

SUPPLEMENTARY TABLES

Supplementary Table 1. Main effects of group and time for traditional epigenetic clocks.

	Horvath		Hannum		PhenoAge		GrimAge	
	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>
Intercept	47.40 (45.49–49.31)	<0.001	39.65 (37.98–41.32)	<0.001	34.80 (32.47–37.13)	<0.001	48.35 (46.06–50.65)	<0.001
Female	-0.89 (-2.93–1.16)	0.398	-2.83 (-4.61–-1.05)	0.003	-0.58 (-3.02–1.87)	0.646	-1.56 (-4.05–0.93)	0.226
Baseline Age	0.81 (0.65–0.98)	<0.001	0.88 (0.74–1.03)	<0.001	1.12 (0.93–1.31)	<0.001	0.81 (0.61–1.01)	<0.001
Group-Decliners	-1.17 (-3.19–0.86)	0.265	-1.58 (-3.35–0.19)	0.086	-0.03 (-2.45–2.40)	0.984	1.91 (-0.56–4.38)	0.136
Time	12.75 (11.86–13.64)	<0.001	13.11 (12.29–13.93)	<0.001	15.30 (13.91–16.70)	<0.001	12.42 (11.70–13.15)	<0.001
Random Effects								
σ^2	4.71		3.99		11.54		3.15	
τ_{00}	9.76 <small>ahabid</small>		7.19 <small>ahabid</small>		11.58 <small>ahabid</small>		16.38 <small>habid</small>	
N	48 <small>ahabid</small>		48 <small>ahabid</small>		48 <small>ahabid</small>		48 <small>ahabid</small>	
Observations	96		96		96		96	

95% Confidence Intervals (CI) are reported.

Supplementary Table 2. Main effects of group and time on PC-clocks and pace of aging measures, controlling for cell percentages.

	PC-Horvath		PC-Hannum		PC-PhenoAge		PC-GrimAge		Dunedin PoAm		Dunedin PACE	
	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>	γ (CI)	<i>p</i>
Intercept	49.26 (47.71–50.81)	<0.001	55.18 (53.63–56.73)	<0.001	45.66 (43.39–47.93)	<0.001	58.91 (57.14–60.67)	<0.001	1.00 (0.96–1.04)	<0.001	0.90 (0.84–0.96)	<0.001
Female	-3.06 (-4.70–-1.41)	0.001	-2.51 (-4.16–-0.87)	0.006	-1.83 (-4.28–0.61)	0.163	-2.09 (-4.01–-0.17)	0.045	0.01 (-0.03–0.05)	0.742	-0.01 (-0.07–0.06)	0.882
Baseline Age	0.84 (0.71–0.97)	<0.001	0.86 (0.73–0.99)	<0.001	1.06 (0.86–1.25)	<0.001	0.79 (0.64–0.94)	<0.001	0.00 (-0.00–0.00)	0.399	0.00 (-0.00–0.01)	0.677
Group-Decliners	-0.59 (-2.23–1.04)	0.495	-0.22 (-1.85–1.41)	0.799	1.66 (-0.77–4.09)	0.201	2.15 (0.24–4.05)	0.038	0.04 (0.00–0.09)	0.048	0.08 (0.01–0.14)	0.030
Time	11.25 (10.58–11.91)	<0.001	11.74 (11.07–12.41)	<0.001	13.73 (12.97–14.48)	<0.001	12.18 (11.74–12.61)	<0.001	0.02 (0.01–0.04)	0.012	0.03 (0.00–0.06)	0.030
CD8 T cell	-11.78 (-94.81–71.25)	0.789	-14.70 (-98.24–68.84)	0.740	67.84 (-27.49–163.18)	0.184	-10.84 (-66.86–45.17)	0.715	-1.83 (-3.70–0.03)	0.069	-0.59 (-3.90–2.72)	0.738
CD4 T cell	6.63 (-36.09–49.34)	0.770	19.75 (-23.22–62.73)	0.388	48.93 (-0.11–97.98)	0.065	21.35 (-7.47–50.16)	0.167	-0.67 (-1.63–0.29)	0.192	0.28 (-1.43–1.98)	0.760
NK cell	30.17 (-17.47–77.80)	0.236	49.66 (1.73–97.58)	0.056	78.80 (24.13–133.47)	0.009	23.22 (-8.89–55.34)	0.177	-0.20 (-1.27–0.87)	0.720	0.16 (-1.74–2.06)	0.873
Plasma Blasts	0.28 (-5.08–5.64)	0.921	1.47 (-3.92–6.86)	0.606	0.36 (-5.81–6.54)	0.912	0.55 (-3.09–4.18)	0.776	-0.10 (-0.22–0.03)	0.141	0.03 (-0.19–0.24)	0.819
Monocytes	6.43 (-47.64–60.50)	0.822	28.13 (-26.27–82.53)	0.332	70.73 (8.56–132.89)	0.037	27.31 (-9.25–63.87)	0.163	-0.74 (-1.96–0.47)	0.252	-0.30 (-2.45–1.86)	0.795
Granulocytes	19.49 (-17.07–56.05)	0.317	35.31 (-1.48–72.09)	0.075	80.82 (38.88–122.76)	0.001	33.02 (8.40–57.65)	0.015	-0.09 (-0.91–0.73)	0.836	0.53 (-0.93–1.99)	0.494
Random Effects												
σ^2	1.97		1.99		2.48		0.84		0.00		0.00	
τ_{00}	6.75 <small>ahabid</small>		6.69 <small>ahabid</small>		15.96 <small>ahabid</small>		10.22 <small>ahabid</small>		0.00 <small>ahabid</small>		0.01 <small>ahabid</small>	
N	48 <small>ahabid</small>		48 <small>ahabid</small>		48 <small>ahabid</small>		48 <small>ahabid</small>		48 <small>ahabid</small>		48 <small>ahabid</small>	
Obs	96		96		96		96		96		96	

95% Confidence Intervals (CI) are reported.

