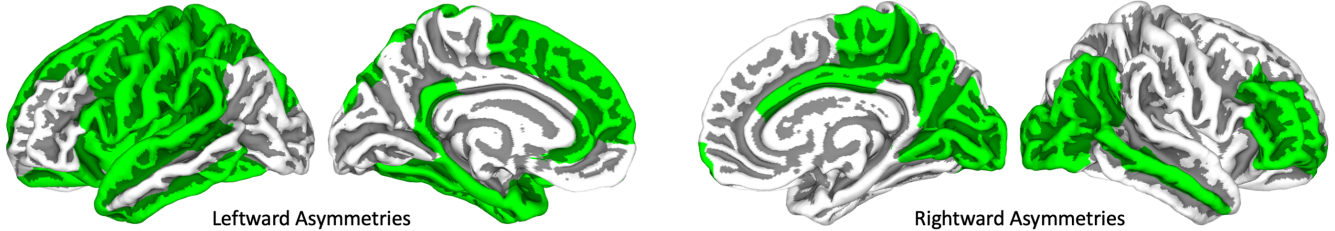


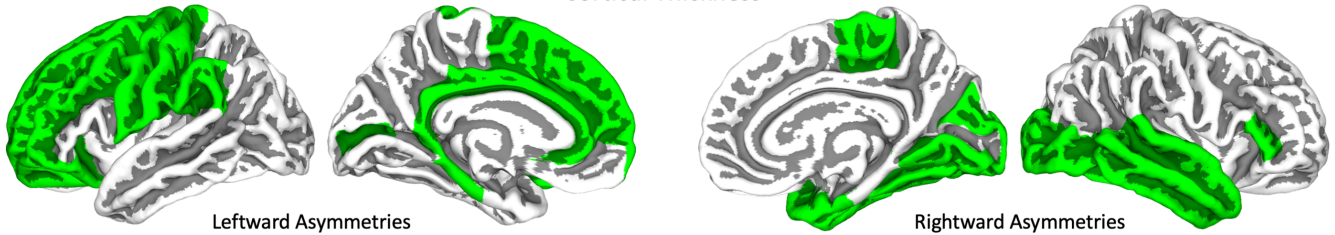
**Supplementary Figures 1-3**  
(analyses restricted to right-handers)

