

## Supplementary Materials:

### Imaging Methods:

#### *fMRI Image Acquisition*

Images were acquired with a research-dedicated GE Signa 3 Tesla MRI scanner (max gradient strength 40mT/m; max slew rate 150T/m/s) (General Electric Company, Waukesha, Wisconsin) with an MRI-compatible head holder at the Weill Medical College of Cornell University.

Anatomical localization: Three to five T1 weighted sagittal slices were collected to localize the anterior and posterior commissures, followed by a set of 17 coronal slices perpendicular to the AC-PC line to determine the location of the amygdala and hippocampus. A reference T1 weighted anatomical image with the same axial slice placement and thickness as the functional imaging was then acquired with two slices centered within the amygdala, as the proxy for co-registration purpose (256x256 matrix size, 5mm in thickness, 1mm gap, TE/TR=14/500ms, FoV=240mm). Functional imaging: Blood Oxygenation Level-Dependent (BOLD) contrast imaging, which reflects changes in venous deoxyhemoglobin associated with neuronal activity, was employed. After shimming to maximize homogeneity, a series of functional scans was collected using a gradient echo EPI sequence (TR=1200ms, TE=30ms, 15 or 21 slices of 5mm in thickness, 1mm gap, FoV=240mm, matrix=64x64), with a z-shimming algorithm (Gu 2002) to reduce susceptibility-induced signal losses at the base of the brain. Structural imaging: A high-resolution T1 weighted anatomical image is acquired using a spoiled gradient (SPGR) recalled acquisition sequence (TR/TE=30/8msec, flip angle=45, field of view=220mm, 140 coronal slices with thickness=contiguous 1.5mm, number of averages=1, matrix=256x256, voxel resolution=0.8594x1.5x0.8594mm<sup>3</sup>). Functional MRI System: The Integrated Functional Imaging System SA/E-Prime environment (IFIS-SA, MRI Devices, Waukesha WI; Psychology Software Tools, Pittsburgh PA) were configured and programmed for visual stimulus delivery and response collection (via the head coil-mounted LCD display, headphones and Brainlogics Fiber Optic Button Response Units) that were synchronized via MRI scanner trigger signal in the MRI scanning protocol.

#### *fMRI Image Processing*

The functional image processing pipeline consisted of the following steps using customized SPM software (Friston 2007, Pan, Epstein et al. 2011) carried out on an UNIX server (Sun Microsystems, Mountainview, CA): Reconstruction of EPI functional images using modified GE reconstruction software with off-resonance phase correction, slice-timing correction and Hanning-window apodization; Extraction of physiological fluctuations such as cardiac and respiratory cycles from EPI image sequence (Frank, Buxton et al. 2001); Manual AC-PC re-orientation of the two anatomical images and application of the transformation parameters of the reference T1 image to all functional EPI-BOLD images; Realignment to further correct for slight head movement between scans and for differential spin excitation history based on intracranial voxels; Co-registration of functional EPI-BOLD images to the corresponding high-resolution T1 anatomical image, based on the rigid body transformation parameters of the reference T1 image to the latter for each individual subject; Stereotactic normalization to the standardized Montreal Neurologic Institute (MNI) coordinate space based on the high-resolution T1 anatomical image to normalize for individual differences in brain morphology (12 nonlinear

iterations,  $7 \times 8 \times 7$  nonlinear basis functions, medium regularization, and resampled to  $3 \times 3 \times 3$  mm<sup>3</sup> voxels using sinc interpolation), and application of the normalization transformation to all functional EPI-BOLD images; Spatial smoothing of all the normalized functional EPI-BOLD images with an isotropic Gaussian kernel (FWHM = 7.5mm). Extensive examination of processed images at each intermediate stage for quality assurance was performed both by visual inspection and quantitation. fMRI data sets in this study were quality controlled against and met with the stringent criteria that there can be no movement of greater than 1/3 voxel over the study session for each participant.

