

Supplementary Appendix 1

Table S1. Associations between blood levels and derived ratios of L-arginine metabolism markers and fractional anisotropy (FA) among study participants.

FA in ROIs	L-arginine	L-arginine/ L-ornithine + L- citrulline	L-arginine/ L-ornithine	L-arginine/ L-citrulline
<i>Frontal lobe, posterior parts</i>				
jNAWM	-0.369	-0.339	-0.326	-0.320
pNAWM	n.s.	n.s.	n.s.	-0.333
jWMH	n.s.	n.s.	n.s.	-0.442
<i>Tempo-parietal lobe</i>				
jNAWM	n.s.	-0.331	-0.304	-0.313
<i>Cingulate gyrus, right</i>				
middle parts	-0.418	-0.366	-0.338	-0.312
<i>Corpus callosum</i>				
anterior parts	n.s.	n.s.	n.s.	-0.365
anterior-middle parts	n.s.	-0.393	-0.306	-0.313
<i>Hippocampus</i>				
right	n.s.	n.s.	-0.315	n.s.

Note. Values represent Spearman's rank correlation coefficients (r_s); n.s. — non significant.

FA, fractional anisotropy ($\times 10^{-2}$); jNAWM, juxtacortical normal-appearing white matter; dNAWM, deep normal-appearing white matter; pNAWM, periventricular normal-appearing white matter; jWMH, juxtacortical white matter hyperintensity; ROIs, regions of interest.

Table S2. Associations between blood levels and derived ratios of L-arginine metabolism markers and mean diffusivity (MD) values among study participants.

MD in ROIs	L-arginine	L-arginine/ L-ornithine + L-citrulline	L-arginine/ L-ornithine	L-arginine/ L-citrulline	L-arginine/ ADMA
<i>Frontal lobe, anterior parts</i>					
jNAWM	n.s.	0.319	n.s.	n.s.	n.s.
dNAWM	0.298	0.365	n.s.	0.434	n.s.
pWMH	0.405	0.436	0.345	0.386	n.s.
dWMH	0.423	n.s.	n.s.	n.s.	n.s.
<i>Frontal lobe, posterior parts</i>					
dNAWM	n.s.	0.449	0.325	n.s.	n.s.
pWMH	0.366	n.s.	n.s.	n.s.	n.s.
dWMH	0.410	0.358	0.368	n.s.	n.s.
<i>Tempo-parietal lobe</i>					
jNAWM	0.366	0.359	n.s.	0.318	n.s.
jWMH	n.s.	0.382	n.s.	n.s.	n.s.
pWMH	0.435	0.527	0.518	0.340	n.s.
dWMH	0.374	0.452	0.405	n.s.	0.310
<i>Cingulate gyrus, left</i>					

anterior parts	n.s.	0.319	n.s.	0.340	n.s.
middle parts	0.448	0.456	0.355	0.357	0.319
<i>Corpus callosum</i>					
anterior-middle parts	n.s.	0.316	n.s.	n.s.	n.s.

Note. Values represent Spearman's rank correlation coefficients (r_s); n.s. — non significant.

MD, mean diffusivity ($\text{mm}^2/\text{s} \times 10^{-4}$); jNAWM, juxtacortical normal-appearing white matter; dNAWM, deep normal-appearing white matter; pNAWM, periventricular normal-appearing white matter; jWMH, juxtacortical white matter hyperintensity; dWMH, deep white matter hyperintensity; pWMH, periventricular white matter hyperintensity; ROIs, regions of interest.

Table S3. Associations between blood levels and derived ratios of L-arginine metabolism markers and radial diffusivity (RD) values among study participants.

RD in ROIs	L-arginine	L-arginine/ L-ornithine + L- citrulline	L-arginine/ L-ornithine	L-arginine/ L-citrulline	L-arginine/ ADMA
<i>Frontal lobe, anterior parts</i>					
jNAWM	n.s.	0.335	n.s.	0.340	n.s.
dNAWM	n.s.	0.354	n.s.	0.448	n.s.
jWMH	0.390	n.s.	n.s.	n.s.	n.s.
pWMH	0.390	0.410	0.337	n.s.	n.s.
dWMH	0.420	n.s.	n.s.	n.s.	0.344
<i>Frontal lobe, posterior parts</i>					
jNAWM	0.351	0.320	0.311	n.s.	n.s.
pWMH	0.371	n.s.	n.s.	n.s.	n.s.
dWMH	0.392	0.335	0.359	n.s.	n.s.
<i>Tempo-parietal lobe</i>					
jNAWM	0.300	0.480	0.366	0.421	n.s.
jWMH	n.s.	0.395	n.s.	n.s.	n.s.
pWMH	0.417	0.523	0.508	0.351	n.s.
dWMH	0.455	0.531	0.471	0.331	0.342
<i>Cingulate gyrus, right</i>					
middle parts	0.402	0.336	0.324	0.301	n.s.
posterior parts	0.322	0.348	0.390	n.s.	n.s.
<i>Cingulate gyrus, left</i>					
middle parts	n.s.	0.372	n.s.	n.s.	n.s.
<i>Corpus callosum</i>					
anterior-middle parts	n.s.	0.369	0.300	n.s.	n.s.

Note. Values represent Spearman's rank correlation coefficients (r_s); n.s. — non significant

RD, radial diffusivity ($\text{mm}^2/\text{s} \times 10^{-4}$); jNAWM, juxtacortical normal-appearing white matter; dNAWM, deep normal-appearing white matter; pNAWM, periventricular normal-appearing white matter; jWMH, juxtacortical white matter hyperintensity; dWMH, deep white matter hyperintensity; pWMH, periventricular white matter hyperintensity; ROIs, regions of interest.

Table S4. Associations between blood levels and derived ratios of L-arginine metabolism markers and axial diffusivity (AD) values among study participants.

AD in ROIs	L-arginine	L-arginine/ L-ornithine + L-citrulline	L-arginine/ L-ornithine	L-arginine/ L-citrulline
<i>Frontal lobe, posterior parts</i>				
dNAWM	0.358	0.502	0.349	0.541
<i>Corpus callosum</i>				
posterior-middle parts	0.324	n.s.	n.s.	n.s.
<i>Uncinate fasciculus</i>				
left	0.324	0.346	n.s	0.335

Note. Values represent Spearman's rank correlation coefficients (r_s); n.s. — non significant

AD, axial diffusivity ($\text{mm}^2/\text{s} \times 10^{-4}$); dNAWM, deep normal-appearing white matter; ROIs, regions of interest.