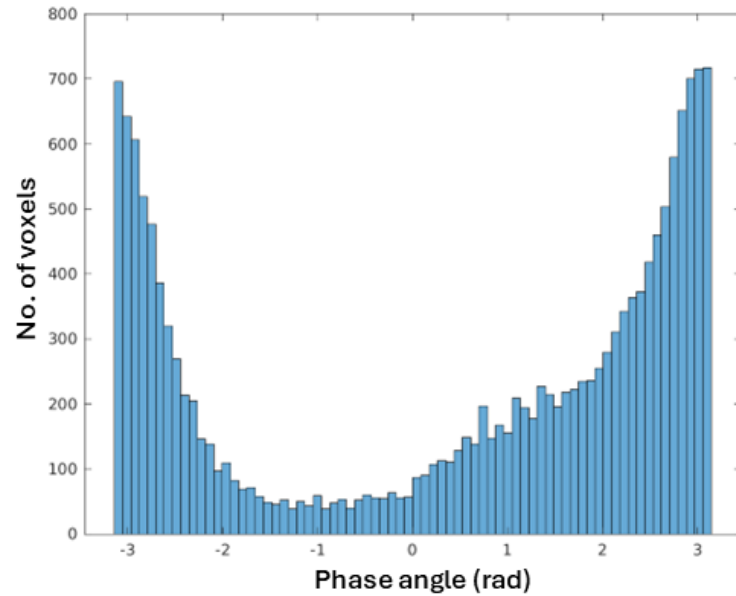
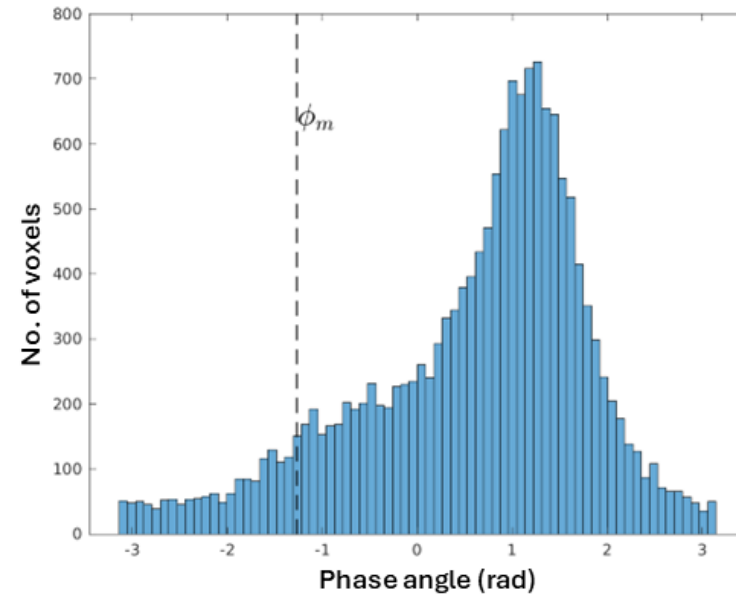


Supplementary material



(a)



(b)

Figure S1. The histogram of the phase angle distribution of the Fourier spectrum of the BOLD signal in the whole brain (a) before and (b) after shifting to start with the minimum occurring phase angle for a selected participant. The distribution of shifted phase angles allows to select the reference phase for the CVR lag calculation. The dotted line on (b) shows the selected minimum phase angle reference (ϕ_m) at 10% of the cumulative distribution.

