sup>						
No. cases (AMED/AHEI-2010)	(72/65)	(66/70)	(73/84)	(69/51)	(55/65)	
AMED	1.00 (ref)	0.90 (0.64, 1.27)	0.95 (0.67, 1.34)	0.99 (0.70, 1.39)	0.70 (0.48, 1.02)	0.17
AHEI-2010	1.00 (ref)	1.03 (0.73, 1.45)	1.19 (0.85, 1.67)	0.76 (0.52, 1.10)	0.83 (0.57, 1.21)	0.26
Women <sup>3</sup>						
No. cases (AMED/AHEI-2010)	(79/73)	(65/89)	(85/72)	(97/102)	(91/81)	
AMED	1.00 (ref)	0.96 (0.69, 1.34)	1.07 (0.77, 1.48)	1.47 (1.07, 2.03)	1.28 (0.90, 1.82)	0.13
AHEI-2010	1.00 (ref)	1.25 (0.93, 1.67)	1.01 (0.73, 1.38)	1.16 (0.84, 1.59)	1.12 (0.79, 1.57)	0.37
<b>Rectal cancer</b>						
Men <sup>2</sup>						
No. cases (AMED/AHEI-2010)	(56/44)	(59/58)	(46/50)	(36/41)	(44/48)	
AMED	1.00 (ref)	1.06 (0.73, 1.54)	0.74 (0.49, 1.12)	0.63 (0.41, 0.97)	0.68 (0.44, 1.05)	0.006
AHEI-2010	1.00 (ref)	1.31 (0.87, 1.95)	1.14 (0.75, 1.72)	0.84 (0.54, 1.31)	0.91 (0.58, 1.42)	0.17
Women <sup>3</sup>						
No. cases (AMED/AHEI-2010)	(77/51)	(60/61)	(67/82)	(59/66)	(61/64)	
AMED	1.00 (ref)	0.82 (0.58, 1.15)	0.82 (0.59, 1.16)	0.76 (0.53, 1.09)	0.75 (0.50, 1.10)	0.27
AHEI-2010	1.00 (ref)	1.19 (0.85, 1.67)	1.23 (0.87, 1.74)	1.17 (0.81, 1.68)	0.99 (0.66, 1.47)	0.73

AMED, Alternative Mediterranean Diet; AHEI-2010, Alternative Healthy Eating Index-2010

<sup>1</sup>P-value for the continuous diet scores determined using the Wald test

<sup>2</sup>Adjusted for total energy intake (kcal/day, quintiles), alcohol intake (g/day, quintiles), physical activity (MET-hours/wk, quintiles), NSAID use ( $\geq 2$  NSAID/week vs.  $< 2$  NSAID/week [ref]), family history of CRC (yes vs. no [ref]), previous CRC screening via colonoscopy or sigmoidoscopy (yes vs. no [ref]), history of polyps (yes vs. no [ref]), smoking (never smoker [ref], 0- $<10$ , 10- $<20$ , 20- $<30$ , 30- $<40$ , 40- $<50$   $\geq 50$  packyears), multivitamin use (regular use vs. non-use [ref]), supplemental calcium intake (none [ref],  $>0-200$ ,  $>200-400$ ,  $>400-600$ ,  $>600$ mg/day), and young adult body mass index ( $<25$  [ref], 25- $<27.5$ , 27.5- $<30$ ,  $\geq 30$  kg/m<sup>2</sup>)

<sup>3</sup>Adjusted for same as multivariable models in men + menopausal status (postmenopausal vs. not [ref]), and postmenopausal hormone use (never use [ref], past use, current use)

**Supplemental Table 3. Associations (multivariable hazard ratios, 95% confidence intervals) between continuous DASH, AMED, and AHEI-2010 scores<sup>1</sup> and colorectal cancer risk stratified by dietary and lifestyle characteristics in the Nurses' Health Study and Health Professionals Follow-up Study**