**Significant Asymmetry**

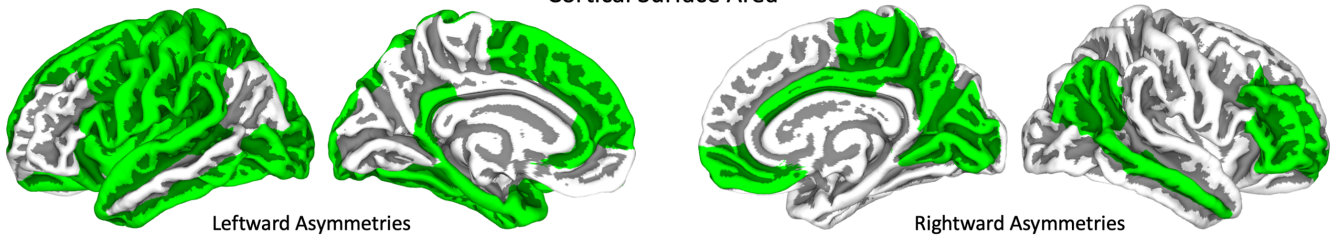
Cortical Volume



Cortical Thickness



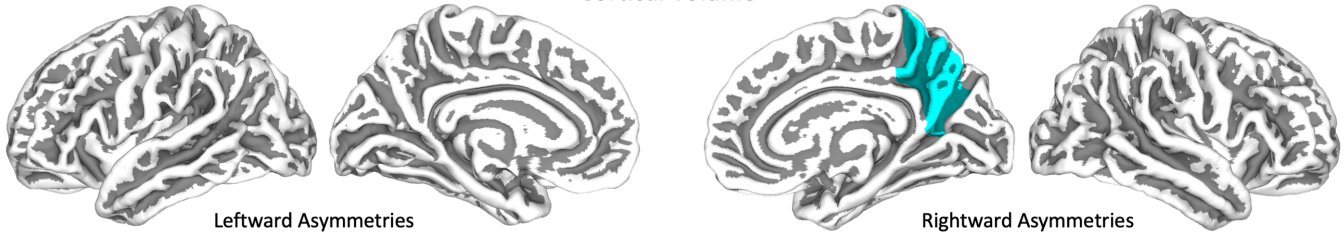
Cortical Surface Area



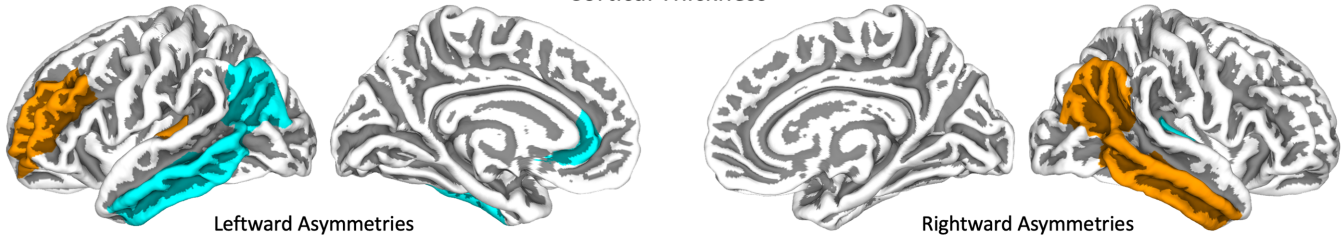
**Supplementary Figure 1: Hemispheric asymmetry in right-handers only.** Cortical regions with significant asymmetries are indicated in green. The regions defined by the Desikan-Killiany atlas (Desikan et al., 2006) were projected onto the central surface of the FSAverage template using the CAT12 toolbox (Gaser et al., 2022). Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres. All significant asymmetries are FDR-corrected using a threshold of 0.05 (Benjamini and Yekutieli, 2001; Hochberg and Benjamini, 1990).

## Significant Age-related Changes in Asymmetry

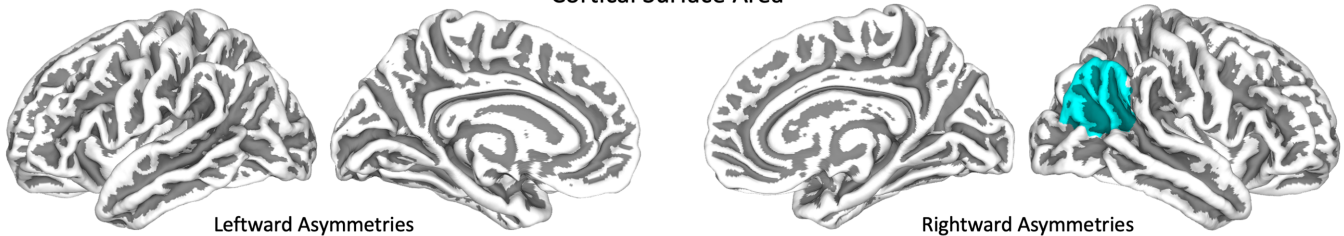
### Cortical Volume



### Cortical Thickness



### Cortical Surface Area



- Increased Asymmetry with Age
- Decreased Asymmetry with Age

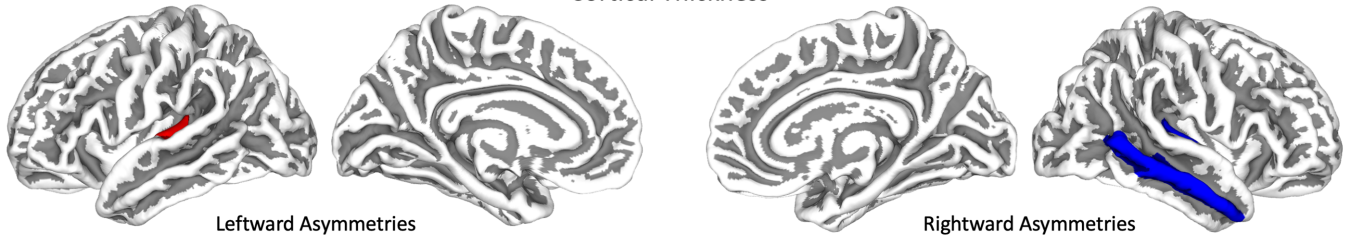
**Supplementary Figure 2: Age-related changes in asymmetry in right-handers only.** Cortical regions with significant age-related changes in asymmetry are indicated in orange (increases) or cyan (decreases). Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres. If asymmetry for a specific region changes in its direction with increasing age, the region is indicated in both left and right panels.

