

# **SUPPLEMENTAL MATERIAL**

**Table S1. Comparison of included and excluded women.**

	Missing (Included, Excluded)	Total	Included	Excluded	P-value
N (%)	--	857	765 (89.3)	92 (10.7)	
Race	--				
White	--	447 (52.2)	402 (52.5)	45 (48.9)	0.510
Black	--	410 (47.8)	363 (47.5)	47 (51.1)	
Age, yrs, mean (SD)	--	46.6 (3.0)	46.6 (3.0)	46.4 (2.8)	0.502
Education, yrs, mean (SD)	0, 54	15.7 (2.1)	15.7 (2.1)	15.2 (2.4)	0.162
Processing Speed, mean (SD)	--	58.3 (11.0)	58.2 (11.1)	59.9 (7.6)	0.272
Working Memory, mean (SD)	--	6.7 (2.1)	6.7 (2.1)	7.0 (2.2)	0.196
Cardiovascular Health, mean (SD)	--	63.1 (16.2)	63.3 (16.1)	61.5 (17.4)	0.328
Cardiovascular Health, median (IQR)	--	63.8 (52.5, 75.0)	63.8 (52.9, 75.6)	62.3 (50.3, 74.1)	0.168
Diet score, mean (SD)	3, 5	46.2 (28.2)	46.5 (28.5)	43.8 (25.4)	0.400
Physical Activity score, mean (SD)	--	45.5 (43.3)	45.2 (43.4)	47.6 (42.6)	0.619
Tobacco score, mean (SD)	21, 9	58.9 (37.7)	58.5 (37.6)	61.7 (38.4)	0.445
Sleep score, mean (SD)	38, 207	79.0 (24.7)	79.5 (24.6)	74.6 (26.3)	0.171
BMI score, mean (SD)	1, 0	58.9 (34.5)	59.2 (34.3)	56.3 (36.1)	0.438
non-HDL score, mean (SD)	2, 23	70.6 (29.8)	70.4 (29.9)	71.6 (28.4)	0.735
Glucose score, mean (SD)	3, 22	88.4 (22.5)	88.6 (22.4)	86.6 (23.0)	0.430
Blood Pressure score, mean (SD)	--	59.2 (33.3)	59.3 (33.4)	58.0 (32.2)	0.728
Financial strain, N (%)	10, 54	287 (36.2)	275 (36.4)	12 (31.6)	0.544

**Table S2. Race-specific Models for Processing Speed starting at Baseline.**

Black Women

	Model 1	Model 2
Effect	Estimate (95% CI)	Estimate (95% CI)
Intercept	<b>-0.128 (-0.218, -0.038)</b>	<b>-0.142 (-0.232, -0.052)</b>
Time	<b>-0.020 (-0.027, -0.012)</b>	<b>-0.017 (-0.024, -0.010)</b>
BL Age	<b>-0.032 (-0.059, -0.004)</b>	-0.021 (-0.050, 0.009)
Education	<b>0.129 (0.088, 0.170)</b>	<b>0.131 (0.088, 0.175)</b>
CVH	0.021 (-0.066, 0.109)	-0.026 (-0.118, 0.067)
Age * Time		-0.002 (-0.005, 0)
Education * Time		-0.001 (-0.004, 0.003)
CVH * Time		<b>0.012 (0.004, 0.020)</b>

White Women

	Model 1	Model 2
Effect	Estimate (95% CI)	Estimate (95% CI)
Intercept	<b>0.278 (0.205, 0.351)</b>	<b>0.275 (0.202, 0.349)</b>
Time	-0.001 (-0.008, 0.005)	0 (-0.007, 0.007)
BL Age	-0.019 (-0.041, 0.004)	-0.013 (-0.036, 0.010)
Education	<b>0.065 (0.032, 0.098)</b>	<b>0.066 (0.032, 0.100)</b>
CVH	0.056 (-0.022, 0.133)	0.061 (-0.018, 0.141)
Age * Time		<b>-0.002 (-0.004, 0)</b>
Education * Time		-0.001 (-0.004, 0.003)
CVH * Time		-0.003 (-0.010, 0.005)

