



Web Figure 1. Sequence of steps in creating the dietary inflammatory index (adapted from ref#16, with Editor's permission)
 Shivappa N, Steck SE, Hurley TG, et al. Designing and developing a literature-derived, population-based dietary inflammatory index. *Public Health Nutrition* 2014;17(8):1689-96.

Web Table 1. Distribution of food groups in quintiles (Q) of the cumulative average dietary inflammatory index; Women's Health Initiative

Food group (medium servings/day) ^a	Quintiles of cumulative average dietary inflammatory index				
	Q1 (-6.62, < -3.25) (more anti- inflammatory)	Q2 (-3.25, < -2.17)	Q3 (-2.17, < -0.84)	Q4 (< -0.84, 0.97)	Q5 (0.97, 5.39) (more pro- inflammatory)
Fruits	2.78	2.18	1.95	1.80	1.35
Vegetables	3.21	2.41	2.17	2.03	1.55
Red meat	0.57	0.66	0.65	0.67	0.62
Poultry	0.40	0.36	0.34	0.34	0.28
Soy	0.15	0.05	0.04	0.03	0.01
Nuts	0.34	0.25	0.22	0.20	0.15
Whole Grains	1.54	1.17	1.07	1.01	0.80
Dairy	2.20	1.99	1.84	1.68	1.27
Eggs	0.17	0.17	0.17	0.16	0.15

Q=quintile

^aValues are mean intake for each food group

Web Table 2: Age-adjusted hazards ratios of the association between patterns of change in dietary inflammatory potential and colorectal cancer risk stratified by NSAID use; Women's Health Initiative, 1993-2014

Tumor location ^b	Patterns of change ^a in quintiles of the dietary inflammatory index									
	Anti-inflammatory stable (Referent)		Anti-inflammatory change		Neutral inflammation stable		Pro-inflammatory change		Pro-inflammatory stable	
All participants										
Colorectal cancer, n, % ^c	287	1.11	129	1.21	155	1.24	120	1.22	347	1.23
Colorectal cancer, HR (95% CI)	1.00		1.14	0.93, 1.41	1.12	0.92, 1.36	1.15	0.93, 1.43	1.17	1.00, 1.37
Colon cancer, n, %	234	0.91	107	1.01	135	1.08	99	1.01	284	1.01
Colon cancer, HR (95% CI)	1.00		1.17	0.93, 1.47	1.2	0.97, 1.48	1.17	0.93, 1.48	1.18	1.00, 1.40
Proximal colon cancer, n, %	159	0.62	73	0.69	86	0.69	81	0.83	191	0.68
Proximal colon cancer, HR (95% CI)	1.00		1.18	0.89, 1.55	1.12	0.86, 1.46	1.41	1.08, 1.85	1.17	0.95, 1.44
Distal colon cancer, n, %	60	0.23	24	0.23	42	0.34	18	0.19	75	0.27
Distal colon cancer, HR (95% CI)	1.00		1.01	0.63, 1.62	1.45	0.98, 2.15	0.82	0.49, 1.40	1.2	0.85, 1.68
Rectal cancer, n, %	55	0.23	23	0.24	20	0.18	22	0.25	63	0.24
Rectal cancer, HR (95% CI)	1.00		1.03	0.64, 1.68	0.76	0.45, 1.26	1.08	0.66, 1.78	1.08	0.75, 1.55
Non users of non-steroidal anti-inflammatory drugs										
Colorectal cancer, n, %	103	1.04	49	1.11	51	1.09	50	1.26	161	1.35
Colorectal cancer, HR (95% CI)	1.00		1.11	0.79, 1.56	1.05	0.75, 1.47	1.26	0.90, 1.77	1.37	1.07, 1.76
Colon cancer, n, %	88	0.89	40	0.91	45	0.96	41	1.02	133	1.12
Colon cancer, HR (95% CI)	1.00		1.06	0.73, 1.55	1.07	0.76, 1.56	1.21	0.84, 1.76	1.33	1.02, 1.74
Proximal colon cancer, n, %	57	0.58	28	0.64	23	0.49	30	0.76	96	0.81
Proximal colon cancer, HR (95% CI)	1.00		1.15	0.73, 1.82	0.88	0.53, 1.39	1.38	0.89, 2.15	1.49	1.07, 2.07
Distal colon cancer, n, %	24	0.24	9	0.21	20	0.43	11	0.28	30	0.25
Distal colon cancer, HR (95% CI)	1.00		0.86	0.40, 1.86	1.76	0.97, 3.19	1.18	0.58, 2.40	1.08	0.63, 1.85
Rectal cancer, n, %	16	0.18	9	0.22	6	0.14	9	0.25	28	0.26
Rectal cancer, HR (95% CI)	1.00		1.29	0.57, 2.92	0.80	0.31, 2.04	1.45	0.64, 3.28	1.52	0.82, 2.81
Regular users of non-steroidal anti-inflammatory drugs										
Colorectal cancer, n, %	173	1.15	73	0.83, 1.54	100	1.36	68	1.27	148	1.03