### Significant Sex Differences in Asymmetry

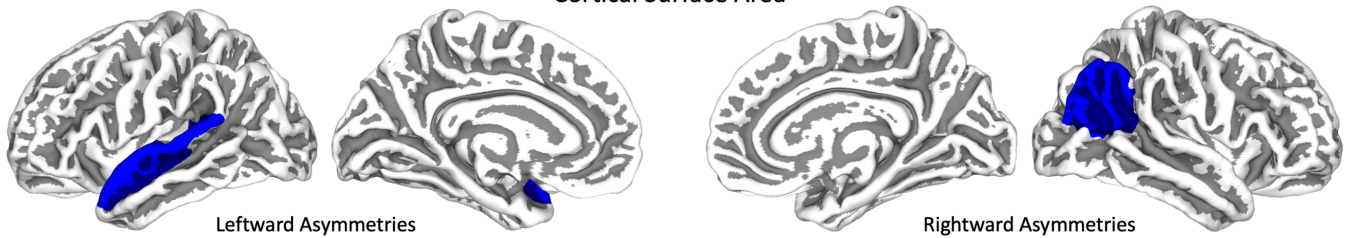
#### Cortical Volume



#### Cortical Thickness



#### Cortical Surface Area

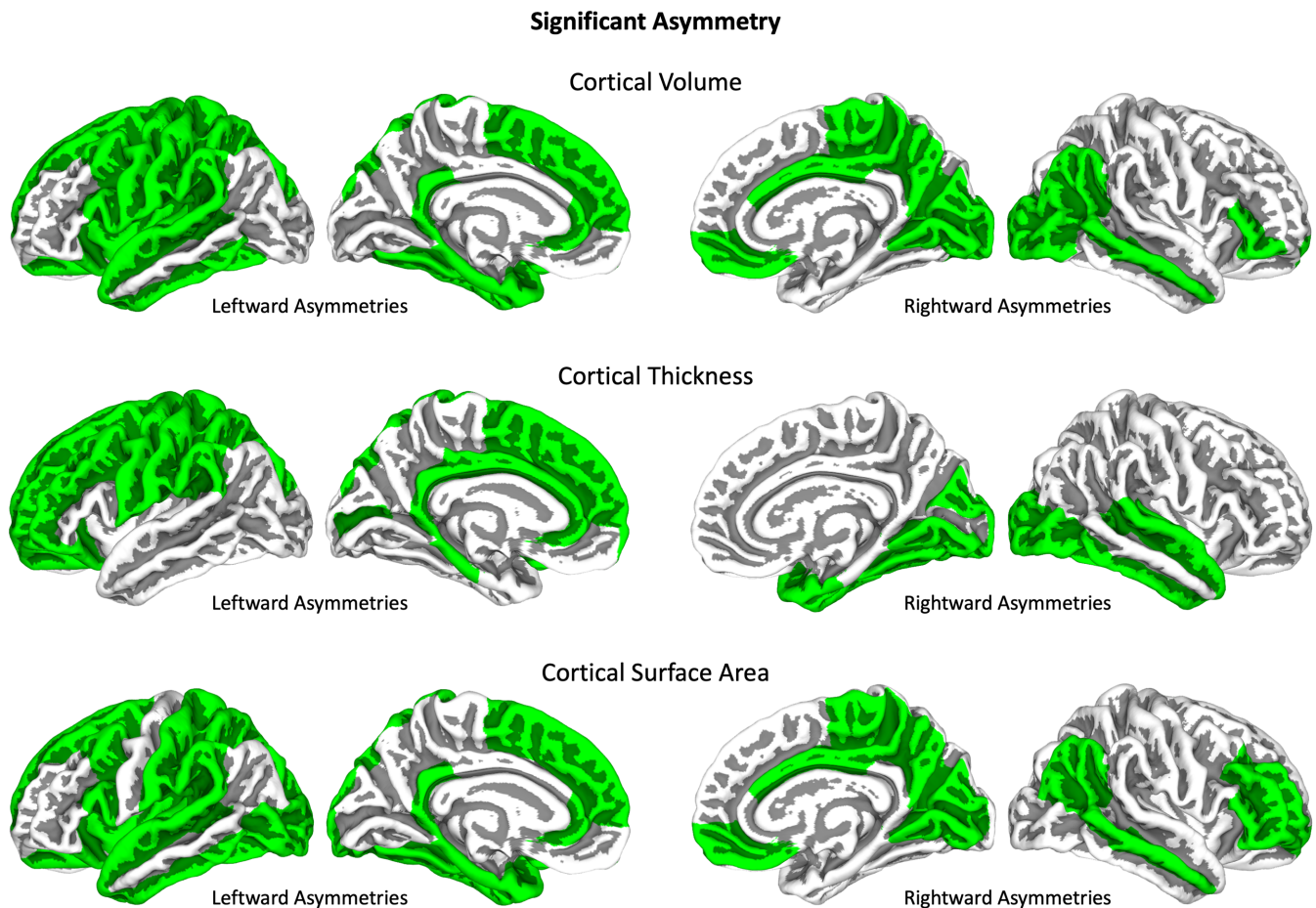


- Asymmetry Male > Female
- Asymmetry Female > Male

**Supplementary Figure 3: Sex Differences in asymmetry in right-handers only.** Cortical regions with significantly larger asymmetries in males are depicted in blue, and with significantly larger asymmetries in females in red. Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres.



## Supplementary Figures 4-6 (analyses restricted to participants < 12 years of age)

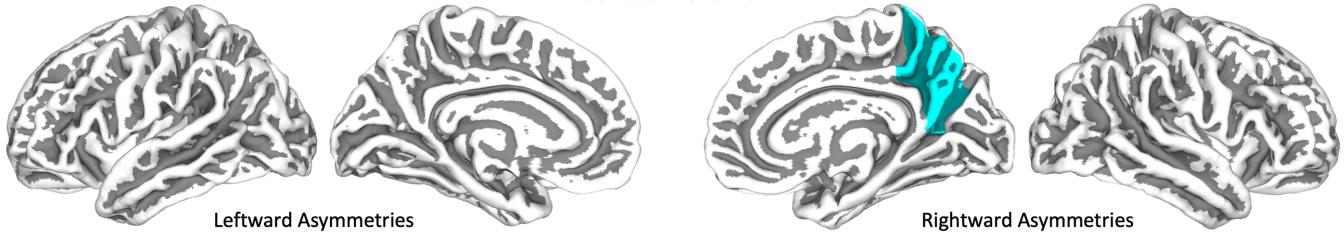


**Supplementary Figure 4: Hemispheric asymmetry in participants younger than 12 years of age.** Cortical regions with significant asymmetries are indicated in green. The regions defined by the Desikan-Killiany atlas (Desikan et al., 2006) were projected onto the central surface of the FSAverage template using the CAT12 toolbox (Gaser et al., 2022). Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres. All significant asymmetries are FDR-corrected using a threshold of 0.05 (Benjamini and Yekutieli, 2001; Hochberg and Benjamini, 1990).

