

Electronic Supplementary Material

Cardiovascular risk in cognitively preserved elderly is associated with glucose hypometabolism in the posterior cingulate cortex and precuneus regardless of brain atrophy and apolipoprotein gene variations.

AGE - The Official Journal of the American Aging Association.

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Online Resource 1 : Image-processing steps

MR images

The skull-stripped MR images were first interpolated to get an isotropic resolution ($2 \times 2 \times 2 \text{ mm}^3$). These resultant MR images were coregistered on their respective FDG-PET images. The coregistered MR images were processed using the Unified Segmentation (Ashburner and Friston, 2005) and DARTEL toolbox (Diffeomorphic Anatomical Registration Through Exponentiated Lie Algebra) (Ashburner, 2007) to enable a more accurate spatial normalization. This approach registers all gray matter and white matter images to an averaged-size template created from all individuals used in this study and modulates the images to preserve the total amount of signal from each region in the images.

FDG-PET images

The PET images were coregistered to MR images and interpolated to the same voxel size as the MR images, namely $2 \times 2 \times 2 \text{ mm}^3$. After all PET images were corrected for partial volume effects (PVE) through the Meltzer method (Meltzer *et al.*, 2000), the DARTEL flow fields calculated from the MR images were applied to their respective PET images to obtain an anatomically exact overlap between gray matter and PET images of all subjects with modulation to preserve the total amount of signal from each region. In the same way as the MR data, the PET data were smoothed by Gaussian kernel of 12 mm full-width at half-maximum.