SUPPLEMENTAL MATERIAL

Table S1. Mean and standard deviation (S.D.) and median (interquartile range, IQR) for individual non-esterified fatty acids in the Cardiovascular Health Study participants, 1996-1997

NEFA, µmol/L	Mean ± SD (Range)	Median (IQR)
SFA	199 ± 62.7 (57.4-652)	191 (155-235)
Lauric acid, 12:0	2.69 ± 2.79 (0.03-34.3)	2.06 (1.38-3.09)
Myristic acid, 14:0	8.97 ± 4.04 (1.13-41.5)	8.17 (6.14-11.0)
Pentadecylic acid, 15:0	1.61 ± 0.53 (0.51-6.55)	1.53 (1.24-1.88)
Palmitic acid, 16:0	124 ± 44.5 (26.2-498)	118 (93.1-149)
Stearic acid, 18:0	60.1 ± 17.1 (13.4-183.8)	58.1 (48.4-69.0)
Arachidic acid, 20:0	0.72 + 0.37 (0.18-5.01)	0.62 (0.51-0.81)
Behenic acid, 22:0	0.43 ± 0.18 (0.11-2.76)	0.39 (0.33-0.48)
Lignoceric acid, 24:0	0.67 ± 0.63 (0.09-24.2)	0.61 (0.50-0.74)
MUFA	183 ± 79.5 (26.2-577)	171 (125-229)
Myristoleic acid, 14:1n-5	0.87 ± 0.64 (0.05-5.00)	0.69 (0.43-1.14)
cis-7-hexadecenoic acid, 16:1n-9	2.00 ± 0.86 (0.45-6.18)	1.85 (1.37-2.45)
Palmitoleic acid, 16:1n-7	16.1 ± 11.2 (1.18-99.5)	13.7 (8.64-21.4)
Oleic acid, 18:1n-9	150.2 ± 63.0 (21.6-471)	142 (104-188)
cis-Vaccenic acid, 18:1n-7	11.4 ± 5.51 (1.92-45.5)	10.3 (7.42-14.4)
Gondoic acid, 20:1n-9	1.03 ± 0.48 (0.15-4.33)	0.94 (0.69-1.28)
Erucic acid, 22:1n-9	0.38 ± 0.21 (0.04-3.21)	0.33 (0.24-0.44)
Nervonic acid, 24:1n-9	0.35 ± 0.18 (0.06-4.41)	0.33 (0.27-0.39)
n-6 PUFA	87.7 ± 35.1 (16.0-265)	82.0 (62.0-109)
Linoleic acid, 18:2n-6	78.8 ± 32.6 (13.0-247)	73.5 (55.2-98.3)

γ-Linolenic acid, 18:3n-6	0.56 ± 0.31 (0.07-3.02)	0.49 (0.34-0.71)
Dihomolinoleic acid, 20:2n-6	0.90 ± 0.44 (0.11-6.38)	0.82 (0.60-1.11)
Dihomo-γ-Linolenic acid, 20:3n-6	0.96 ± 0.70 (0.15-7.97)	0.79 (0.57-1.12)
Arachidonic acid, 20:4n-6	5.35 ± 2.96 (1.14-26.5)	4.68 (3.53-6.28)
Adrenic acid, 22:4n-6	0.71 ± 0.51 (0.09-6.99)	0.60 (0.42-0.86)
Docosapentaenoic acid, 22:5n-6	0.38 ± 0.21 (0.06-2.31)	0.33 (0.25-0.45)
n-3 PUFA	11.6 ± 4.63 (2.71-38.3)	10.7 (8.26-14.1)
Alpha Linolenic acid (ALA), 18:3n-3	5.76 ± 2.91 (0.68-22.8)	5.19 (3.67-7.22)
Stearidonic acid (SDA), 18:4n-3	2.14 ± 1.07 (0.17-8.41)	1.93 (1.40-2.63)
Eicosapentaenoic acid (EPA), 20:5n-3	0.37 ± 0.30 (0.00-2.94)	0.29 (0.19-0.45)
Docosapentaenoic acid (DPA), 22:5n-3	0.85 ± 0.44 (0.12-3.86)	0.77 (0.54-1.05)
Docosahexaenoic acid (DHA), 22:6n-3	2.44 ± 1.51 (0.40-12.5)	2.05 (1.49-2.91)
***trans* Fat**	13.0 ± 5.59 (0.82-45.7)	12.2 (8.83-16.2)
trans-7-hexadecenoic acid, 16:1n-9*t*	0.89 ± 0.48 (0.11-4.19)	0.80 (0.54-1.11)
Palmitelaidic acid, 16:1n-7*t*	0.86 ± 0.35 (0.13-3.14)	0.81 (0.61-1.06)
Sum of 18:1n-10-12*t* isomers*	0.71 ± 0.37 (0.03-3.57)	0.64 (0.45-0.87)
Elaidic acid, 18:1n-9	6.51 ± 2.94 (0.20-23.0)	6.09 (4.35-8.15)
trans-Vaccenic acid, 18:1n-7*t*	2.72 ± 1.21 (0.12-8.72)	2.53 (1.87-3.40)
Linelaidic acid, 18:2*t*†	0.23 ± 0.19 (0.01-2.61)	0.18 (0.10-0.30)
Conjugated linoleic acid, 18:2CLA	1.05 ± 0.75 (0.07-6.34)	0.84 (0.49-1.40)