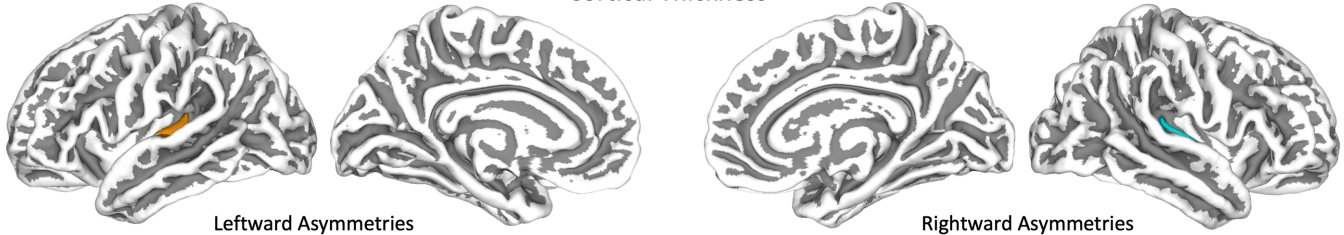


## Significant Age-related Changes in Asymmetry

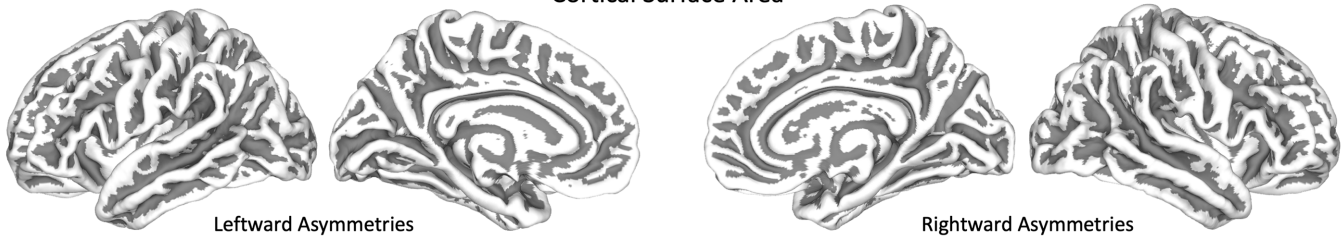
### Cortical Volume



### Cortical Thickness



### Cortical Surface Area

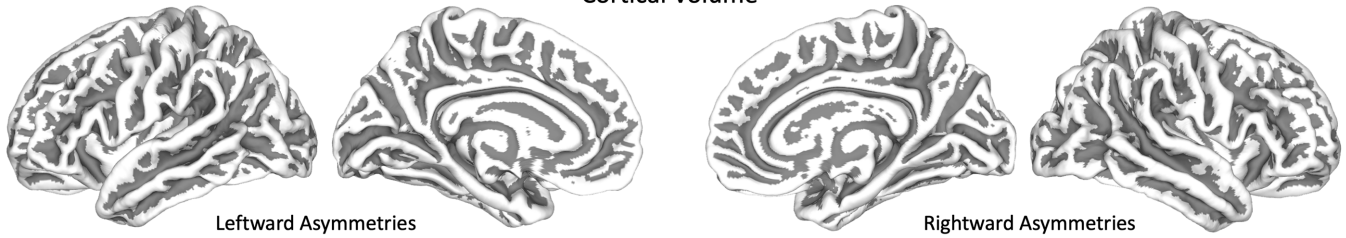


- Increased Asymmetry with Age
- Decreased Asymmetry with Age

**Supplementary Figure 5: Age-related changes in asymmetry in participants younger than 12 years of age.** Cortical regions with significant age-related changes in asymmetry are indicated in orange (increases) or cyan (decreases). Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres. If asymmetry for a specific region changes in its direction with increasing age, the region is indicated in both left and right panels.

