Supplemental Figures

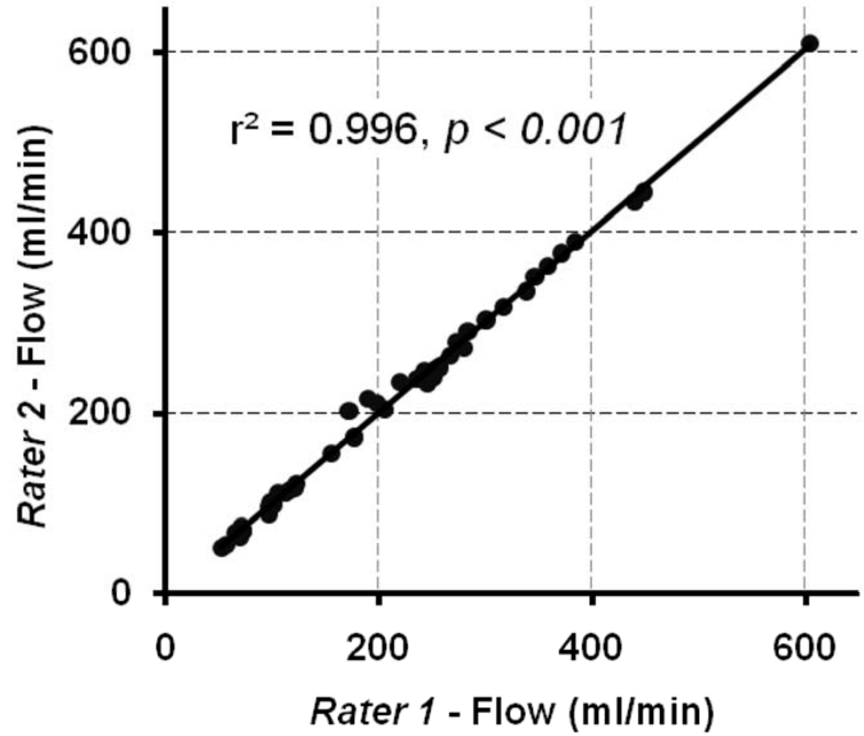

Fig. S1: Scatter plot of CBF values measured by two raters. A total of 50 vessels (10 each for left and right internal carotid and vertebral arteries and 10 for the sagittal sinus) were assessed by each rater. For each processing, a preliminary ROI was manually drawn followed by an intensity thresholding (2 x noise level) to obtain the final vessel mask. The voxels inside the mask were integrated to compute the flow. Other threshold values (0-5 x noise level) were also tested and the r^2 values were all above 0.99.