Values are presented as mean ± SD (Range) and median (interquartile range). *18:1n-10-12*t*, sum of 18:1n-10, n-11, and n-12 *trans* isomers; †18:2*t*, sum of all 18:2 *trans* isomers.

Table S2. Prospective association of serum individual non-esterified fatty acid (NEFA) with incident stroke in the Cardiovascular Health Study cohort, 1996-1997

NEFA, umol/L	Model 1*		Model 2†		Model 3‡	
	Hazard ratio (95% CI)	***P*-value**	**Hazard ratio (95% CI)**	***P*-value**	**Hazard ratio (95% CI)**	***P*-value**
SFA						
12:0	0.92 (0.80-1.06)	0.25	0.92 (0.80-1.07)	0.29	0.92 (0.80-1.07)	0.29
14:0	0.95 (0.63-1.43)	0.81	0.97 (0.64-1.48)	0.90	0.93 (0.61-1.41)	0.73
15:0	1.24 (0.90-1.72)	0.19	1.24 (0.89-1.73)	0.20	1.30 (0.93-1.82)	0.13
16:0	1.29 (0.89-1.86)	0.18	1.33 (0.90-1.96)	0.15	1.30 (0.88-1.91)	0.19
18:0	0.87 (0.66-1.14)	0.31	0.85 (0.65-1.12)	0.25	0.85 (0.65-1.11)	0.23
20:0	**1.17 (0.98-1.40)**	**0.09**	**1.18 (0.99-1.41)**	**0.07**	**1.21 (1.01-1.44)**	**0.04**
22:0	1.04 (0.91-1.18)	0.57	1.07 (0.94-1.21)	0.32	1.05 (0.92-1.20)	0.43
24:0	0.97 (0.81-1.16)	0.73	0.99 (0.85-1.14)	0.85	0.97 (0.84-1.14)	0.75
MUFA						
14:1n-5	0.89 (0.63-1.26)	0.51	0.87 (0.61-1.23)	0.42	0.87 (0.62-1.24)	0.45
16:1n-9	**0.71 (0.50-1.02)**	**0.06**	**0.67 (0.47-0.97)**	**0.03**	**0.68 (0.47-0.98)**	**0.04**
16:1n-7	1.13 (0.73-1.73)	0.59	1.16 (0.74-1.81)	0.53	1.21 (0.77-1.89)	0.41
18:1n-9	0.80 (0.42-1.52)	0.50	0.91 (0.48-1.72)	0.77	0.92 (0.48-1.76)	0.79
18:1n-7	1.22 (0.76-1.97)	0.41	1.15 (0.70-1.89)	0.57	1.10 (0.67-1.81)	0.71
20:1n-9	1.20 (0.88-1.63)	0.25	1.14 (0.83-1.56)	0.42	1.14 (0.83-1.57)	0.42
22:1n-9	0.95 (0.83-1.08)	0.42	0.96 (0.85-1.09)	0.56	0.96 (0.85-1.10)	0.57
24:1n-9	1.03 (0.93-1.15)	0.56	1.02 (0.91-1.15)	0.68	1.00 (0.88-1.14)	0.94
n-6 PUFA						
18:2n-6	1.27 (0.85-1.91)	0.25	1.22 (0.81-1.83)	0.33	1.20 (0.80-1.81)	0.39
18:3n-6	1.05 (0.90-1.23)	0.52	1.06 (0.90-1.25)	0.47	1.04 (0.89-1.23)	0.61
20:2n-6	1.05 (0.89-1.24)	0.55	1.06 (0.90-1.25)	0.49	1.08 (0.91-1.27)	0.41