### Significant Sex Differences in Asymmetry

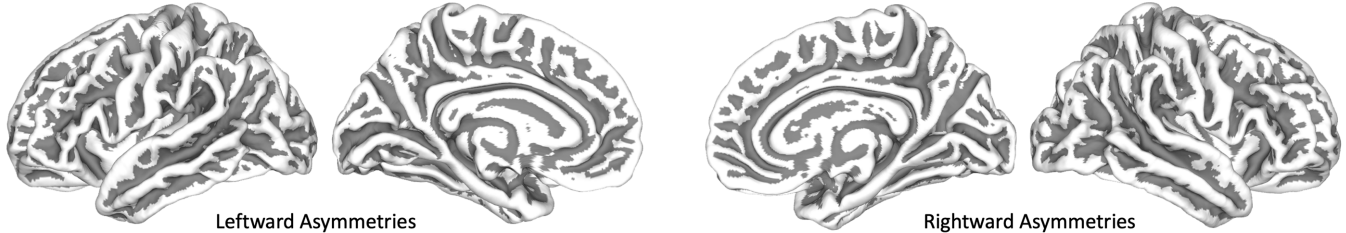
#### Cortical Volume



Leftward Asymmetries

Rightward Asymmetries

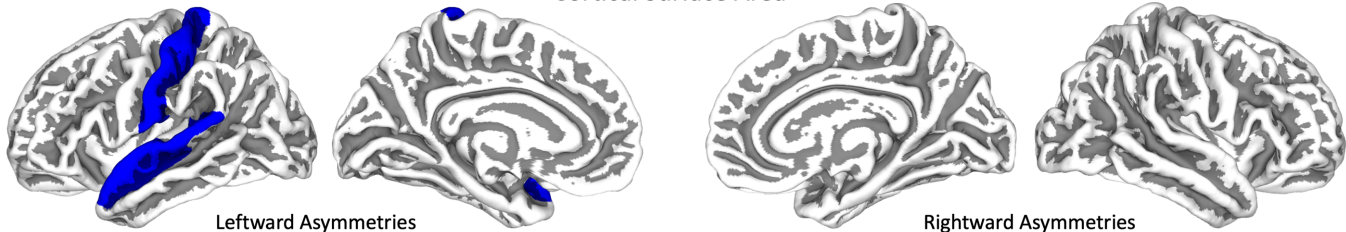
#### Cortical Thickness



Leftward Asymmetries

Rightward Asymmetries

#### Cortical Surface Area



Leftward Asymmetries

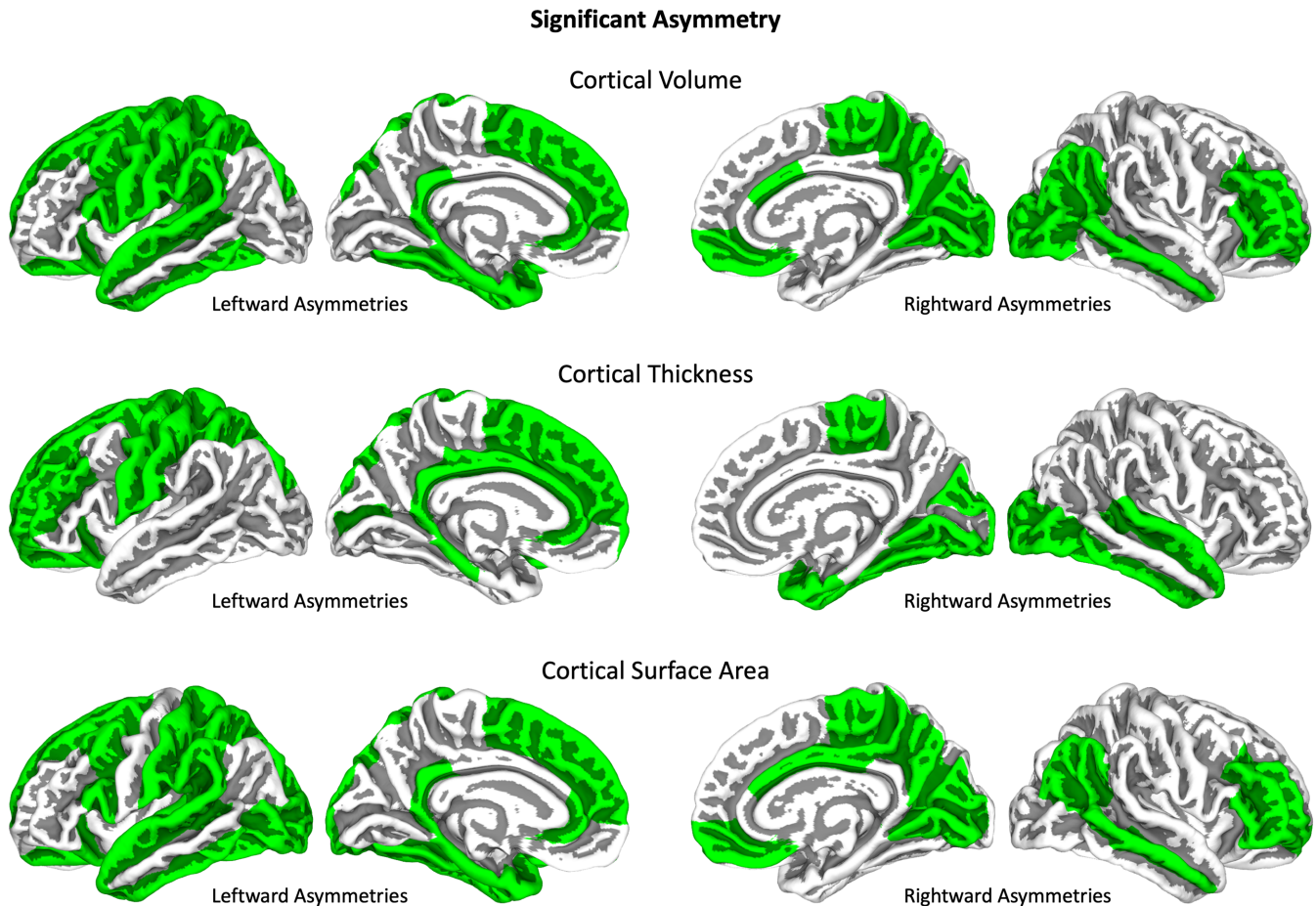
Rightward Asymmetries

- Asymmetry Male > Female
- Asymmetry Female > Male

**Supplementary Figure 6: Sex Differences in asymmetry in participants younger than 12 years of age.** Cortical regions with significantly larger asymmetries in males are depicted in blue, and with significantly larger asymmetries in females in red. Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres.