### *Functional Image Analysis*

Using customized *fmrstat* software (Worsley, Liao et al. 2002), a two-level voxel-wise linear fixed-effects model was utilized to examine the effect sizes of the key Group/Condition contrasts in an ANCOVA setting. First, a voxel-wise multiple linear regression model was employed at the individual subject level. This was comprised of the block-by-block regressors of interest, which consist of each stimulus block onset time/duration convolved with a prototypical hemodynamic response function, and the covariates of no interest, which consist of the temporal first-order derivative of the principal regressors (to compensate for slight latency differences in individual hemodynamic response from the prototypical response function), global fluctuations, physiological fluctuations, realignment parameters, and scanning periods (Aguirre, Zarahn et al. 1998, McGonigle, Howseman et al. 2000). Temporal filtering was performed to counter the effects of baseline shifts and higher frequency noise (than prototypical hemodynamic response), and a voxel-wise *AR(1)* model of the time course is used to accommodate temporal correlation in consecutive scans. Effects at every brain voxel were estimated using the EM (expectation maximization) algorithm, and task-specific condition effects of Word Type were then compared using linear contrasts. That is, for each subject, the effect image and its standard error image for each Word Type were calculated, and these were also combined in a series of linear contrasts between Word Types to be entered into the second group-level analysis to assess within-group effect sizes of the key hypotheses. Second, at the group level, the within-group effects of the hypothesis-driven contrasts (PTSD words vs Panic Disorder words, PTSD words vs. Neutral words, PTSD words vs. Positive words) were examined for the pre-treatment mean effects of the contrasts of interest, and their association with normalized CAPS improvement index via a multiple regression model, with the CAPS improvement index as the main regressor, and age and scanning protocol as covariates of no-interest. (Two different scanning protocols were used, with the only difference being number of slices collected. There were no effects of protocol detected in ANCOVA, so scans were combined, with protocol as a covariate of no interest.) These group-level correlation effect estimates generated statistical maps of the t-statistic, and the statistical significance of the t-maps was then evaluated in the final step of inference. The statistical inference is based on random field theory as implemented in *fmrstat*, where the t-statistical maps were thresholded initially at a voxel-wise two-tailed p-value < 0.01 and a cluster spatial extent > 250 mm<sup>3</sup>. The group-level correlation effect of interest at a peak coordinate was considered significant if the corrected p-value < 0.05, which was based on family-wise error rate correction of the voxel-wise p-values over the entire brain.

Supplementary Table S1. PT v NU

PT > NU	Brain Region	Brodmann Area	MNI Coordinates			Z-value	p-value	Corrected p-value	Cluster ID	Cluster Size (mm <sup>3</sup> )
			X	Y	Z					
	L Superior Frontal Gyrus	8	-3	51	45	8.126	<0.001	<0.001	1	64854
	Medial Frontal Gyrus	9	0	63	30	7.076	<0.001	<0.001	1	
	R Medial Frontal Gyrus	8	6	63	36	6.497	<0.001	<0.001	1	
	R Superior Frontal Gyrus	6	12	15	75	5.509	<0.001	<0.001	1	
	L Superior Frontal Gyrus	6	-6	21	66	5.49	<0.001	<0.001	1	
	L Medial Frontal Gyrus	10	-6	66	9	5.141	<0.001	0.001	1	
	Superior Frontal Gyrus	9	0	60	21	5.123	<0.001	0.001	1	
	R Superior Frontal Gyrus	8	12	54	48	4.896	<0.001	0.002	1	
	L Superior Frontal Gyrus	6	-12	27	57	4.639	<0.001	0.006	1	
	Superior Frontal Gyrus	6	0	15	63	4.608	<0.001	0.007	1	
	L Red Nucleus		-3	-21	-15	6.724	<0.001	<0.001	2	26298
	L Thalamus, Pulvinar		-6	-30	-3	5.376	<0.001	<0.001	2	
	R Caudate Head		9	9	-3	5.198	<0.001	<0.001	2	
	L Lateral Globus Pallidus		-12	9	-3	4.971	<0.001	0.001	2	
	L Caudate Head		-9	12	-3	4.927	<0.001	0.002	2	
	R Medial Globus Pallidus		15	-6	-6	4.821	<0.001	0.003	2	
	L Thalamus, Anterior Nucleus		-6	0	9	4.477	<0.001	0.012	2	
	R Caudate Body		6	6	3	4.433	<0.001	0.014	2	
	L Amygdala		-24	-6	-15	4.339	<0.001	0.02	2	
	R Thalamus		6	0	6	4.333	<0.001	0.02	2	
	R Hypothalamus		6	0	-18	4.204	<0.001	0.033	2	
	R Cerebellum, Inferior Semi-Lunar Lobule		39	-78	-42	5.649	<0.001	<0.001	3	19521
	R Fusiform Gyrus	18	24	-99	-12	4.979	<0.001	0.001	3	
	R Inferior Occipital Gyrus	18	36	-90	-9	4.842	<0.001	0.002	3	
	R Cerebellum, Pyramis		12	-84	-24	4.777	<0.001	0.003	3	
	R Cerebellum, Uvula		9	-93	-39	4.717	<0.001	0.004	3	

