Table S1. Baseline clinical characteristics of the intention-to-treat participants between the fish oil and corn oil groups

Characteristics	Fish oil (n=38)	Corn oil (n=39)	*P* [1]
Age, y	55.41±7.80	57.97±7.24	0.229
Gender male, n (%)	20 (52.63)	18 (46.15)	0.410
Ethnicity Mongolian, n (%)	14 (36.84)	10 (25.64)	0.289
BMI, kg/m^2	25.97±2.82	25.11±3.02	0.857
SBP, mm Hg	135.02±15.15	136.78±14.72	0.902
DBP, mm Hg	88.08±12.98	89.21±10.71	0.887
Fasting glucose, mmol/L	5.12±1.21	5.04±1.04	0.614
TG, mmol/L	1.90±0.82	2.11±0.24	0.243
TC, mmol/L	5.49±1.32	5.30±1.00	0.581
CRP, mg/L	3.18±2.04	3.51±2.32	0.481
IL-6, pg/mL	2.20±1.35	1.94±1.16	0.260
TNF-α, pg/mL	7.25±2.35	8.01±2.84	0.093
Coronary heart disease, n (%)	5 (13.15)	4 (10.24)	0.686
Oral calcium antagonists, n (%)	11 (28.94)	11 (28.20)	0.934
Oral diuretic drugs, n (%)	9 (23.68)	8 (20.51)	0.758
Oral ACEI agents, n (%)	4 (10.52)	2 (5.13)	0.369
Other anti-hypertensive drugs, n (%)	3 (7.89)	3 (7.69)	0.925
Oral anti-thrombosis drugs, n (%)	1 (2.56)	3 (7.69)	0.765
Oral lipid-lowering agents, n (%)	6 (15.78)	5 (12.82)	0.804

Continuous values are presented as mean (SD), while categorical variables are presented as number (%).
BMI, body mass index; SBP, systolic blood pressure; DBP, diastolic blood pressure; TC, total cholesterol; TG, triacylglycerol.
[1]*P* value was calculated by chi-square test (for categorical variables) or unpaired t-test (for continuous variables) to test the difference between the two trial arms.

Table S2. Daily dietary intake in the patients by treatment group (n=77)

Dietary nutrients	Fish oil (n=38)	Corn oil (n=39)	*P*[1]
Total energy, kcal	2275.42±656.45	2147.88±579.40	0.36
Carbohydrate, g	351.26±93.83	327.74±95.80	0.19
Total fat, g	66.94±28.59	65.84±26.84	0.86
Protein, g	92.75±6.15	88.66±5.43	0.49
Vit C, mg	69.60±5.91	68.77±4.46	0.90
Vit E, mg	16.64±10.56	14.14±7.15	0.22
Potassium, mg	2449.42±152.13	2339.69±163.94	0.62
Sodium, mg	1943.73±99.32	1921.04±125.53	0.88
Calcium, mg	581.89±54.92	574.34±63.34	0.92
Magnesium, mg	459.96±30.42	421.50±30.70	0.38
Dietary fiber, g	32.51±19.67	29.70±19.32	0.52
Saturated Fat, g	11.37±4.90	11.00±3.51	0.86
Monounsaturated fat, g	7.22±1.96	8.76±2.26	0.33
Polyunsaturated fat, g	11.75±3.26	11.79±2.58	0.98

Values are presented as mean±SD.

[1]*P* value was calculated by unpaired t-test to check the difference between groups.

Table S3. Subgroup analysis on comparisons with placebo for the primary outcomes in the intention-to-treat patients by treatment group