Colorectal cancer, HR (95% CI)	1.00		1.15	0.88, 1.52	1.18	0.92, 1.51	1.15	0.87, 1.52	0.93	0.75, 1.16
Colon cancer, n, %	137	0.91	60	1.04	86	1.17	56	1.05	122	0.85
Colon cancer, HR (95% CI)	1.00		1.21	0.89, 1.64	1.28	0.98, 1.68	1.20	0.88 1.63	0.97	0.76, 1.24
Proximal colon cancer, n, %	93	0.62	41	0.72	63	0.86	43	0.92	72	0.50
Proximal colon cancer, HR (95% CI)	1.00		1.22	0.85, 1.76	1.39	1.01, 1.91	1.54	1.09, 2.18	0.85	0.62, 1.15
Distal colon cancer, n, %	36	0.24	12	0.21	18	0.25	7	0.13	41	0.29
Distal colon cancer, HR (95% CI)	1.00		0.91	0.47, 1.75	1.02	0.58, 1.80	0.57	0.25, 1.27	1.23	0.79, 1.93
Rectal cancer, n, %	37	0.27	14	0.27	14	0.21	13	0.27	26	0.20
Rectal cancer, HR (95% CI)	1.00		1	0.54, 1.85	0.78	0.42, 1.44	1.01	0.54, 1.89	0.74	0.45, 1.83

NSAID=non-steroidal anti-inflammatory drugs

^aThe differences in dietary inflammatory index scores from baseline to year 3 in the Observational Study and from year 1 to composite year 3 (i.e., years 2,3&4 combined) in the Dietary Modification Trial control group are referred to as “change in dietary inflammatory index.” We categorized the changes in the dietary inflammatory index based on quintile (Q) differences between the first and second time points, as follows: **1) anti-inflammatory stable:** Q1 or Q2 at both time points or change from Q3 to Q2; **2) anti-inflammatory change:** changes $\leq -2Q$; **3) neutral inflammation stable:** changes from Q2 to Q3, Q4 to Q3 or stable at Q3 at both time points; **4) pro-inflammatory change:** changes $\geq 2Q$; and **5) pro-inflammatory stable:** Q4 or Q5 at either time points, or change from Q3 to Q4;

^bInternational classification of diseases (ICD)-O-2 codes used to define location of colon cancer include C18.0 (cecum), C18.2 (ascending colon, right colon), C18.3 (hepatic flexure of colon), C18.4 (transverse colon), C18.5 (splenic flexure of colon), C18.6 (descending colon, left colon) and C18.7 (sigmoid colon); rectal cancer include all rectum and rectosigmoid cases;

^cNumber and proportion of cancer cases within the group (all such values)

Web Table 3: Age-adjusted hazards ratios of the association between cumulative average dietary inflammatory index and colorectal cancer risk stratified by NSAID use; Women's Health Initiative, 1993-2014