R	Fusiform Gyrus	18	27	-93	-9	4.651	<0.001	0.006	3	
R	Cerebellum, Tuber		51	-66	-33	4.444	<0.001	0.013	3	
L	Inferior Frontal Gyrus	47	-48	30	-9	6.106	<0.001	<0.001	4	14256
L	Inferior Frontal Gyrus	9	-54	24	18	5.089	<0.001	0.001	4	
L	Precentral Gyrus	44	-51	21	3	4.434	<0.001	0.014	4	
L	Inferior Frontal Gyrus	46	-48	42	0	4.148	<0.001	0.041	4	
L	Precuneus	19	-48	-72	51	6.577	<0.001	<0.001	5	14472
L	Inferior Parietal Lobule	39	-51	-69	51	6.281	<0.001	<0.001	5	
L	Angular Gyrus	39	-54	-66	48	5.95	<0.001	<0.001	5	
L	Middle Temporal Gyrus	39	-51	-63	27	5.535	<0.001	<0.001	5	
L	Inferior Parietal Lobule	39	-54	-63	51	5.425	<0.001	<0.001	5	
L	Middle Temporal Gyrus	39	-48	-60	27	5.395	<0.001	<0.001	5	
L	Superior Temporal Gyrus	39	-51	-60	24	5.388	<0.001	<0.001	5	
L	Superior Temporal Gyrus	22	-54	-57	24	5.32	<0.001	<0.001	5	
L	Supramarginal Gyrus	40	-57	-54	24	5.17	<0.001	0.001	5	
R	Superior Temporal Gyrus	22	57	-9	-15	5.668	<0.001	<0.001	6	7965
R	Superior Temporal Gyrus	38	48	9	-30	5.348	<0.001	<0.001	6	
R	Middle Temporal Gyrus	21	54	0	-27	4.679	<0.001	0.005	6	
L	Middle Temporal Gyrus	21	-57	-6	-24	5.011	<0.001	0.001	7	5805
R	Inferior Frontal Gyrus	45	69	30	15	5.311	<0.001	<0.001	8	6210
R	Inferior Frontal Gyrus	44	51	21	6	4.871	<0.001	0.002	8	
L	Middle Frontal Gyrus	8	-51	24	45	4.992	<0.001	0.001	9	5886
L	Middle Frontal Gyrus	6	-51	15	54	4.944	<0.001	0.002	9	
L	Precuneus	7	-3	-63	36	5.173	<0.001	0.001	10	7911
L	Cuneus	7	-3	-72	39	5.15	<0.001	0.001	10	
	Cingulate Gyrus	31	0	-54	33	4.82	<0.001	0.003	10	
R	Insula	13	36	27	-12	5.379	<0.001	<0.001	11	2862
R	Inferior Frontal Gyrus	47	39	30	-12	5.331	<0.001	<0.001	11	
L	Cerebellum, Inferior Semi-Lunar Lobule		-27	-87	-39	6.186	<0.001	<0.001	12	3726
L	Cerebellum, Declive		-18	-90	-21	4.254	<0.001	0.028	14	1485
R	Precentral Gyrus	6	72	9	39	4.786	<0.001	0.003	15	675