Baseline variables	Changes in TNF-α, pg/mL		P^1	P^2	Changes in IL-6, pg/mL		P^1	P^2	Changes in CRP, mg/L		P^1	P^2
	FO	CO			FO	CO			FO	CO		
Age				0.02				0.07				0.21
35-55 (n=35)	-1.65±1.82	-1.30±2.23	0.62		-0.40±1.06	-0.49±1.11	0.81		-0.78±2.17	0.72±2.52	0.07	
55-70 (n=32)	-2.21±3.26	-0.37±2.96	0.03		-0.87±0.92	-0.10±0.84	0.01		-0.98±2.51	0.44±2.63	0.03	
Gender				0.39				0.08				0.07
Women (n=39)	-1.53±2.24	-0.58±2.53	0.22		-0.37±0.90	-0.20±0.77	0.76		-0.29±2.75	0.54±2.24	0.27	
Men (n=38)	-2.28±3.09	-0.79±2.99	0.05		-0.89±1.04	-0.16±1.22	0.05		-1.33±2.21	0. 63±2.81	0.02	
Race				0.39				0.12				0.23
Mongolian (n=24)	-2.00±3.28	-0.89±3.11	0.22		-0.78±1.12	-0.22±0.78	0.16		-0.02±1.66	1.06±2.10	0.09	
Han (n=53)	-1.93±1.86	-0.68±2.62	0.03		-0.61±0.96	-0.26±1.01	0.19		-1.23±2.80	0.39±2.54	0.02	
Family history of hypertension				0.26				0.45				0.09
Yes (n=39)	-2.06±3.12	-1.14±2.60	0.34		-0.72±1.14	-0.29±0.92	0.18		-0.56±2.41	0.33±1.77	0.24	
No (n=38)	-1.79±1.74	-0.48±2.19	0.07		-0.63±0.93	-0.16±1.10	0.09		-1.36±2.11	0.78±2.64	0.01	
BP levels				0.02				0.12				0.03
≤120/80 (n=21)	-1.42±1.78	-0.65±2.47	0.19		-0.58±1.04	-0.06±0.96	0.16		-0.69±2.28	-0.42±2.55	0.56	
>120/80 (n=56)	-2.08±3.10	-0.84±2.29	0.04		-0.72±1.00	-0.34±0.94	0.08		-0.97±2.36	1.02±2.67	0.001	
n-3 index				0.05				0.08				0.07
≤ median (n=40)	-2.40±3.36	-0.73±2.49	0.04		-0.48±0.93	0.03±0.83	0.06		-0.94±2.90	0.90±2.43	0.01	
> median (n=37)	-1.47±1.64	-0.56±1.86	0.12		-0.85±1.05	-0.47±0.99	0.10		-0.80±2.13	0.22±1.86	0.06	
BMI				0.10				0.18				0.09
≤25 (n=32)	-2.16±2.05	-1.11±2.83	0.14		-0.45±1.10	-0.10±0.81	0.24		-1.27±2.03	-0.20±2.48	0.06	
>25 (n=45)	-1.86±2.95	-0.46±2.65	0.05		-0.77±0.98	-0.28±1.04	0.04		-0.55±2.61	1.09±2.33	0.03	
Use of anti-				0.04				0.64				0.23

hypertensive drugs									
Yes (n=51)	-1.95±3.01	-1.18±2.93	0.35	-0.75±1.11	-0.38±1.00	0.22	-0.56±2.52	0.82±2.28	0.09
No (n=26)	-2.00±2.35	0.34±2.16	0.02	-0.52±0.84	0.10±0.81	0.08	-1.00±2.68	0.42±2.59	0.05

Values are presented as mean±SD (standard deviation). FO, fish oil; CO, corn oil; BP (mm Hg), blood pressure; RBC (%), red blood cell.

[1]*P* value was calculated by using a general linear model with adjustments for age, gender, ethnicity, BMI and baseline values that were unbalanced between groups to test the difference in treatment effects over time between intervention and placebo within each subgroup.

[2]*P* value was calculated by using a general linear model with adjustments for age, gender, ethnicity, BMI and baseline values that were unbalanced between groups to test the interactions between the treatment effects and strata factors.

