

### **Supplemental data**

**Table e-1.** Characteristics of sample analyzed with IL-6 assayed at all time points over the 10-year period (N=179) to sample excluded for absence of 1 to 3 IL-6 assays (N=101).

**Table e-2.** Association of gait-speed and, NAWM-FA and WMH on brain MRI (dependent variables) with sustained exposure to IL-6 over prior 10 years (independent variable) in the sample older adults with at least 3 IL-6 assays over the 10-year study (n=280).

**Figure e-1:** Flow chart depicting participant sample size and reasons for exclusions.

**Table e-1.** Characteristics of sample analyzed with IL-6 assayed at all time points over the 10-year period (N=179) to sample excluded for absence of 1 to 3 IL-6 assays (N=101).

	<b>Participants included N=179</b>	<b>Participants excluded N=101</b>	<b>p value</b>
Age, mean(SD)	83.1 (2.7)	82.8 (2.9)	0.4
Female, n (%)	104 (58.1)	60 (59.4)	0.9
Black, n (%)	66 (36.9)	48 (47.5)	0.1
Postsecondary school education, n (%)	95 (52.5)	48 (47.5)	0.5
IL-6* at time of brain MRI, (pg/ml)	3.1 (2.2)	4.1 (2.6)	0.003
Average 10-year IL-6* exposure, (pg/ml)	2.7 (1.6)	3.6 (3.1)	0.004
Rate of change in IL-6, (pg/ml/year)	0.08 (0.2)	0.05 (0.1)	0.01
Gait Speed, (m/sec)	0.92 (0.2)	0.88 (0.2)	0.2
Modified Mini-mental Status Examination score	93.5 (5.9)	91.6 (8.2)	0.04
Diabetes Mellitus-II, n (%)	40 (22.4)	33 (32.7)	0.07
Smokers, n (%)	4 (2.3)	1 (1)	0.7
Moderate intensity exercise in the last 12 months , n%	41 (23)	26 (26)	0.7
Hypertension, n (%)	121 (67.6)	71 (37)	0.6
Stroke, n (%)	16 (8.9)	9 (9)	1.0
Coronary heart disease, n (%)	41 (22.9)	26 (26)	0.7
Non-steroidal anti-inflammatory drugs, n (%)	15 (8.4)	9 (9.2)	0.8
APOE4 <sup>†</sup> positive status, n (%)	42 (23.5)	25 (28.7)	0.4
Body mass index (kg/m <sup>2</sup> )	27.1 (4.3)	28.1 (4.6)	0.06
Grip strength (cm <sup>2</sup> )	30.5 (10.3)	30.3 (8.7)	0.8
UPDRS <sup>‡</sup> - motor score	2.1 (3.7)	2.2 (4.3)	0.7
WMH normalized to total brain volume, mean (SD)	0.0036 (0.004)	0.0036 (0.004)	0.95

FA, mean (SD)	0.360 (0.014)	0.356 (0.013)	0.02
---------------	---------------	---------------	------

---

Footnotes:

\*: IL-6: interleukin-6

†: APOE4: apo-epsilon, allele 4

‡: UPDRS: Unified Parkinson's Disease Rating Scale

**Table e-2.** Association of gait-speed and, NAWM-FA and WMH on brain MRI (dependent variables) with sustained exposure to IL-6 over prior 10 years (independent variable) in the sample older adults with at least 3 IL-6 assays over the 10-year study (n=280).

	Dependent Variables (Beta and p values)		
	<b>Gait speed</b>	<b>NAWM-FA</b>	<b>WMH</b>
Unadjusted	-0.26 (0.001)	-0.125 (0.039)	0.24 (0.001)
Model A: Age, sex, race, education	-0.23 (0.001)	-0.120 (0.043)	0.22 (0.002)
Model B: Fully adjusted model **	-0.144 (0.037)	-0.082 (ns)	0.231 (0.002)
Model C: Model B + WMH or NAWM FA (NAWM-FA/WMH as dependent variable) or both WMH and NAWM-FA (gait speed as dependent variable)	-0.095 (0.17)	-0.020 (ns)	0.189 (0.005)

\*\* Models adjusted for age, sex, race, obese, self-reported moderate exercise intensity prior 12 months, coronary heart disease, diabetes mellitus Type II, hypertension, modified mini-mental score, Unified Parkinson's disease rating scale motor subscale score, total intracranial volume.

**Figure e-1:** Flow chart depicting participant sample size and reasons for exclusions.