NU > PT	Brain Region	Brodmann Area	MNI Coordinates			Z-value	p-value	Corrected p-value	Cluster ID	Cluster Size (mm <sup>3</sup> )
			X	Y	Z					
1	L Precentral Gyrus	6	-60	0	30	7.413	<0.001	<0.001	1	207252
	L Insula	13	-42	-21	21	7.353	<0.001	<0.001	1	
	R Precentral Gyrus	6	57	0	3	6.396	<0.001	<0.001	1	
	L Precentral Gyrus	4	-60	-9	30	6.315	<0.001	<0.001	1	
	L Precentral Gyrus	3	-57	-12	27	6.203	<0.001	<0.001	1	
	L Supramarginal Gyrus	40	-42	-42	39	5.741	<0.001	<0.001	1	
	R Insula	13	45	-18	21	5.705	<0.001	<0.001	1	
	L Postcentral Gyrus	43	-66	-9	18	5.645	<0.001	<0.001	1	
	R Precuneus	7	15	-57	69	5.64	<0.001	<0.001	1	
	R Postcentral Gyrus	2	39	-30	66	5.63	<0.001	<0.001	1	
	L Postcentral Gyrus	3	-48	-15	36	5.59	<0.001	<0.001	1	
	R Superior Parietal Lobule	7	27	-60	69	5.584	<0.001	<0.001	1	
	R Inferior Parietal Lobule	40	45	-36	51	5.582	<0.001	<0.001	1	
	L Superior Temporal Gyrus	41	-51	-33	15	5.576	<0.001	<0.001	1	
	L Sub-Gyral	40	-36	-45	39	5.562	<0.001	<0.001	1	
	L Middle Temporal Gyrus		-51	-66	3	5.506	<0.001	<0.001	1	
	L Postcentral Gyrus	1	-57	-12	48	5.467	<0.001	<0.001	1	
	L Postcentral Gyrus	2	-60	-15	48	5.414	<0.001	<0.001	1	
	L Superior Parietal Lobule	7	-30	-51	69	5.398	<0.001	<0.001	1	
	L Superior Temporal Gyrus		-54	-3	-3	5.255	<0.001	<0.001	1	
	L Postcentral Gyrus	40	-42	-30	60	5.136	<0.001	0.001	1	
	R Paracentral Lobule	6	3	-24	69	5.095	<0.001	0.001	1	
	L Middle Temporal Gyrus	37	-45	-69	12	5.073	<0.001	0.001	1	
	R Medial Frontal Gyrus	6	3	-21	66	5.059	<0.001	0.001	1	
	L Posterior Cingulate	30	-24	-69	18	5.051	<0.001	0.001	1	
	L Fusiform Gyrus	37	-42	-54	-6	5.011	<0.001	0.001	1	

R	Postcentral Gyrus	7	12	-48	69	4.992	<0.001	0.001	1	
R	Precentral Gyrus	4	36	-21	63	4.957	<0.001	0.001	1	
L	Inferior Parietal Lobule	40	-48	-39	51	4.95	<0.001	0.002	1	
	Medial Frontal Gyrus	6	0	-15	57	4.839	<0.001	0.003	1	
R	Postcentral Gyrus	3	30	-27	69	4.825	<0.001	0.003	1	
L	Superior Temporal Gyrus	42	-63	-30	15	4.751	<0.001	0.004	1	
R	Paracentral Lobule	5	3	-27	60	4.716	<0.001	0.004	1	
	Paracentral Lobule	5	0	-30	60	4.712	<0.001	0.004	1	
R	Inferior Frontal Gyrus	9	54	3	21	4.699	<0.001	0.005	1	
R	Postcentral Gyrus	43	57	-9	18	4.686	<0.001	0.005	1	
R	Postcentral Gyrus	40	63	-18	15	4.686	<0.001	0.005	1	
L	Precuneus	7	-21	-69	48	4.54	<0.001	0.009	1	
R	Sub-Gyral	40	39	-42	36	4.498	<0.001	0.011	1	
R	Postcentral Gyrus		60	-12	12	4.385	<0.001	0.017	1	
R	Clastrum		42	-3	3	4.259	<0.001	0.027	1	
L	Clastrum		-39	-21	0	4.202	<0.001	0.033	1	
L	Cerebellum, Declive		-24	-57	-12	4.189	<0.001	0.035	1	
L	Precuneus	31	-24	-72	30	4.185	<0.001	0.036	1	
L	Parahippocampal Gyrus	30	-27	-57	12	4.133	<0.001	0.043	1	
R	Middle Temporal Gyrus	37	45	-57	3	5.422	<0.001	<0.001	2	10908
R	Parahippocampal Gyrus	19	42	-48	-9	4.714	<0.001	0.004	2	
L	Cerebellar Tonsil		-27	-48	-48	5.036	<0.001	0.001	3	1944
R	Cerebellar Tonsil		42	-51	-42	4.62	<0.001	0.006	4	729
R	Middle Frontal Gyrus	9	33	39	33	4.161	<0.001	0.039	5	1809
R	Posterior Cingulate	31	30	-60	18	4.468	<0.001	0.012	11	648
L	Inferior Temporal Gyrus	20	-63	-42	-24	4.136	<0.001	0.043	12	324

Supplementary Table S1. Gray matter regions in which activation differs between PT and NU conditions ( $p < 0.05$  corrected for whole brain volume, cluster extent threshold  $> 250 \text{ mm}^3$ ).