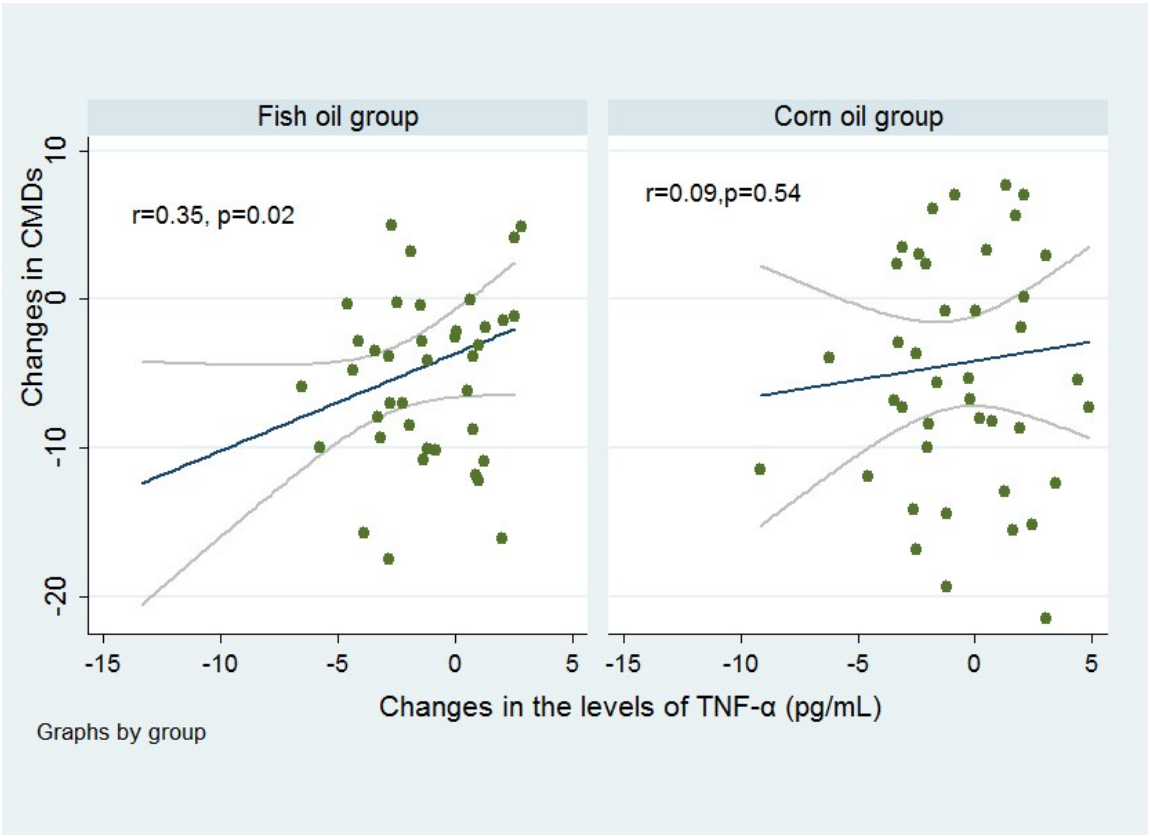

Figure S1. Correlations between changes in the plasma levels of TNF-α (pg/mL) and the standardized cardiometabolic risk scores in either fish oil or corn oil groups.