Supplementary Table 3. Scaled cognitive components for decliners (*n* = 24) and maintainers (*n* = 24).

Scaled cognitive component	<i>n</i> miss ^a	Overall	Decliners	Maintainers	<i>p</i> -value ^b
Matrix Reasoning					
T1	0	74.31 (12.21)	74.23 (10.04)	74.38 (14.28)	0.966
T2	0	70.45 (13.93)	65.59 (15.81)	75.31 (9.87)	0.014
Digit Span – Forward					
T1	0	52.84 (24.93)	56.44 (21.94)	49.24 (27.59)	0.322
T2	0	50.19 (21.22)	43.56 (19.14)	56.82 (21.49)	0.029
Digit Span – Backwards					
T1	0	53.82 (24.31)	56.25 (24.97)	51.39 (23.91)	0.494
T2	0	44.44 (19.85)	40.63 (15.98)	48.26 (22.79)	0.185
Trail Making Test (A)					
T1	0	95.86 (2.70)	95.19 (2.90)	96.52 (2.37)	0.087
T2	0	94.35 (4.90)	92.36 (5.97)	96.34 (2.28)	0.004
Trail Making Test (A-B)					
T1	0	87.18 (9.52)	86.80 (10.80)	87.57 (8.26)	0.784
T2	0	84.28 (12.45)	80.82 (15.13)	87.73 (7.94)	0.053
Stroop Word					
T1	0	53.19 (15.60)	49.67 (16.37)	56.70 (14.27)	0.12
T2	1	43.83 (16.42)	35.69 (15.47)	52.33 (12.88)	<0.001
Stroop Color					
T1	0	57.19 (14.90)	54.61 (14.59)	59.77 (15.07)	0.234
T2	1	50.08 (17.17)	42.46 (16.25)	58.02 (14.52)	0.001
Stroop Color-Word					
T1	0	38.24 (15.86)	40.63 (17.53)	35.85 (13.96)	0.302
T2	1	36.14 (17.40)	29.47 (14.70)	43.09 (17.55)	0.006
Digit Vigilance – page 1					
T1	0	79.20 (12.61)	81.17 (11.04)	77.23 (13.96)	0.284
T2	19	71.42 (19.84)	50.24 (24.60)	79.49 (9.59)	<0.001
Digit Vigilance – page 2					
T1	0	78.65 (16.08)	81.15 (11.44)	76.16 (19.61)	0.287
T2	20	72.18 (17.50)	53.70 (18.13)	78.34 (12.46)	<0.001

Means and standard deviations (SD, in parentheses) are displayed for all scaled cognitive measures (scaled using the proportion of maximum scaling method, range: 0-100, see Methods). Higher scores indicate better performance. T1 = time 1; T2 = time 2. ^aAt T1, no cognition data were missing. At T2, 1 participant was missing the Stroop test and 19 were missing Digit Vigilance pages 1 and 2 and 1 was missing just page 2. ^b*p*-value comparing groups using dependent *t*-tests. *p*-values are bold if <0.05.

Supplementary Table 4. Main effects of scaled T2 cognitive components on PC-GrimAge and pace of aging measures, controlling for cell percentages.

	PC-GrimAge		Dunedin PoAm		Dunedin PACE	
	γ (CI)	<i>p</i>	γ (CI)	<i>T2 Predictors</i>	γ (CI)	<i>p</i>
Matrix Reasoning	-0.066 (-0.138-0.005)	0.086	-0.001 (-0.003-0.001)	0.255	-0.003 (-0.005--0.001)	0.021
DS-Forward	-0.024 (-0.074-0.025)	0.356	-0.000 (-0.001-0.001)	0.794	-0.001 (-0.003-0.001)	0.278
DS-Backward	-0.034 (-0.086-0.019)	0.229	-0.000 (-0.001-0.001)	0.602	-0.001 (-0.003-0.001)	0.277
Trail A	-0.177 (-0.385-0.030)	0.113	-0.004 (-0.008-0.001)	0.140	-0.008 (-0.015--0.001)	0.045
Trail A-B	-0.110 (-0.184--0.035)	0.008	-0.002 (-0.004--0.001)	0.012	-0.004 (-0.006--0.001)	0.012
Stroop Word	-0.059 (-0.119-0.002)	0.074	-0.001 (-0.002-0.000)	0.116	-0.002 (-0.005--0.000)	0.038
Stroop Color	-0.060 (-0.120-0.000)	0.066	-0.001 (-0.002-0.000)	0.087	-0.001 (-0.004-0.001)	0.225
Stroop Color-Word	-0.079 (-0.133--0.024)	0.009	-0.001 (-0.002-0.000)	0.097	-0.002 (-0.004-0.000)	0.087
Digit Vigilance-pg1	-0.056 (-0.131-0.018)	0.173	-0.001 (-0.003-0.000)	0.165	-0.001 (-0.004-0.002)	0.466
Digit Vigilance-pg2	-0.068 (-0.146-0.010)	0.122	-0.002 (-0.004-0.000)	0.123	-0.002 (-0.005-0.001)	0.227

95% Confidence Intervals (CI) are reported. Models included female, baseline age, time, and cell percentages (estimates not shown). Higher scaled cognitive scores indicate better performance. Abbreviation: DS: digit span.