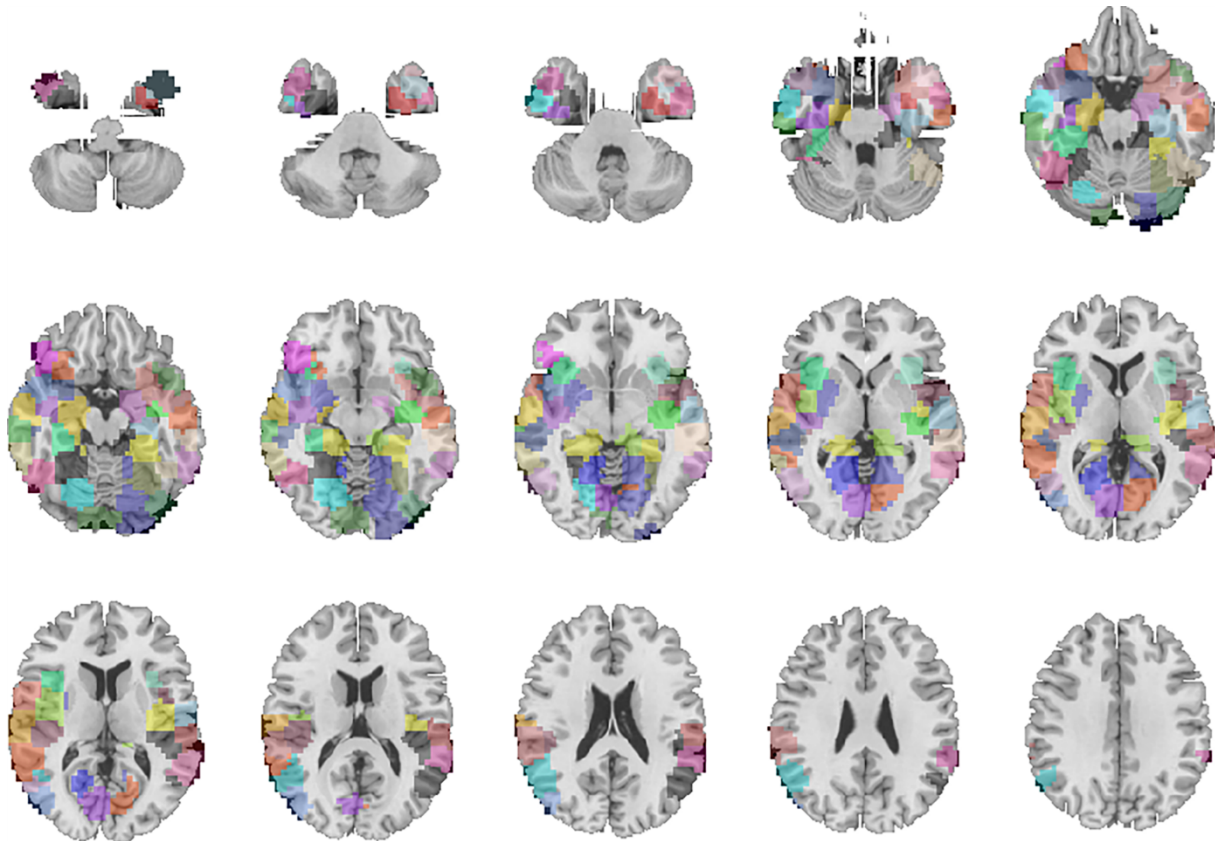
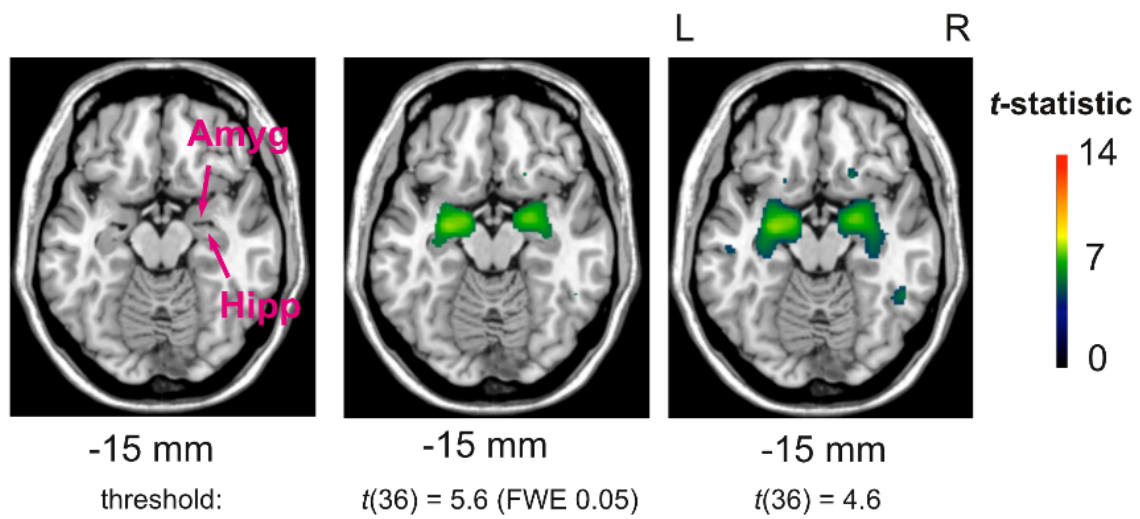