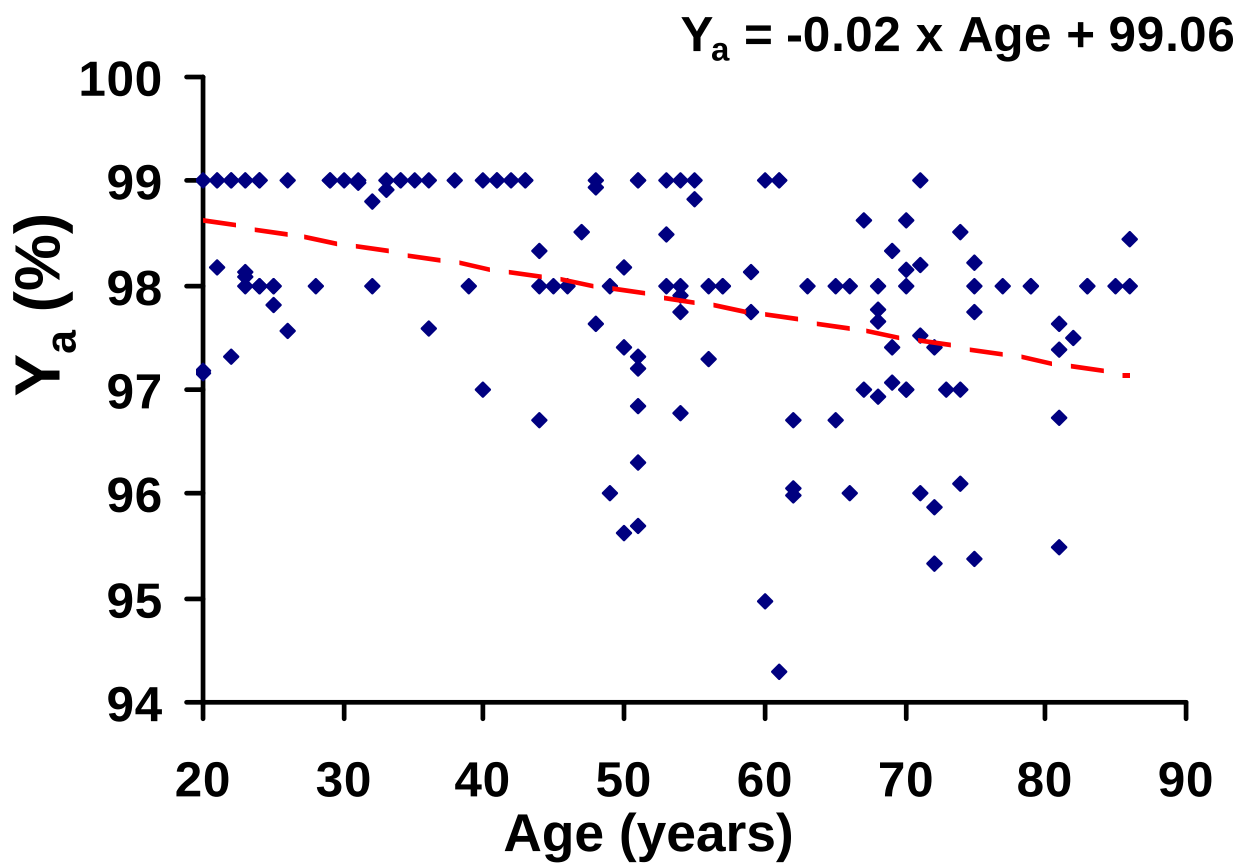

Fig. S2: Scatter plot between arterial oxygenation (Y_a) and age (N=152, R=0.42, p<0.0001). Similar to reports from literature, the arterial oxygenation value is close to unity and is minimally affected by age. Every year, Y_a decreases by approximately 0.02%.