20:3n-6	**1.28 (1.01-1.61)**	**0.04**	**1.29 (1.02-1.63)**	**0.04**	**1.28 (1.01-1.62)**	**0.04**
20:4n-6	**0.82 (0.66-1.01)**	**0.06**	**0.81 (0.65-1.00)**	**0.05**	**0.83 (0.67-1.02)**	**0.08**
22:4n-6	0.94 (0.81-1.09)	0.42	0.95 (0.82-1.10)	0.51	0.94 (0.80-1.10)	0.43
22:5n-6	0.95 (0.80-1.12)	0.53	0.95 (0.80-1.14)	0.60	0.98 (0.82-1.17)	0.79
n-3 PUFA						
18:3n-3	0.90 (0.69-1.19)	0.47	0.96 (0.73-1.26)	0.78	0.96 (0.73-1.26)	0.77
18:4n-3	1.05 (0.91-1.21)	0.48	1.07 (0.93-1.24)	0.36	1.08 (0.93-1.25)	0.29
20:5n-3	0.94 (0.75-1.17)	0.59	0.96 (0.77-1.20)	0.70	0.97 (0.78-1.21)	0.80
22:5n-3	0.90 (0.68-1.20)	0.49	0.92 (0.69-1.24)	0.60	0.92 (0.69-1.24)	0.60
22:6n-3	0.88 (0.71-1.10)	0.28	0.87 (0.70-1.09)	0.22	0.84 (0.68-1.04)	0.11
***trans* FA**						
16:1n-9T	1.28 (0.92-1.76)	0.14	1.27 (0.91-1.78)	0.16	1.31 (0.93-1.83)	0.12
16:1n-7T	0.77 (0.56-1.06)	0.11	0.77 (0.56-1.07)	0.12	0.77 (0.55-1.07)	0.12
18:1n10-12T[§]	1.15 (0.82-1.61)	0.42	1.10 (0.78-1.55)	0.58	1.09 (0.77-1.54)	0.62
18:1n-9T	0.78 (0.57-1.07)	0.12	0.77 (0.56-1.07)	0.12	0.79 (0.57-1.09)	0.14
18:1n-7T	0.92 (0.67-1.26)	0.60	0.91 (0.66-1.26)	0.58	0.92 (0.67-1.27)	0.61
18:2T[‖]	1.03 (0.92-1.15)	0.63	1.04 (0.92-1.17)	0.54	1.04 (0.92-1.18)	0.52
18:2CLA	1.04 (0.88-1.23)	0.68	1.03 (0.87-1.22)	0.75	1.02 (0.85-1.21)	0.84

Hazard ratio estimates are given per 1-SD increment in NEFA. CI, confidence interval. CLA, conjugated linoleic acid. [*]Model 1 adjusted for age, sex, race, field center, and all other NEFAs; [†]Model 2 adjusts for model 1 covariates plus smoking status, education, physical activity, serum albumin, alcohol consumption, cystatin C for estimate glomerular filtration rate, body mass index, aspirin use, and waist circumference; [‡]Model 3 adjusts for Model 2 covariates plus hypertension, prevalent diabetes, and total serum cholesterol concentration; [§]18:1n10-12*t*, sum of 18:2n-10, n-11, and n-12 *trans* isomers; [‖]18:2*t*, sum of all 18:2 *trans* isomers.

Table S3. Prospective association of serum individual non-esterified fatty acid (NEFA) with incident stroke, excluding hemorrhagic strokes (*n*=45), in the Cardiovascular Health Study cohort, 1996-1997