## Supplementary Figures 7-9

(analyses restricted to participants 12 years of age and older)

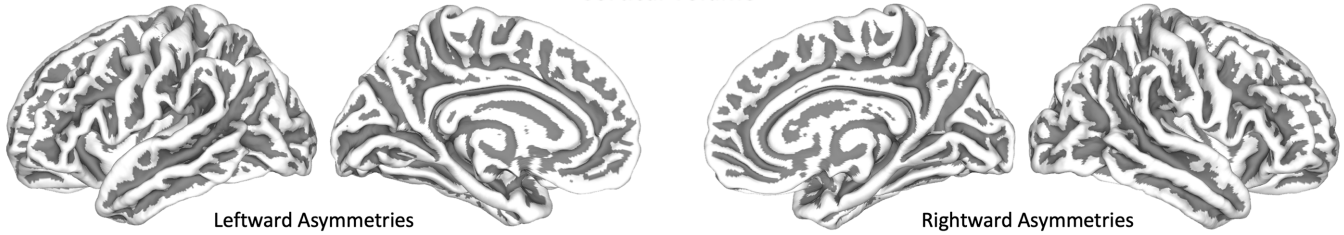


**Supplementary Figure 7: Hemispheric asymmetry in participants 12 years of age and older.** Cortical regions with significant asymmetries are indicated in green. The regions defined by the Desikan-Killiany atlas (Desikan et al., 2006) were projected onto the central surface of the FSAverage template using the CAT12 toolbox (Gaser et al., 2022). Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres. All significant asymmetries are FDR-corrected using a threshold of 0.05 (Benjamini and Yekutieli, 2001; Hochberg and Benjamini, 1990).

