Supplementary Table 1—Sex-specific logistic regression models predicting incidence[†] of each risk factor per 5 HU decrement in baseline fat attenuation after adjusting for VAT or BMI

	WOMEN				MEN			
	MV[‡] + VAT	p	MV[‡] + BMI	p	MV[‡] + VAT	p	MV[‡] + BMI	p
Diabetes								
SAT HU	1.19 (0.53 ,2.65)	0.67	1.27 (0.59 ,2.70)	0.54	1.01 (0.55 ,1.82)	0.99	0.89 (0.51 ,1.57)	0.70
VAT HU	0.59 (0.21 ,1.64)	0.31	1.09 (0.52 ,2.29)	0.82	0.92 (0.45 ,1.87)	0.81	1.16 (0.65 ,2.09)	0.61
Hypertension								
SAT HU	1.19 (0.85 ,1.66)	0.31	1.20 (0.86 ,1.67)	0.28	0.75 (0.56 ,1.02)	0.06	0.87 (0.66 ,1.15)	0.33
VAT HU	1.31 (0.81 ,2.10)	0.27	1.33 (0.90 ,1.95)	0.15	0.81 (0.53 ,1.23)	0.31	1.19 (0.89 ,1.60)	0.24
Low HDL								
SAT HU	1.15 (0.65 ,2.04)	0.64	1.13 (0.64 ,2.01)	0.67	0.66 (0.43 ,1.02)	0.06	0.67 (0.45 ,1.00)	0.049
VAT HU	1.02 (0.42 ,2.48)	0.96	1.07 (0.54 ,2.12)	0.84	0.42 (0.22 ,0.81)	0.01	0.69 (0.44 ,1.09)	0.11
Metabolic Syndrome								
SAT HU	1.69 (1.13 ,2.51)	0.01	1.89 (1.30 ,2.77)	0.001	0.73 (0.55 ,0.98)	0.04	0.82 (0.63 ,1.08)	0.16
VAT HU	1.20 (0.74 ,1.95)	0.47	2.10 (1.45 ,3.04)	<0.0001	0.82 (0.54 ,1.25)	0.36	1.36 (1.01 ,1.82)	0.04
Hypertriglyceridemia								
SAT HU	1.33 (0.97 ,1.83)	0.08	1.40 (1.02 ,1.92)	0.04	0.78 (0.60 ,1.01)	0.06	0.81 (0.63 ,1.04)	0.09
VAT HU	1.27 (0.83 ,1.94)	0.27	1.40 (1.00 ,1.97)	0.05	0.74 (0.51 ,1.09)	0.13	0.92 (0.70 ,1.23)	0.59

† Estimates are odds ratios (95% CI) for the condition for a 5 unit decrement in HU (more negative).

‡ MV model adjusted for age, physical activity, alcohol intake, smoking status, menopausal status (Women only), and Hormone Replacement Therapy (Women only). Diabetes models were additionally adjusted for fasting glucose (at baseline). Hypertension model was additionally adjusted for baseline SBP and baseline DBP. Low HDL models and Hypertriglyceridemia models were additionally adjusted for baseline HDL and baseline log triglycerides, respectively.

Supplementary Table 2—Sex-specific linear regression models predicting change† in each outcome per 5 HU decrement in baseline fat attenuation after adjustment for either VAT or BMI

	WOMEN				MEN			
	MV‡ + VAT	p	MV‡ + BMI	p	MV‡ + VAT	p	MV‡ + BMI	p
SBP								
SAT HU	1.64 (0.73 ,2.54)	0.0004	1.66 (0.77 ,2.54)	0.0003	-0.12 (-1.00 ,0.76)	0.79	0.35 (-0.49 ,1.19)	0.41
VAT HU	-0.61 (-2.11 ,0.89)	0.43	0.28 (-0.96 ,1.51)	0.66	0.65 (-0.61 ,1.92)	0.31	1.39 (0.49 ,2.29)	0.003
DBP								
SAT HU	1.04 (0.44 ,1.63)	0.0007	1.10 (0.52 ,1.69)	0.0002	0.24 (-0.38 ,0.86)	0.45	0.40 (-0.19 ,0.99)	0.18
VAT HU	-1.15 (-2.13 ,-0.17)	0.02	-0.28 (-1.10 ,0.54)	0.50	0.44 (-0.46 ,1.33)	0.34	0.67 (0.03 ,1.31)	0.04
Glucose								
SAT HU	0.23 (-0.61 ,1.06)	0.60	0.72 (-0.10 ,1.55)	0.09	0.82 (-0.49 ,2.13)	0.22	1.03 (-0.24 ,2.30)	0.11
VAT HU	0.65 (-0.73 ,2.04)	0.36	2.18 (1.04 ,3.32)	0.0002	1.40 (-0.44 ,3.24)	0.14	1.68 (0.37 ,2.99)	0.01
HDL								
SAT HU	-2.25 (-3.10 ,-1.39)	<0.0001	-2.47 (-3.31 ,-1.62)	<.0001	-0.39 (-1.20 ,0.42)	0.35	-0.20 (-0.98 ,0.59)	0.63
VAT HU	-0.73 (-2.19 ,0.74)	0.33	-1.61 (-2.83 ,-0.40)	0.01	0.44 (-0.75 ,1.64)	0.47	0.20 (-0.67 ,1.08)	0.65
Log Triglycerides								
SAT HU	0.04 (0.01 ,0.07)	0.003	0.05 (0.02 ,0.08)	0.0002	-0.00 (-0.04 ,0.03)	0.82	-0.01 (-0.04 ,0.03)	0.74
VAT HU	0.06 (0.02 ,0.11)	0.005	0.08 (0.04 ,0.12)	<.0001	-0.02 (-0.07 ,0.03)	0.37	-0.01 (-0.04 ,0.03)	0.69

† Estimates are change in the parameter (exam 2 value – exam 1 value) for a 5 unit decrement in HU (more negative).

‡ MV model adjusted for age, physical activity, alcohol intake, smoking status, menopausal status (Women only), and Hormone Replacement Therapy (Women only). Additional covariates included Exam 1 values of the parameter. SBP and DBP models excluded participants on hypertensive medications at baseline (and imputed +10/+5 if patient was on hypertension medications at Exam 2). Other models excluded participants on diabetes medications or lipid lowering medications (as appropriate).