

1 **SUPPLEMENTAL MATERIAL**

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Table S1

Cerebrovascular reactivity values by ROI

ROI	CVR range (SD)	Log-transformed CVR range (SD)	Average BOLD-Et-CO ₂ correlation coefficient (SD)
Basal Ganglia	0.079 to 0.425 (0.06)	-1.10 to -0.370 (0.12)	0.800 (0.09)
Centrum Semiovale	0.011 to 0.066 (0.01)	-1.95 to -1.18 (0.17)	0.500 (0.18)
Midbrain	0.074 to 0.443 (0.05)	-1.13 to -0.35 (0.11)	0.691 (0.13)
Hippocampus	0.069 to 0.419 (0.06)	-1.16 to -0.38 (0.13)	0.697 (0.13)

3 Values are the range of unadjusted CVR values (standard deviation) and log-transformed CVR
 4 values (standard deviation) in the basal ganglia, centrum semiovale, midbrain, and hippocampus.
 5 The CVR-MRICloud toolbox also provides the BOLD-Et-CO₂ correlation coefficient for each
 6 ROI as a quality control measure.

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Table S2

Mixed effects model: relationships between log-transformed baseline Basal Ganglia CVR and longitudinal ePVS in four ROIs

ROI	
Basal Ganglia	-3.18 (3.92), p = 0.002**, CI: -5.11 to -1.24
Centrum Semiovale	17.52 (17.23), p = 0.315, CI: -17.17 to 52.21
Midbrain	1.63 (2.67), p = 0.613, CI: -3.74 to -7.01
Hippocampus	-1.26 (2.91), p = 0.668, CI: -7.12 to 4.60

11 Values are measure coefficient estimate (SE), p value, 95% Confidence Interval. ePVS, enlarged
 12 perivascular spaces; BG, basal ganglia.

13 Model: adjusted for age, sex, and time point.

14 *p < 0.05

15 **p ≤ 0.01

16 ***p ≤ 0.001