Tumor location ^b	Quintiles of cumulative average dietary inflammatory index ^a										^c P _{trend}
	Quintile 1 (more anti-inflammatory diet) referent		Quintile 2	Quintile 3	Quintile 4	Quintile 5 (more pro-inflammatory diet)					
All participants											
Colorectal cancer, n, % ^d	181	1.04	211	1.21	226	1.3	176	0.99	247	1.42	
Colorectal cancer, HR (95% CI)	1.00		1.17	0.94, 1.46	1.29	1.04, 1.61	1.01	0.81, 1.27	1.50	1.22, 1.85	0.002
Colon cancer, n, %	148	0.85	174	1.00	187	1.08	144	0.83	206	1.19	
Colon cancer, HR (95% CI)	1.00		1.17	0.94, 1.46	1.29	1.04, 1.61	1.01	0.81, 1.27	1.50	1.22, 1.85	0.002
Proximal colon cancer, n, %	98	0.57	129	0.74	127	0.73	98	0.57	138	0.80	
Proximal colon cancer, HR (95% CI)	1.00		1.31	1.01, 1.71	1.33	1.02, 1.73	1.04	0.79, 1.38	1.53	1.18, 1.98	0.02
Distal colon cancer, n, %	41	0.24	36	0.21	52	0.30	36	0.21	54	0.31	
Distal colon cancer, HR (95% CI)	1.00		0.88	0.56, 1.37	1.25	0.86, 1.95	0.91	0.58, 1.42	1.40	0.93, 2.10	0.10
Rectal cancer, n, %	34	0.21	38	0.24	41	0.26	29	0.18	41	0.26	
Rectal cancer, HR (95% CI)	1.00		1.12	0.70, 1.77	1.23	0.78, 1.94	0.87	0.53, 1.42	1.25	0.80, 1.98	0.61
Non users of non-steroidal anti-inflammatory drugs											
Colorectal cancer, n, %	68	1.00	75	1.13	91	1.33	67	0.93	113	1.53	
Colorectal cancer, HR (95% CI)	1.00		1.08	0.75, 1.54	1.30	0.92, 1.83	0.99	0.69, 1.43	1.60	1.15, 2.21	0.009
Colon cancer, n, %	59	0.86	61	0.92	74	1.09	59	0.82	94	1.27	
Colon cancer, HR (95% CI)	1.00		1.08	0.75, 1.54	1.30	0.92, 1.83	0.99	0.69, 1.43	1.60	1.15, 2.21	0.009
Proximal colon cancer, n, %	37	0.54	41	0.62	48	0.71	38	0.53	70	0.95	
Proximal colon cancer, HR (95% CI)	1.00		1.16	0.74, 1.80	1.35	0.88, 2.07	1.02	0.65, 1.61	1.91	1.28, 2.84	0.002
Distal colon cancer, n, %	17	0.25	18	0.27	22	0.37	17	0.24	20	0.27	
Distal colon cancer, HR (95% CI)	1.00		1.1	0.56, 2.13	1.33	0.70, 2.50	0.98	0.50, 1.92	1.15	0.60, 2.20	0.85
Rectal cancer, n, %	10	0.16	14	0.23	17	0.27	8	0.12	19	0.28	
Rectal cancer, HR (95% CI)	1.00		1.45	0.65, 3.27	1.75	0.80, 3.83	0.79	0.31, 1.99	1.87	0.87, 4.03	0.32
Regular users of non-steroidal anti-inflammatory drugs											
Colorectal cancer, n, %	108	1.09	128	1.26	126	1.28	90	0.97	110	1.26	

Colorectal cancer, HR (95% CI)	1.00		1.23	0.92, 1.63	1.28	0.96, 1.71	0.96	0.70, 1.21	1.32	0.98, 1.77	0.34
Colon cancer, n, %	84	0.85	107	1.05	105	1.07	73	0.78	92	1.05	
Colon cancer, HR (95% CI)	1.00		1.23	0.92, 1.63	1.28	0.96, 1.71	0.96	0.70, 1.31	1.32	0.98, 1.77	0.34
Proximal colon cancer, n, %	56	0.57	84	0.83	75	0.77	51	0.55	52	0.60	
Proximal colon cancer, HR (95% CI)	1.00		1.44	1.03, 2.03	1.37	0.97, 1.94	1.01	0.69, 1.47	1.12	0.77, 1.64	0.61
Distal colon cancer, n, %	24	0.24	16	0.16	26	0.27	16	0.17	32	0.37	
Distal colon cancer, HR (95% CI)	1.00		0.64	0.34, 1.21	1.11	0.64, 1.93	0.73	0.39, 1.38	1.59	0.94, 2.70	0.04
Rectal cancer, n, %	24	0.27	22	0.24	23	0.26	17	0.20	18	0.22	
Rectal cancer, HR (95% CI)	1.00		0.89	0.50, 1.59	0.98	0.55, 1.74	0.76	0.41, 1.41	0.87	0.47, 1.60	0.55

NSAID=non-steroidal anti-inflammatory drugs

^aThe cumulative average dietary inflammatory index was the average of the dietary inflammatory index scores at baseline (Year 1 for the Dietary Modification Trial control group) and Year 3;

^bInternational classification of diseases (ICD)-O-2 codes used to define location of colon cancer include C18.0 (cecum), C18.2 (ascending colon, right colon), C18.3 (hepatic flexure of colon), C18.4 (transverse colon), C18.5 (splenic flexure of colon), C18.6 (descending colon, left colon) and C18.7 (sigmoid colon); rectal cancer include all rectum and rectosigmoid cases;

^cThe p value for trend was obtained by assigning the median cumulative average DII for each quintile to all participants in the quintile and inserting this ordinal variable in the multivariable-adjusted model;

^dNumber and proportion of cancer cases within the group (all such values)