Analysis of 2 subgroups of subjects: with eyes open and eyes closed

Demographic characteristics of subjects are reported in supplementary table 1. There was no difference in respect to age or gender between the groups.

**Supplemental table 1:** Demographics of eyes open vs. eyes closed analysis.

	Eyes open	Eyes closed	P value
Male/female	8/3	7/4	1.00
Age	52.2 ± 10.4	56.7 ± 9.6	0.30

Values are indicated as mean ± standard deviation

Since the number of subjects per group was n=11, the maximal possible number of independent components of 10, i.e. n-1, was extracted from both fMRI and FDG-PET data.

ICA of PET data produced 2 and 1 visual component in the subgroup of subjects with eyes open and closed, respectively. While the secondary visual network was revealed in both conditions/subgroups, the primary one in the subgroup of subjects with eyes open only (figure). In ICA of fMRI data, a similar component covering primary and secondary visual cortices was extracted in both subgroups (figure). Consecutively, two visual components in the PET data of the eyes open group were merged. As expected, the spatial similarity of these components with the visual network from the fMRI data was higher in the eyes open subgroup with a dice of 0.55 vs. 0.12, respectively.

Supplemental figure 1: Visual RSNs in fMRI and PET data with corresponding Dice coefficients
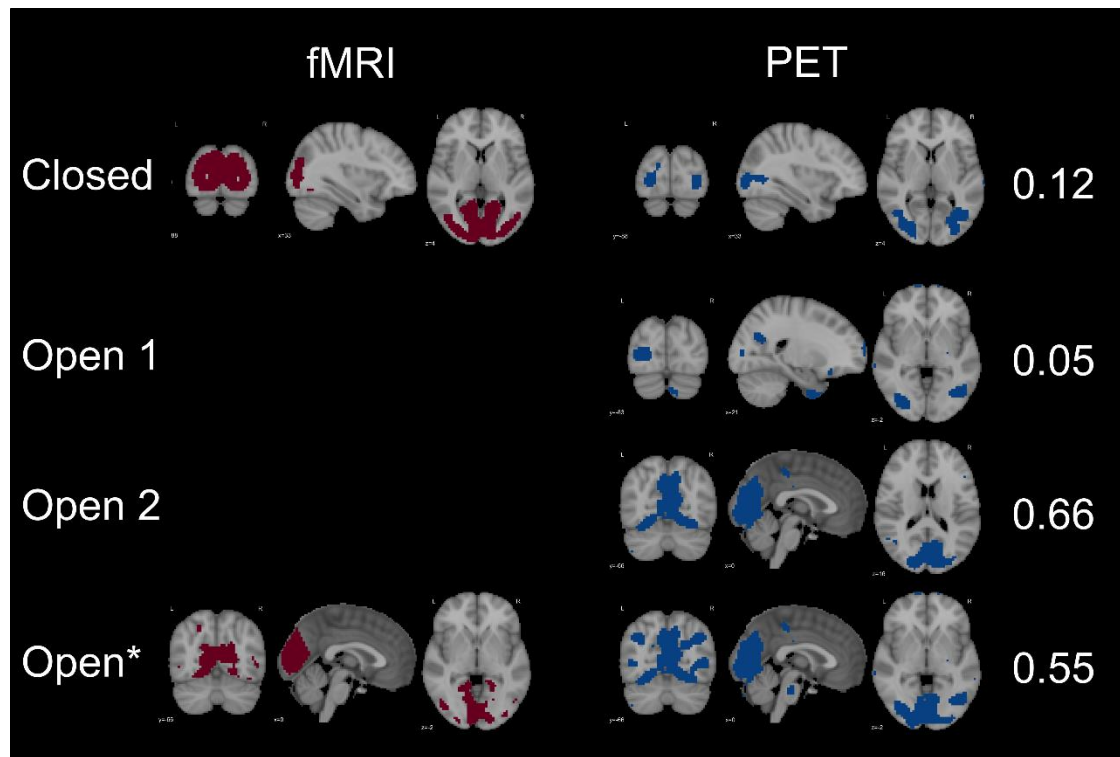
* As compared to the fMRI map, the PET map is a merge of two components, open 1 and open 2.

Parameters of the GIFT toolbox

ICA analyses were performed using a Group ICA of fMRI toolbox (GIFT) by the MIALAB group (version GroupICATv4.0a (GIFTv3.0a)). The data was masked with a default brain template mask. Default settings of GIFT were applied, among others the Infomax algorithm and the regular stability analysis type. We used a serial Group ICA with GICA as type of back reconstruction. Regarding intensity normalization, the option "remove mean per timepoint" was utilized. It means that the mean image across timepoints was removed from each individual fMRI data set, while the mean group image was removed from each individual PET image. Finally, the maps were thresholded at a z-score of 2.0.