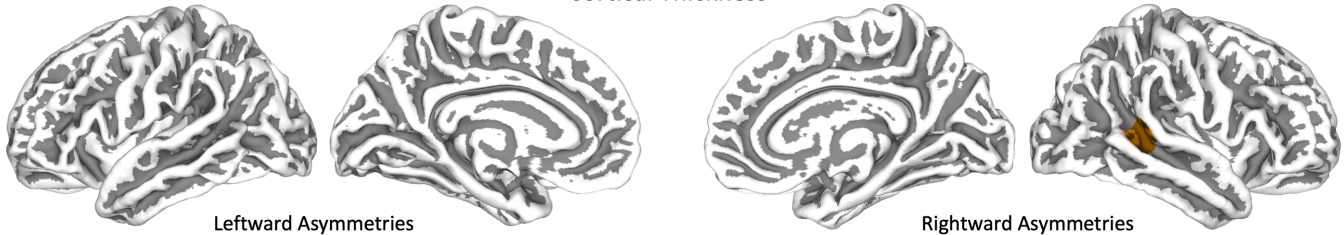


### Significant Age-related Changes in Asymmetry

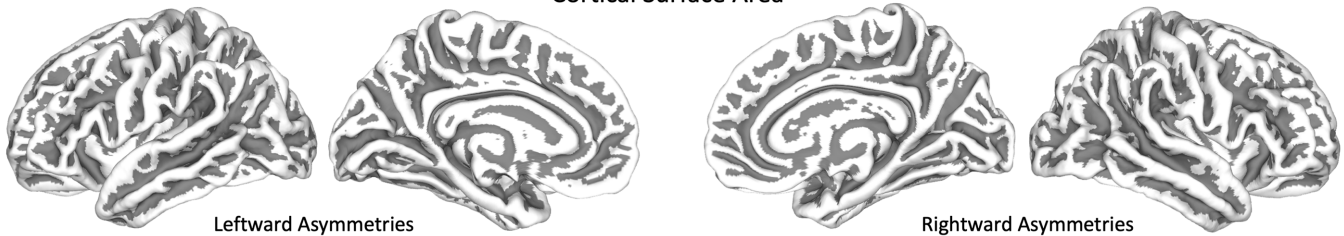
#### Cortical Volume



#### Cortical Thickness



#### Cortical Surface Area

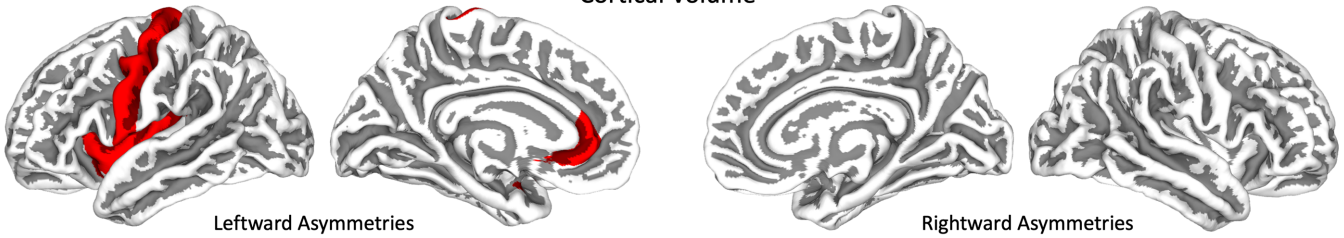


- Increased Asymmetry with Age
- Decreased Asymmetry with Age

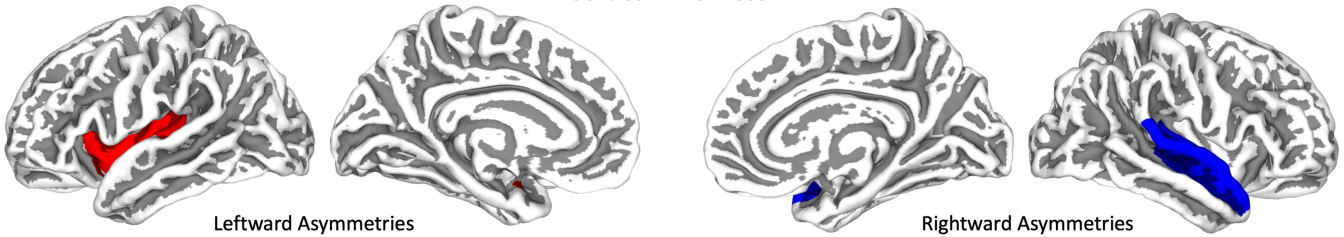
**Supplementary Figure 8: Age-related changes in asymmetry in participants 12 years of age and older.** Cortical regions with significant age-related changes in asymmetry are indicated in orange (increases) or cyan (decreases). Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres. If asymmetry for a specific region changes in its direction with increasing age, the region is indicated in both left and right panels.

### Significant Sex Differences in Asymmetry

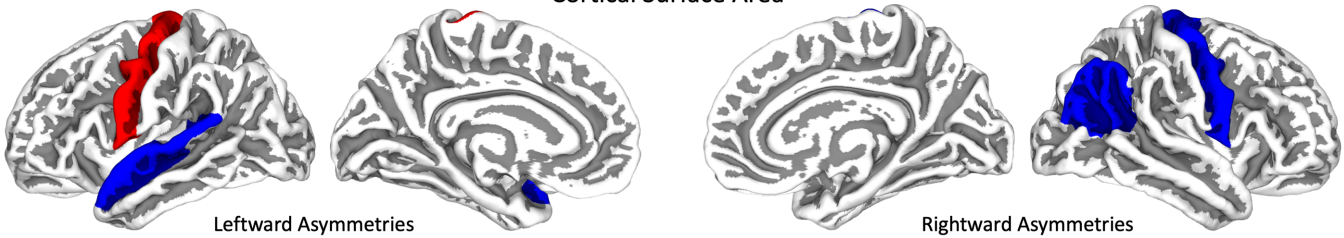
#### Cortical Volume



#### Cortical Thickness



#### Cortical Surface Area



- Asymmetry Male > Female
- Asymmetry Female > Male

#### Supplementary Figure 9: Sex Differences in asymmetry in participants 12 years of age and older.

Cortical regions with significantly larger asymmetries in males are depicted in blue, and with significantly larger asymmetries in females in red. Rightward asymmetries are indicated on the right hemisphere, leftward asymmetries on the left hemispheres.