	DASH <sup>2</sup>				AMED <sup>3</sup>				AHEI-2010 <sup>3</sup>			
	HPFS		NHS		HPFS		NHS		HPFS		NHS	
	HR (95% CI)	P-het <sup>4</sup>	HR (95% CI)	P-het <sup>5</sup>	HR (95% CI)	P-het <sup>4</sup>	HR (95% CI)	P-het <sup>5</sup>	HR (95% CI)	P-het <sup>4</sup>	HR (95% CI)	P-het <sup>5</sup>
<b>Aspirin/NSAID</b>												
High (n=546 HPFS cases; n=729 NHS cases)	0.86 (0.75, 0.98)	0.34	1.04 (0.92, 1.17)	0.30	0.86 (0.74, 1.00)	0.42	1.01 (0.90, 1.14)	0.68	0.87 (0.76, 0.99)	0.12	1.05 (0.93, 1.17)	0.70
Low (n=616 HPFS cases; n=799 NHS cases)	0.88 (0.78, 0.99)		0.93 (0.83, 1.03)		0.92 (0.81, 1.05)		1.00 (0.90, 1.11)		0.96 (0.86, 1.08)		1.00 (0.91, 1.11)	
<b>Family History of CRC</b>												
Yes (n=206 HPFS cases; n=295 NHS cases)	0.89 (0.71, 1.11)	0.67	1.05 (0.87, 1.27)	0.55	0.96 (0.74, 1.24)	0.41	1.19 (0.99, 1.43)	0.05	1.00 (0.81, 1.25)	0.73	1.09 (0.91, 1.31)	0.69
No (n=956 HPFS cases; n=1233 NHS cases)	0.87 (0.79, 0.95)		0.95 (0.87, 1.04)		0.87 (0.78, 0.97)		0.96 (0.88, 1.05)		0.89 (0.81, 0.98)		1.01 (0.93, 1.10)	
<b>Obesity</b>												
Obese (n=159 HPFS cases; n=320 NHS cases)	0.70 (0.53, 0.92)	0.06	0.93 (0.78, 1.12)	0.70	0.82 (0.61, 1.11)	0.40	0.90 (0.75, 1.08)	0.33	0.95 (0.73, 1.24)	0.94	0.91 (0.76, 1.09)	0.24
Not obese (n=1003 HPFS cases; n=1208 NHS cases)	0.91 (0.83, 1.00)		0.99 (0.90, 1.08)		0.91 (0.82, 1.01)		1.03 (0.94, 1.12)		0.92 (0.84, 1.01)		1.05 (0.97, 1.15)	
<b>Smoking</b>												
Ever (n=682 HPFS cases; n=928 NHS cases)	0.89 (0.79, 1.00)	0.90	0.99 (0.89, 1.10)	0.45	0.89 (0.79, 1.01)	0.78	0.99 (0.89, 1.10)	0.99	0.93 (0.83, 1.04)	0.83	1.03 (0.93, 1.14)	0.50
Never (n=480 HPFS cases; n=600 NHS cases)	0.86 (0.75, 0.98)		0.93 (0.82, 1.06)		0.89 (0.76, 1.04)		1.01 (0.89, 1.15)		0.92 (0.80, 1.05)		1.01 (0.89, 1.14)	
<b>Multivitamin Use</b>												
Regular use (n=625 HPFS cases; n=524 NHS cases)	0.98 (0.87, 1.10)	0.06	0.91 (0.79, 1.05)	0.32	0.97 (0.84, 1.11)	0.24	0.94 (0.81, 1.08)	0.20	0.96 (0.85, 1.08)	0.40	1.00 (0.87, 1.14)	0.55



Ever (n=869 NHS cases)	--	0.97 (0.87, 1.08)	0.87	--	--	0.99 (0.89, 1.11)	0.65	--	--	1.04 (0.94, 1.15)	0.57
Never (n=659 NHS cases)	--	0.96 (0.85, 1.08)		--		0.99 (0.88, 1.12)		--		0.98 (0.87, 1.10)	

<sup>1</sup>Per a one-unit increase in the interquartile range for each dietary score

<sup>2</sup>Adjusted for total energy intake (kcal/day, quintiles), alcohol intake (g/day, quintiles), physical activity (MET-hours/wk, quintiles), NSAID use (≥2 NSAIDs/week vs. <2 NSAIDs/week [ref]), family history of CRC (yes vs. no [ref]), previous CRC screening via colonoscopy or sigmoidoscopy (yes vs. no [ref]), history of polyps (yes vs. no [ref]), smoking (never smoker [ref], 0-<10, 10-<20, 20-<30, 30-<40, 40-<50 ≥50 packyears), multivitamin use (regular use vs. non-use [ref]), supplemental calcium intake (none [ref], >0-200, >200-400, >400-600, >600mg/day), and young adult body mass index (<25 [ref], 25-<27.5, 27.5-<30, ≥30 kg/m<sup>2</sup>); in women, additionally adjusted for menopausal status (postmenopausal vs. not [ref]), and postmenopausal hormone use (never use [ref], past use, current use)

<sup>3</sup>Adjusted for the same covariates as for the DASH diet but excluding alcohol intake

<sup>4</sup>P value for the interaction term between the potential effect modifier of interest and the continuous diet score in men determined using the Wald test

<sup>5</sup>P value for the interaction term between the potential effect modifier of interest and the continuous diet score in women determined using the Wald test