NEFA, umol/L	Model 1*		Model 2†		Model 3‡	
	Hazard ratio (95% CI)	*P*-value	Hazard ratio (95% CI)	*P*-value	Hazard ratio (95% CI)	*P*-value
SFA						
12:0	0.94 (0.81-1.09)	0.41	0.94 (0.81-1.10)	0.44	0.94 (0.81-1.09)	0.42
14:0	1.09 (0.69-1.73)	0.70	1.12 (0.70-1.78)	0.64	1.05 (0.66-1.67)	0.84
15:0	1.13 (0.78-1.63)	0.51	1.15 (0.79-1.68)	0.45	1.22 (0.83-1.79)	0.31
16:0	1.17 (0.76-1.80)	0.46	1.20 (0.77-1.88)	0.42	1.16 (0.75-1.81)	0.51
18:0	0.96 (0.71-1.30)	0.78	0.93 (0.69-1.25)	0.62	0.93 (0.69-1.25)	0.61
20:0	1.13 (0.92-1.38)	0.25	1.15 (0.93-1.41)	0.19	1.18 (0.96-1.45)	0.11
22:0	1.02 (0.88-1.18)	0.79	1.06 (0.91-1.22)	0.46	1.03 (0.89-1.20)	0.67
24:0	1.00 (0.87-1.14)	0.97	1.00 (0.89-1.14)	0.95	0.99 (0.87-1.13)	0.87
MUFA						
14:1n-5	0.91 (0.61-1.35)	0.63	0.88 (0.59-1.32)	0.54	0.89 (0.59-1.34)	0.58
16:1n-9	0.79 (0.54-1.17)	0.25	0.75 (0.51-1.12)	0.16	0.76 (0.51-1.13)	0.18
16:1n-7	0.87 (0.52-1.45)	0.59	0.91 (0.54-1.55)	0.73	0.98 (0.58-1.65)	0.93
18:1n-9	0.72 (0.35-1.50)	0.38	0.85 (0.41-1.77)	0.67	0.85 (0.41-1.79)	0.68
18:1n-7	1.53 (0.89-2.63)	0.13	1.37 (0.77-2.41)	0.28	1.29 (0.73-2.28)	0.38
20:1n-9	1.14 (0.80-1.64)	0.47	1.08 (0.75-1.56)	0.66	1.08 (0.74-1.57)	0.68
22:1n-9	0.90 (0.77-1.04)	0.16	0.93 (0.80-1.08)	0.32	0.93 (0.80-1.08)	0.33
24:1n-9	1.04 (0.93-1.17)	0.53	1.02 (0.89-1.17)	0.74	1.00 (0.86-1.15)	0.97
n-6 PUFA						
18:2n-6	1.27 (0.79-2.04)	0.32	1.18 (0.73-1.89)	0.50	1.18 (0.73-1.90)	0.50
18:3n-6	1.10 (0.93-1.29)	0.27	1.11 (0.93-1.32)	0.25	1.09 (0.91-1.30)	0.36

20:2n-6	1.05 (0.88-1.24)	0.60	1.06 (0.90-1.26)	0.47	1.07 (0.90-1.28)	0.44
20:3n-6	1.24 (0.95-1.62)	0.11	1.24 (0.95-1.61)	0.11	1.23 (0.94-1.60)	0.12
20:4n-6	0.82 (0.65-1.04)	0.10	0.82 (0.65-1.04)	0.10	0.84 (0.67-1.07)	0.15
22:4n-6	0.92 (0.78-1.09)	0.35	0.93 (0.78-1.11)	0.43	0.92 (0.77-1.10)	0.36
22:5n-6	0.92 (0.76-1.13)	0.43	0.95 (0.78-1.17)	0.63	0.97 (0.79-1.19)	0.78
n-3 PUFA						
18:3n-3	0.81 (0.59-1.12)	0.21	0.88 (0.64-1.21)	0.43	0.87 (0.63-1.21)	0.42
18:4n-3	1.10 (0.94-1.28)	0.23	1.13 (0.96-1.32)	0.13	1.14 (0.98-1.33)	0.10
20:5n-3	0.96 (0.76-1.23)	0.76	0.97 (0.76-1.24)	0.79	0.98 (0.77-1.25)	0.86
22:5n-3	0.97 (0.71-1.34)	0.87	0.99 (0.72-1.38)	0.97	1.01 (0.73-1.39)	0.97
22:6n-3	0.85 (0.65-1.10)	0.22	0.86 (0.66-1.11)	0.24	0.83 (0.65-1.05)	0.12
***trans* FA**						
16:1n-9T	1.25 (0.88-1.79)	0.22	1.25 (0.86-1.82)	0.24	1.28 (0.88-1.87)	0.20
16:1n-7T	0.79 (0.55-1.13)	0.19	0.77 (0.53-1.11)	0.16	0.76 (0.52-1.09)	0.14
18:1n10-12T[§]	1.13 (0.78-1.64)	0.50	1.07 (0.73-1.55)	0.74	1.06 (0.73-1.55)	0.74
18:1n-9T	0.80 (0.57-1.14)	0.22	0.80 (0.56-1.15)	0.23	0.81 (0.57-1.16)	0.25
18:1n-7T	0.88 (0.62-1.26)	0.48	0.90 (0.63-1.29)	0.56	0.91 (0.64-1.31)	0.62
18:2T[‖]	1.08 (0.96-1.21)	0.20	1.08 (0.96-1.23)	0.20	1.09 (0.96-1.24)	0.18
18:2CLA	1.06 (0.88-1.28)	0.52	1.04 (0.86-1.26)	0.69	1.03 (0.85-1.25)	0.78