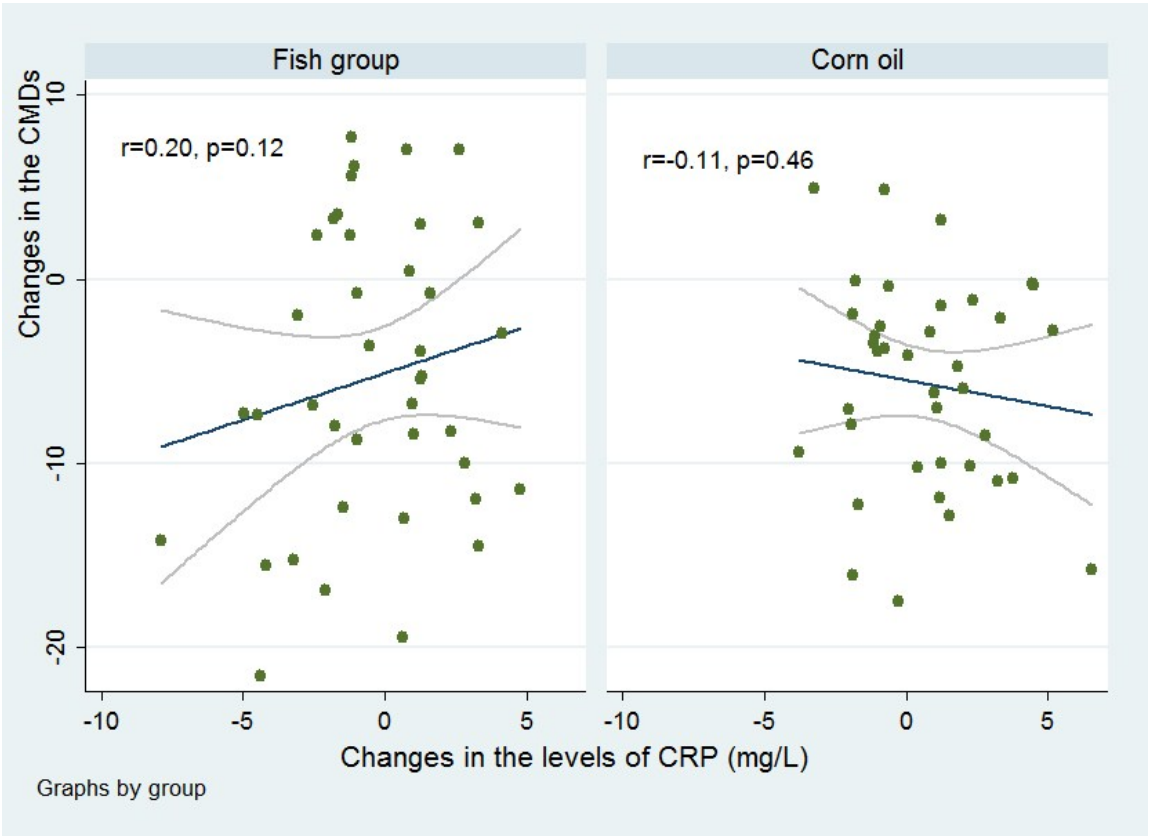

Figure S2. Correlations between changes in the plasma levels of CRP (mg/L) and the standardized cardiometabolic risk scores in either fish oil or corn oil groups.

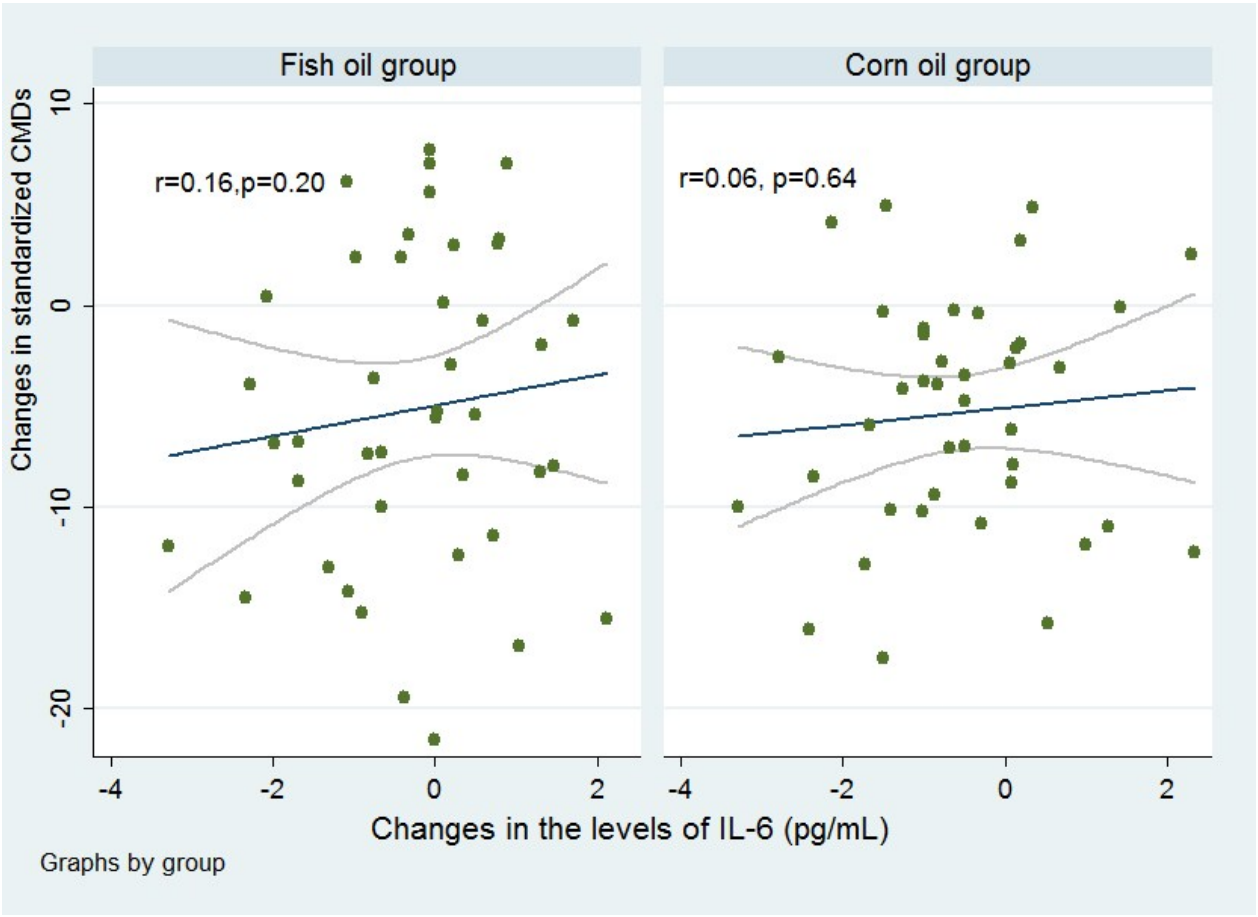

Figure S3. Correlations between changes in the plasma levels of IL-6 (pgm/L) and the standardized cardiometabolic risk scores in either fish oil or corn oil groups.