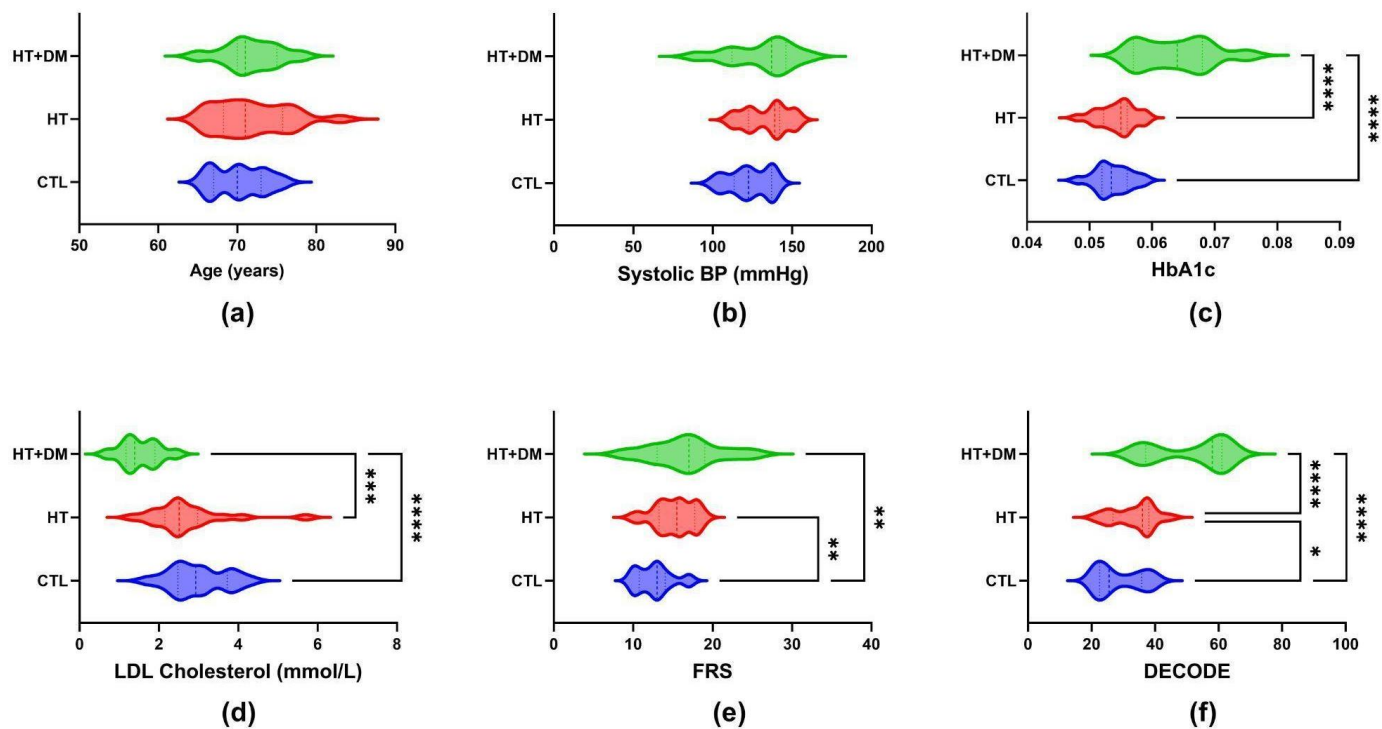
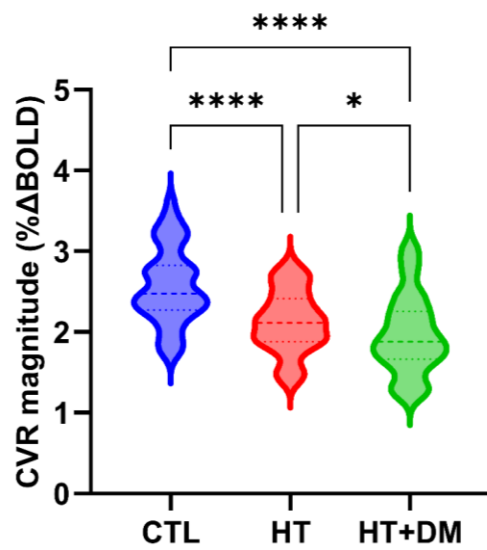
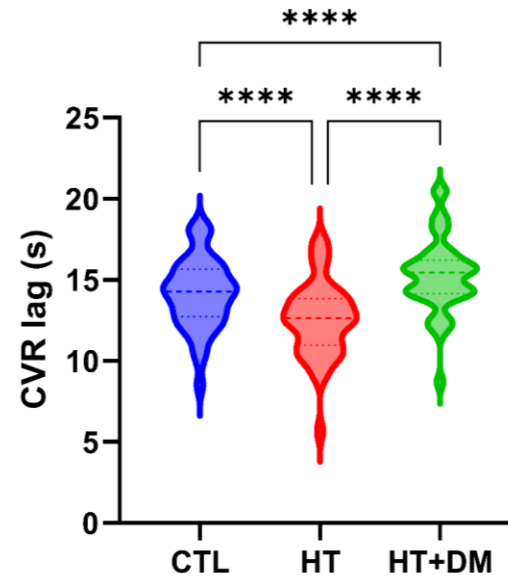


Figure S2. Participant demographics. Shown as violin plots are the (a) age, (b) systolic blood pressure, (c) HbA1c values, (d) LDL cholesterol, (e) Framingham Risk Score (FRS), and (f) Diabetes Epidemiology: Collaborative Analysis of Diagnostic Criteria in Europe (DECODE) score for each participant group. The statistically significant differences were detected by ordinary one-way ANOVA corrected for multiple comparisons by controlling the false discovery rate using the Benjamini-Hochberg procedure indicated by * ($q < 0.05$), ** ($q < 0.01$), *** ($q < 0.001$) and **** ($q < 0.0001$).



(a)



(b)

Figure S3. Mean CVR (a) magnitude and (b) time delay across all cortical ROIs. The statistically significant differences detected by two-way ANOVA corrected for multiple comparisons by controlling the false discovery rate using the Benjamini-Hochberg procedure indicated by * ($q < 0.05$) and **** ($q < 0.0001$).