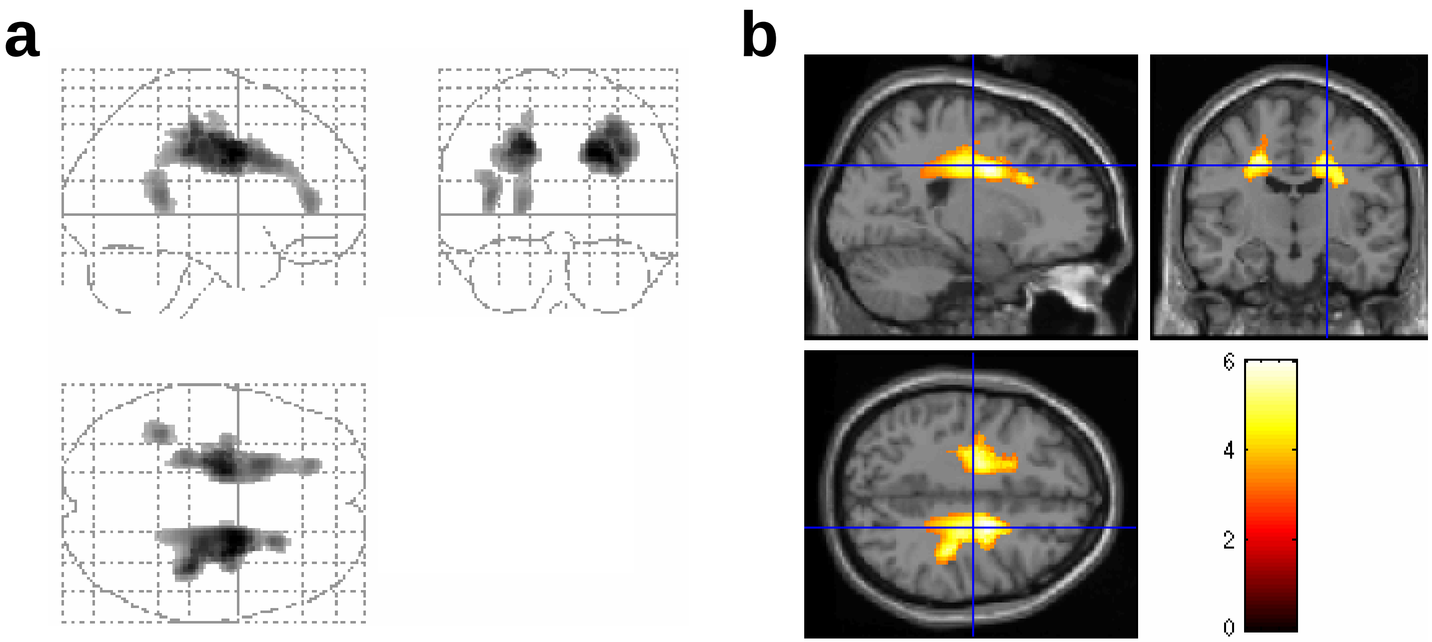

Fig. S3: Results of voxel-based analysis of CBF *increase* with age. The left panel shows the glass brain overlay and the right panel shows the rendering on the Montreal Neurological Institute (MNI) brain template. Colored voxels indicate brain regions with age-related CBF increase. The regions shown are located in central white matters.

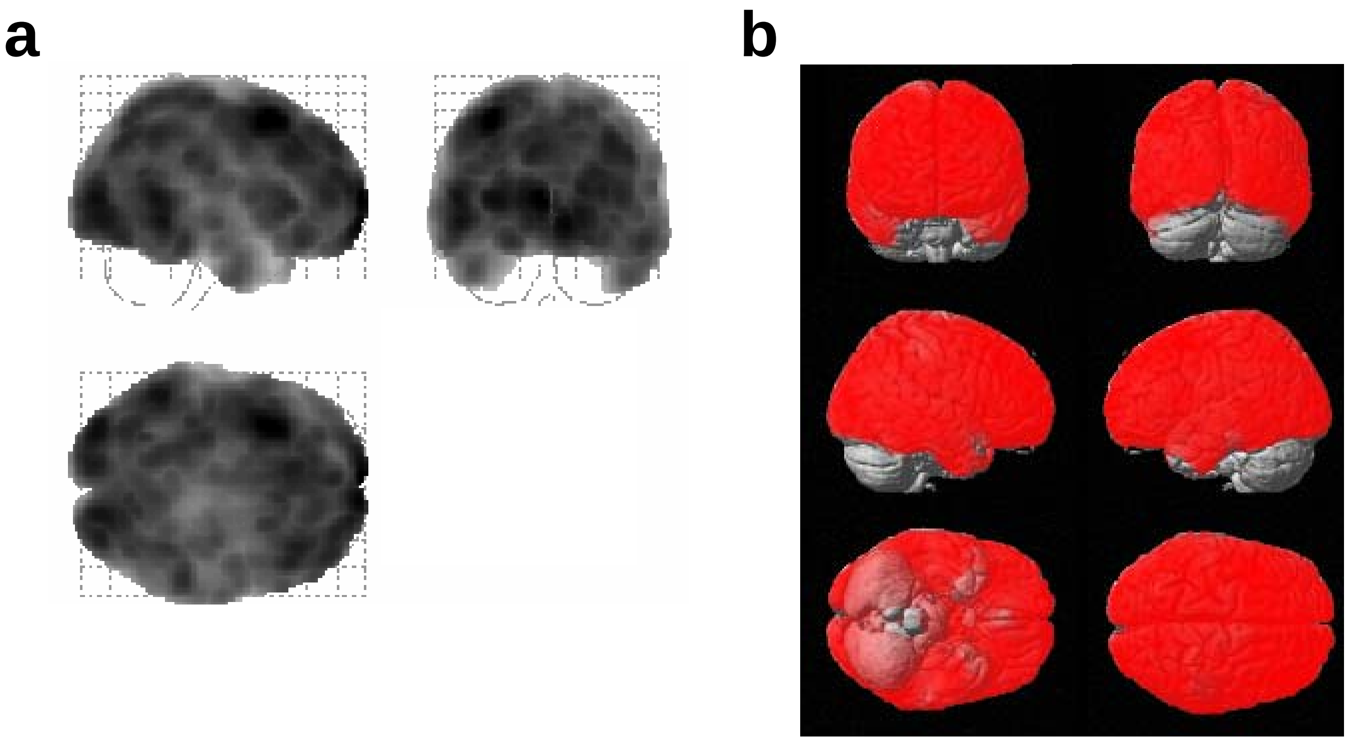

Fig. S4: Results of voxel-based CBF comparison between female and male. The left panel shows the glass brain overlay and the right panel shows the rendering on the Montreal Neurological Institute (MNI) brain template. Women have a higher CBF than men and this difference is homogeneous over the entire brain.