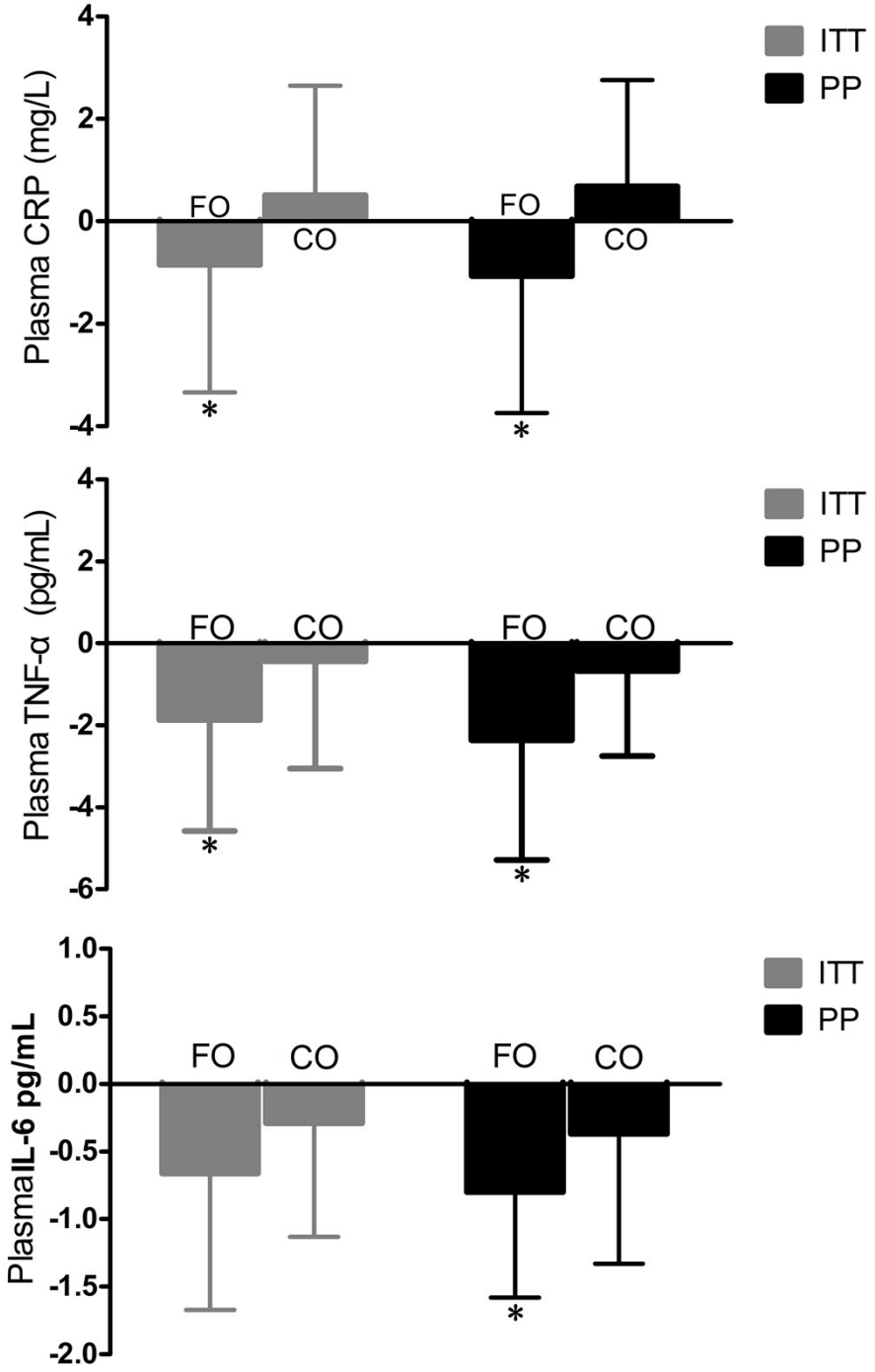

Figure S4. Changes in plasma proinflammatory factors in both intention-to-treat and pre-protocol participants by treatment groups.