CVH = z-score of Life's Essential 8

Time, age at Baseline, education in years; age and education centered

Model 1: Main effects

Model 2: Model 1 plus 2-way interactions

Bolded: significant at  $p < 0.05$

**Table S3. Processing Speed with CVH components, starting at Baseline (Model 3).**

Component	Non-HDL	BMI	Diabetes	Blood Pressure
Effect	Estimate (95% CI)	Estimate (95% CI)	Estimate (95% CI)	Estimate (95% CI)
Intercept	<b>0.290 (0.215, 0.366)</b>	<b>0.298 (0.221, 0.374)</b>	<b>0.289 (0.212, 0.366)</b>	<b>0.289 (0.211, 0.368)</b>
Time	-0.002 (-0.008, 0.005)	-0.002 (-0.009, 0.005)	-0.002 (-0.009, 0.005)	-0.001 (-0.008, 0.006)
Race	<b>-0.435 (-0.546, -0.325)</b>	<b>-0.429 (-0.541, -0.317)</b>	<b>-0.427 (-0.538, -0.315)</b>	<b>-0.44 (-0.554, -0.326)</b>
Age	-0.016 (-0.035, 0.002)	-0.017 (-0.036, 0.001)	-0.016 (-0.035, 0.002)	-0.018 (-0.037, 0.001)
Education	<b>0.098 (0.071, 0.125)</b>	<b>0.099 (0.072, 0.126)</b>	<b>0.098 (0.071, 0.125)</b>	<b>0.099 (0.072, 0.125)</b>
Component	0.03 (-0.048, 0.109)	-0.029 (-0.106, 0.047)	0.017 (-0.077, 0.112)	0.003 (-0.079, 0.085)
Race * Time	<b>-0.017 (-0.026, -0.007)</b>	<b>-0.015 (-0.025, -0.005)</b>	<b>-0.016 (-0.026, -0.006)</b>	<b>-0.015 (-0.025, -0.005)</b>
Age * Time	<b>-0.003 (-0.004, -0.001)</b>	<b>-0.002 (-0.004, -0.001)</b>	<b>-0.003 (-0.004, -0.001)</b>	<b>-0.002 (-0.004, -0.001)</b>
Education * Time	0 (-0.003, 0.002)	0 (-0.003, 0.002)	0 (-0.003, 0.002)	0 (-0.003, 0.002)
Component * Time	-0.002 (-0.009, 0.005)	0.002 (-0.005, 0.008)	0.002 (-0.008, 0.011)	-0.002 (-0.009, 0.005)
Race * Component	-0.007 (-0.119, 0.105)	0.068 (-0.044, 0.181)	0.035 (-0.085, 0.155)	-0.047 (-0.161, 0.068)
Race * Component * Time	0.003 (-0.007, 0.012)	0.007 (-0.003, 0.017)	0.003 (-0.009, 0.014)	<b>0.012 (0.002, 0.022)</b>

Race: Referent is White; Time (years since Baseline), age (years) at Baseline, education in years; age and education centered

Bolded: significant at  $p < 0.05$

CVH components = z-scores of Life's Essential 8 components

**Table S3. Processing Speed with CVH components, starting at Baseline (Model 3), continued.**

Component	Sleep	Diet	Tobacco	Physical Activity
Effect	Estimate (95% CI)	Estimate (95% CI)	Estimate (95% CI)	Estimate (95% CI)
Intercept	<b>0.308 (0.223, 0.394)</b>	<b>0.288 (0.213, 0.364)</b>	<b>0.287 (0.212, 0.363)</b>	<b>0.279 (0.202, 0.355)</b>
Time	0.001 (-0.006, 0.008)	-0.001 (-0.008, 0.006)	-0.002 (-0.009, 0.004)	-0.002 (-0.008, 0.005)
Race	<b>-0.459 (-0.586, -0.332)</b>	<b>-0.426 (-0.536, -0.316)</b>	<b>-0.419 (-0.529, -0.309)</b>	<b>-0.416 (-0.528, -0.304)</b>
Age	-0.018 (-0.038, 0.003)	-0.016 (-0.035, 0.002)	-0.016 (-0.035, 0.002)	-0.017 (-0.036, 0.001)
Education	<b>0.108 (0.078, 0.138)</b>	<b>0.098 (0.072, 0.125)</b>	<b>0.099 (0.072, 0.126)</b>	<b>0.095 (0.068, 0.122)</b>
Component	0.013 (-0.083, 0.109)	-0.012 (-0.086, 0.062)	0.046 (-0.032, 0.123)	0.058 (-0.016, 0.132)
Race * Time	<b>-0.020 (-0.030, -0.010)</b>	<b>-0.018 (-0.027, -0.008)</b>	<b>-0.019 (-0.028, -0.009)</b>	<b>-0.016 (-0.025, -0.006)</b>
Age * Time	<b>-0.003 (-0.004, -0.001)</b>	<b>-0.003 (-0.004, -0.001)</b>	<b>-0.003 (-0.005, -0.001)</b>	<b>-0.002 (-0.004, -0.001)</b>
Education * Time	-0.001 (-0.003, 0.002)	0 (-0.002, 0.002)	0 (-0.002, 0.002)	0 (-0.003, 0.002)
Component * Time	<b>-0.008 (-0.017, 0)</b>	-0.004 (-0.011, 0.002)	-0.003 (-0.010, 0.004)	0 (-0.007, 0.006)
Race * Component	-0.065 (-0.193, 0.062)	0.030 (-0.079, 0.140)	<b>-0.121 (-0.232, -0.010)</b>	-0.052 (-0.163, 0.060)
Race * Component * Time	0.007 (-0.003, 0.018)	0.001 (-0.009, 0.011)	<b>0.012 (0.001, 0.022)</b>	0.008 (-0.002, 0.017)

Race: Referent is White; Time (years since Baseline), age (years) at Baseline, education in years; age and education centered

Bolded: significant at  $p < 0.05$

CVH components = z-scores of Life's Essential 8 components

Figure S1. Histogram of Life's Essential 8 by Race.