Hazard ratio estimates are given per1-SD increment in NEFA. CI, confidence interval. CLA, conjugated linoleic acid. [*]Model 1 adjusted for age, sex, race, field center, and all other NEFAs; [†]Model 2 adjusts for model 1 covariates plus smoking status, education, physical activity, serum albumin, alcohol consumption, cystatin C for estimate glomerular filtration rate, body mass index, aspirin use, and waist circumference; [‡]Model 3 adjusts for Model 2 covariates plus hypertension, prevalent diabetes, and total serum cholesterol concentration; [§]18:1n10-12*t*, sum of 18:2n-10, n-11, and n-12 *trans* isomers; [‖]18:2*t*, sum of all 18:2 *trans* isomers.

Table S4. Multicollinearity assessment using comparison of standard errors of hazard ratio estimates from individual NEFA models and a single model including all NEFAs (excluding 14:1, 18:1n-7, and 16:1n-7)

NEFA, umol/L	Individual NEFA models		Multiple NEFA model		SE ratio[†]
	SE	Hazard ratio[*] (95% CI)	SE	Hazard ratio (95% CI)	
SFA					
12:0	0.06	0.97 (0.86-1.09)	0.07	0.92 (0.80-1.06)	1.18
15:0	0.06	1.07 (0.95-1.20)	0.15	1.18 (0.88-1.57)	2.54
16:0	0.06	1.13 (1.01-1.27)	0.17	1.41 (1.02-1.95)	2.83
18:0	0.05	1.08 (0.98-1.20)	0.13	0.82 (0.63-1.06)	2.46
20:0	0.05	1.14 (1.04-1.26)	0.09	1.21 (1.02-1.43)	1.77
22:0	0.05	1.11 (1.01-1.21)	0.06	1.06 (0.94-1.21)	1.39
24:0	0.07	0.99 (0.87-1.12)	0.08	0.98 (0.84-1.14)	1.20
MUFA					
14:1n-5	0.06	1.03 (0.92-1.16)	0.12	0.96 (0.75-1.22)	2.00
16:1n-9	0.06	1.07 (0.95-1.20)	0.18	0.69 (0.48-0.98)	3.07
18:1n-9	0.06	1.12 (0.99-1.25)	0.29	1.09 (0.62-1.92)	4.81
20:1n-9	0.06	1.14 (1.02-1.28)	0.16	1.14 (0.84-1.56)	2.72
22:1n-9	0.05	1.05 (0.94-1.16)	0.07	0.96 (0.85-1.09)	1.26
24:1n-9	0.05	1.05 (0.95-1.16)	0.06	1.03 (0.91-1.15)	1.17
n-6 PUFA					
18:2n-6	0.06	1.12 (1.00-1.26)	0.20	1.14 (0.77-1.69)	3.40
18:3n-6	0.06	1.08 (0.97-1.21)	0.08	1.06 (0.90-1.24)	1.43
20:2n-6	0.05	1.10 (1.00-1.20)	0.08	1.07 (0.91-1.26)	1.79
20:3n-6	0.05	1.06 (0.97-1.17)	0.12	1.33 (1.06-1.67)	2.40
20:4n-6	0.06	1.00 (0.90-1.11)	0.11	0.81 (0.66-1.01)	1.97
22:4n-6	0.06	1.01	0.08	0.95	1.36