Supplementary Material

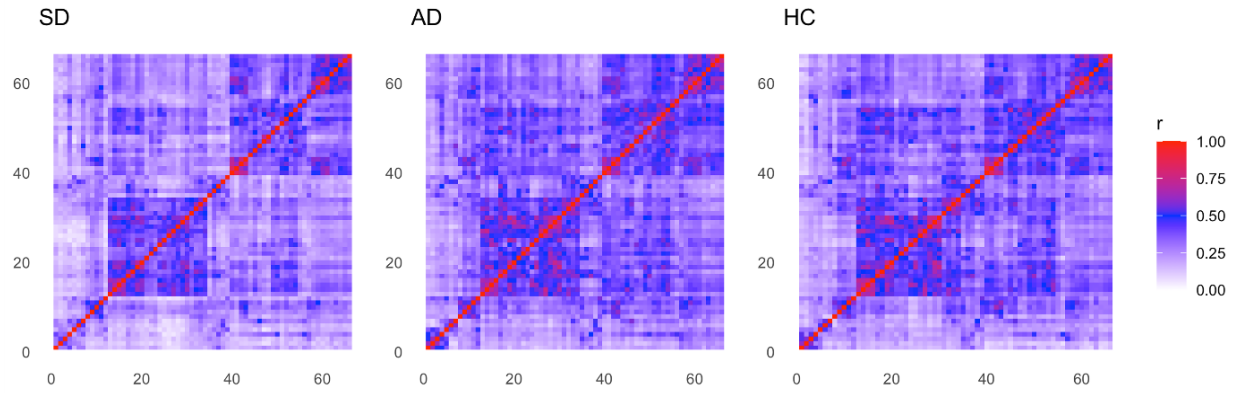
Functional Connectivity Alterations of the Temporal Lobe and Hippocampus in Semantic Dementia and Alzheimer's Disease



Supplementary Figure 1. Sixty-six ROIs from a functional parcellation by Craddock [38] ($k = 200$) that were selected based on their overlap with structures in the temporal cortex, the hippocampus, and the amygdala.



Supplementary Figure 2. Using a more liberal threshold to increase power reveals reduced gray matter density not only in the amygdala but also in the hippocampus in Alzheimer's disease patients.



Supplementary Figure 3. Mean connectivity strengths shown as correlation matrix (Pearson's r) for the 66 ROIs from the temporal cortex and the three groups (SD, semantic dementia; AD, Alzheimer's disease; HC, healthy elderly controls).

Supplementary Table 1. Sensitivity analysis using three additional covariates, age, scanner site and gray matter density in the temporal cortex. Compared to the original analysis without covariates, the same seven functional connections demonstrated significant group differences.

Edge no.	ROI no.	ROI no.	Region	Region	<i>F</i>	FDR adj. <i>p</i>
1	129	11	Left anterior superior temporal gyrus / middle temporal gyrus / insular cortex	Left posterior middle temporal gyrus / superior temporal gyrus	10.72	0.041
2	85	24	Right lateral inferior occipital cortex / lateral superior occipital cortex	Left posterior superior temporal gyrus / central opercular cortex / parietal opercular cortex / planum temporale	12.27	0.025
3	198	32	Right fusiform cortex / parahippocampal gyrus	Right inferior temporal pole	12.20	0.025
4	70	37	Left lingual gyrus / intracalcarine cortex / precuneus cortex	Left posterior hippocampus / thalamus	12.97	0.025
5	89	37	Right lingual gyrus / intracalcarine cortex	Left posterior hippocampus / thalamus	11.28	0.032
6	153	71	Right anterior middle temporal gyrus / superior temporal gyrus	Right orbitofrontal cortex	11.91	0.025
7	112	72	Left orbitofrontal cortex / insular cortex	Left anterior inferior temporal gyrus / middle temporal gyrus	12.47	0.025

Supplementary Table 2. Post-hoc Tukey HSD p -values for the three single comparisons (rows) and for each of the seven ROI-pairs that had a significant group effect (columns). Significant values reflect that the group effect was driven by a specific group level contrast. This analysis included the covariates age, mean gray matter density in the temporal cortex, and study site.

Edge No.	1	2	3	4	5	6	7
AD versus HC	0.010	0.071	0.98	0.54	0.21	0.0007	1.00
SD versus HC	< 0.0001	0.037	0.0002	< 0.0001	< 0.0001	< 0.0001	0.0003
SD versus AD	0.066	<0.0001	0.0006	0.002	0.022	0.98	0.0003

Supplementary Table 3. Sensitivity analysis using three covariates, age, scanner site, and MMSE. Two functional connections demonstrated significant group differences.

Edge no.	ROI no.	ROI no.	Region	Region	<i>F</i>	FDR adj. <i>p</i>
4	70	37	Left lingual gyrus / intracalcarine cortex / precuneus cortex	Left posterior hippocampus / thalamus	14.64	0.026
5	89	37	Right lingual gyrus / intracalcarine cortex	Left posterior hippocampus / thalamus	12.9	0.038

Supplementary Table 4. Post-hoc Tukey HSD *p*-values for the three single comparisons (rows) and for each of the seven ROI-pairs that had a significant group effect (columns). Significant values reflect that the group effect was driven by a specific group level contrast. This analysis included the covariates age, mean gray matter density in the temporal cortex, and study site.

Edge No.	4	5
AD versus HC	0.52	0.20
SD versus HC	< 0.0001	< 0.0001
SD versus AD	0.0007	0.009