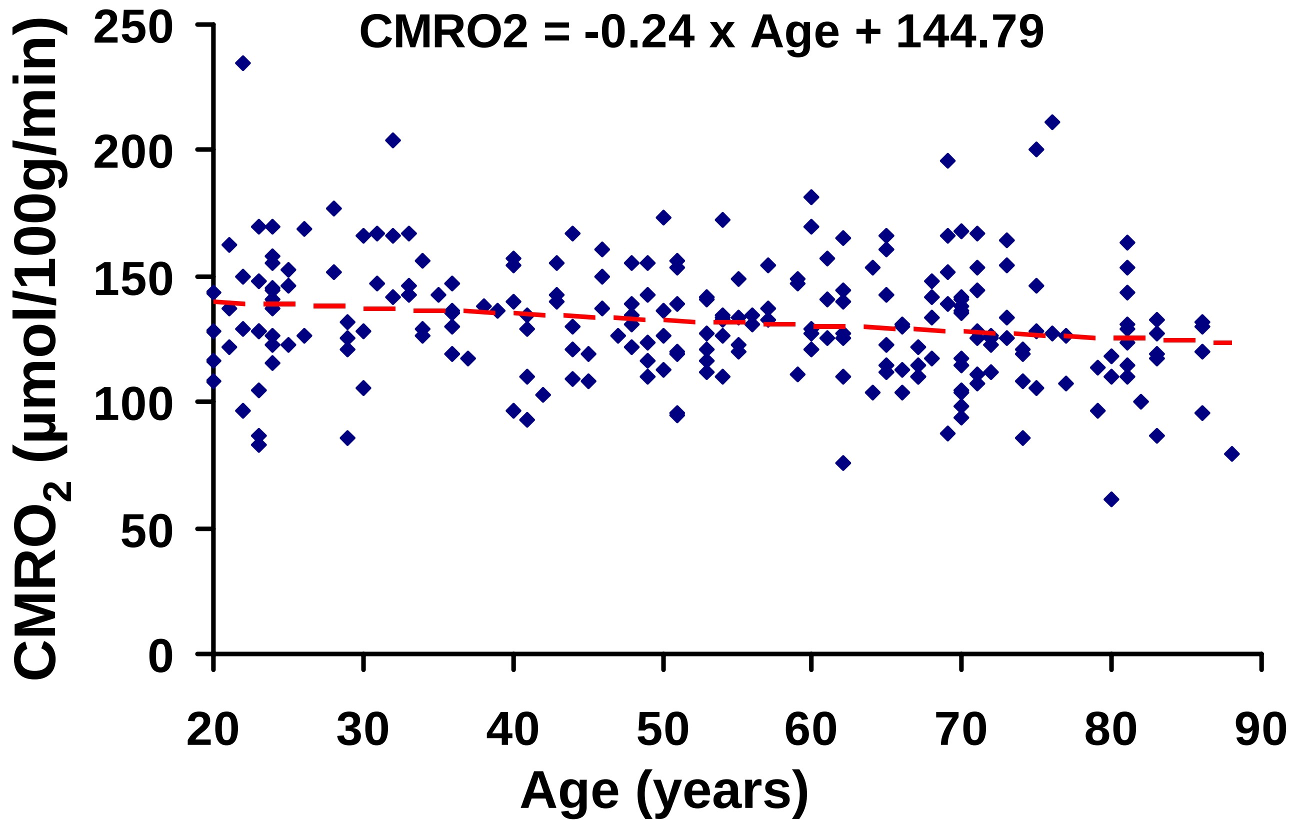

Fig. S5: Scatter plot between intracranial-space-based CMRO2 and age (N=232, R=0.19, p=0.008). The dashed line is a linear fitting of the experimental data. Regression analysis showed that age has a negative effect on intracranial-space-based CMRO2, which is opposite from that on tissue-volume-based CMRO2.