		(0.91-1.13)		(0.82-1.11)	
22:5n-6	0.05	1.05 (0.94-1.16)	0.09	0.96 (0.81-1.15)	1.67
n-3 PUFA					
18:3n-3	0.06	1.07 (0.95-1.20)	0.13	0.98 (0.75-1.27)	2.23
18:4n-3	0.06	1.03 (0.92-1.15)	0.07	1.07 (0.93-1.24)	1.26
20:5n-3	0.06	0.96 (0.85-1.08)	0.11	0.96 (0.76-1.19)	1.89
22:5n-3	0.06	1.00 (0.89-1.12)	0.15	0.93 (0.69-1.24)	2.50
22:6n-3	0.06	0.96 (0.85-1.07)	0.11	0.88 (0.71-1.10)	1.92
***trans* FA**					
16:1n-9T	0.06	1.06 (0.94-1.20)	0.17	1.29 (0.92-1.80)	2.79
16:1n-7T	0.06	1.01 (0.90-1.14)	0.17	0.77 (0.55-1.06)	2.77
18:1n10-12T[‡]	0.06	1.06 (0.94-1.18)	0.17	1.11 (0.79-1.56)	2.98
18:1n-9T	0.06	0.99 (0.88-1.11)	0.16	0.78 (0.57-1.07)	2.72
18:1n-7T	0.06	1.00 (0.89-1.12)	0.16	0.88 (0.64-1.20)	2.71
18:2T[§]	0.05	1.05 (0.95-1.16)	0.06	1.04 (0.92-1.17)	1.15
18:2CLA	0.06	1.08 (0.96-1.21)	0.09	1.04 (0.87-1.23)	1.51

Hazard ratio estimates are given per 1-SD increment in NEFA.; CI, confidence interval. CLA, conjugated linoleic acid. SE, standard error. [*], all models adjust for age, sex, race, field center, smoking status, education, physical activity, serum albumin, alcohol consumption, cystatin C for estimate glomerular filtration rate, body mass index, aspirin use, and waist circumference. [†]SE ratio, multiple NEFA model standard error divided by individual NEFA model standard error; [‡], 18:1n10-12T, sum of 18:2n-10, n-11, and n-12 *trans* isomers; [§], 18:2*t*, sum of all 18:2 *trans* isomers.

Table S5. Exploration of potential mediation by homeostatic model assessment of insulin resistance (HOMA-IR) in the association of serum non-esterified fatty acid (NEFA) sub-classes with incident stroke in the Cardiovascular Health Study cohort, 1996-1997

Sub-classes of NEFA, umol/L	Model 1*		Model 2†		Model 3‡	
	Hazard ratio (95% CI)	*P*-value	Hazard ratio (95% CI)	*P*-value	Hazard ratio (95% CI)	*P*-value
n-6 PUFA	1.32 (1.01-1.72)	0.04	1.32 (1.01-1.73)	0.04	1.33 (1.02-1.74)	0.04
n-3 PUFA	0.73 (0.58-0.91)	0.01	0.77 (0.61-0.97)	0.02	0.77 (0.61-0.97)	0.03
Total *trans*	0.90 (0.76-1.07)	0.23	0.85 (0.71-1.01)	0.07	0.85 (0.71-1.01)	0.07

Hazard ratio estimates are given per 1-SD increment in NEFA sub-class. CI, confidence interval. *Model 1 adjusted for age, sex, race, field center, and all other NEFA sub-classes; †Model 2 adjusts for model 1 covariates plus smoking status, education, physical activity, serum albumin, alcohol consumption, cystatin C for estimate glomerular filtration rate, body mass index, aspirin use, and waist circumference; ‡Model 3 adjusts for Model 2 covariates plus HOMA-IR.

Table S6. Exploration of potential mediation by homeostatic model assessment of insulin resistance (HOMA-IR) in the association of selected serum individual non-esterified fatty acid (NEFA) with incident stroke in the Cardiovascular Health Study cohort, 1996-1997

NEFA, umol/L per SD	Model 1*		Model 2†		Model 3‡	
	Hazard ratio (95% CI)	*P*-value	Hazard ratio (95% CI)	*P*-value	Hazard ratio (95% CI)	*P*-value
20:0	1.17 (0.98-1.40)	0.09	1.18 (0.99-1.41)	0.07	1.18 (0.99-1.42)	0.07
16:1n-9	0.71 (0.50-1.02)	0.06	0.67 (0.47-0.97)	0.03	0.67 (0.46-0.96)	0.03
20:3n-6	1.28 (1.01-1.61)	0.04	1.29 (1.02-1.63)	0.04	1.28 (1.01-1.62)	0.04
20:4n-6	0.82 (0.66-1.01)	0.06	0.81 (0.65-1.00)	0.05	0.81 (0.66-1.01)	0.06

Hazard ratio estimates are given per 1-SD increment in NEFA. CI, confidence interval. *Model 1 adjusted for age, sex, race, field center, and all other NEFAs; †Model 2 adjusts for model 1 covariates plus smoking status, education, physical activity, serum albumin, alcohol consumption, cystatin C for estimate glomerular filtration rate, body mass index, aspirin use, and waist circumference; ‡Model 3 adjusts for Model 2 covariates plus HOMA-IR.

Table S7. Principal component analysis of non-esterified fatty acids associated with incident stroke in the CHS participants

FAs	PC[§] 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7
12:0					-0.4817		
14:0	0.2084			0.2511			
15:0	0.2036			0.2740			
16:0	0.2312						
18:0			0.2649	0.2152			
20:0		0.2571	0.3328	0.3822			
22:0		0.2528	0.3296	0.2469			
24:0						0.3001	0.8645
14:1n-5			-0.2892	0.2515			
16:1n-7	0.2084		-0.2678				
16:1n-9	0.2242						
18:1n-7	0.2349						
18:1n-9	0.2384						
20:1n-9	0.2044				0.2493		
22:1n-9				0.2380	0.5043		
24:1n-9					0.2818	0.5126	-0.2726
18:2n-6	0.2235						
18:3n-6							
20:2n-6					0.2366		
20:3n-6		0.3200					
20:4n-6		0.3374					
22:4n-6						-0.3572	0.2445
22:5n-6							
18:3n-3					0.2033		
18:4n-3		-0.2068					
20:5n-3		0.3620					
22:5n-3		0.2220					
22:6n-3		0.3342		-0.2521			
16:1n-7*t*	0.2183						
16:1n-9*t*		-0.2028					
18:1n-10-12*t*[*]		-0.2168	0.2478				
18:1n-7*t*			0.3412				
18:1n-9*t*		-0.2192	0.2823				
18:2*t*[†]				0.2374		-0.5544	
18:2-CLA[‡]							

Principal component analysis retained 7 components with eigenvalues >1, and the data presented above were the loadings of the components greater than 0.2. [*]18:1n-10-12*t*, sum of 18:1n-10, n-11, and n-12 trans isomers; [†]18:2*t*, sum of all 18:2 *trans* isomers; [‡]CLA, conjugated linoleic acid; [§]PC, principal component.

Table S8. Principal component analysis of all 35 NEFAs with incident stroke in the Cardiovascular Health Study cohort, 1996-1997

	Model 1[‡]		Model 2[§]		Model 3[‖]	
	HR[†] (95%CI)	*P*-value	HR (95%CI)	*P*-value	HR (95%CI)	*P*-value
PC[*] 1	1.01 (0.98-1.04)	0.373	1.02 (0.99-1.05)	0.142	1.01 (0.99-1.05)	0.199
PC 2	0.98 (0.93-1.04)	0.569	1.01 (0.95-1.07)	0.864	0.99 (0.94-1.06)	0.943
PC 3	1.03 (0.96-1.12)	0.414	1.02 (0.94-1.10)	0.699	1.03 (0.95-1.12)	0.477
PC 4	1.08 (0.99-1.18)	0.067	**1.10 (1.01-1.20)**	**0.025**	**1.11 (1.02-1.21)**	**0.019**
PC 5	1.06 (0.96-1.16)	0.282	1.07 (0.97-1.19)	0.161	1.05 (0.96-1.16)	0.292
PC 6	0.95 (0.85-1.06)	0.341	0.96 (0.85-1.07)	0.442	0.95 (0.84-1.07)	0.365
PC 7	0.87 (0.72-1.05)	0.133	0.92 (0.77-1.10)	0.339	0.90 (0.75-1.09)	0.279

Values are hazard ratio (95% confidence interval). [*]PC, principal component; [†]HR, hazard ratio; [‡]Model 1 adjusted for age, sex, race, and field center; [§]Model 2 adjusts for model 1 covariates plus smoking status, education, physical activity, serum albumin, alcohol consumption, cystatin C for estimate glomerular filtration rate, body mass index, aspirin use, and waist circumference; [‖]Model 3 adjusts for Model 2 covariates plus hypertension, prevalent diabetes, and serum total cholesterol concentration.