Supplementary Table S2. PT v PA

PT > PA	Brain Region	Brodmann Area	MNI Coordinates			Z-value	p-value	Corrected p-value	Cluster ID	Cluster Size (mm <sup>3</sup> )	
			X	Y	Z						
	R Superior Frontal Gyrus	8	6	48	45	4.822	<0.001	0.003	1	12258	
	L Superior Frontal Gyrus	6	-6	45	51	4.68	<0.001	0.005	1		
	L Superior Frontal Gyrus	8	-3	48	45	4.618	<0.001	0.006	1		
	R Medial Frontal Gyrus	8	6	45	39	4.554	<0.001	0.008	1		
	L Cerebellum, Declive		-12	-78	-21	4.218	<0.001	0.031	2		1485
	L Inferior Semi-Lunar Lobule		-27	-87	-42	4.38	<0.001	0.017	3		2160
	R Inferior Frontal Gyrus	45	69	33	12	4.181	<0.001	0.036	4		2673
	L Middle Temporal Gyrus	38	-45	3	-48	4.384	<0.001	0.017	5		864
	R Superior Frontal Gyrus	10	27	75	-15	4.407	<0.001	0.015	6		702
	L Red Nucleus		-3	-18	-15	4.462	<0.001	0.012	7		756
	L Mammillary Body		-3	-15	-12	4.371	<0.001	0.018	7		
	L Substantia Nigra		-6	-18	-12	4.26	<0.001	0.027	7		
	R Superior Frontal Gyrus	6	15	15	66	4.507	<0.001	0.01	8		864
	R Inferior Temporal Gyrus	20	51	-15	-42	4.211	<0.001	0.032	9		594
	L Angular Gyrus	39	-51	-75	48	4.222	<0.001	0.031	22		837
PA > PT	Brain Region	Brodmann Area	MNI Coordinates			Z-value	p-value	Corrected p-value	Cluster ID	Cluster Size (mm <sup>3</sup> )	
	L Postcentral Gyrus	3	-33	-27	66	4.764	<0.001	0.003	1	10368	
	L Postcentral Gyrus	5	-33	-39	69	4.671	<0.001	0.005	1		
	L Postcentral Gyrus	7	-12	-48	72	4.524	<0.001	0.01	1		
	L Superior Parietal Lobule	7	-27	-57	72	4.402	<0.001	0.016	1		
	L Postcentral Gyrus	2	-54	-15	27	4.772	<0.001	0.003	2		8208

L	Precentral Gyrus	3	-57	-12	30	4.53	<0.001	0.009	2	
L	Insula	13	-42	-21	21	4.515	<0.001	0.01	2	
L	Precentral Gyrus	6	-39	-9	36	4.286	<0.001	0.024	2	
R	Insula	13	48	-15	21	5.046	<0.001	0.001	3	6966
R	Postcentral Gyrus	43	57	-9	18	4.578	<0.001	0.008	3	
R	Postcentral Gyrus		60	-12	15	4.548	<0.001	0.009	3	
R	Postcentral Gyrus	40	63	-18	15	4.528	<0.001	0.009	3	
R	Precentral Gyrus	6	72	3	3	4.56	<0.001	0.008	6	
R	Superior Temporal Gyrus	22	75	3	6	4.332	<0.001	0.02	6	3078
L	Inferior Temporal Gyrus	20	-63	-39	-24	4.539	<0.001	0.009	10	675
	Anterior Cingulate	32	0	24	-21	4.247	<0.001	0.028	15	378

Supplementary Table S2. Gray matter regions in which activation differs between PT and PA conditions ( $p < 0.05$  corrected for whole brain volume, cluster extent threshold  $> 250 \text{ mm}^3$ ).

Supplementary Table S3. PT v PO

PT > PO	Brain Region	Brodmann Area	MNI Coordinates			Z-value	p-value	Corrected p-value	Cluster ID	Cluster Size ( $\text{mm}^3$ )
			X	Y	Z					
	L Superior Frontal Gyrus	8	-15	57	42	5.661	<0.001	<0.001	1	34803
	L Superior Frontal Gyrus	6	-9	21	72	5.259	<0.001	<0.001	1	
	R Superior Frontal Gyrus	8	15	54	51	4.856	<0.001	0.002	1	
	L Medial Frontal Gyrus	9	-9	54	27	4.764	<0.001	0.003	1	
	L Medial Frontal Gyrus	6	-3	39	30	4.743	<0.001	0.004	1	
	R Superior Frontal Gyrus	6	12	15	69	4.711	<0.001	0.004	1	
	L Medial Frontal Gyrus	8	-3	36	45	4.603	<0.001	0.007	1	
	R Medial Frontal Gyrus	8	6	63	39	4.578	<0.001	0.008	1	
	L Medial Frontal Gyrus	6	-3	57	30	4.409	<0.001	0.015	1	



	Medial Frontal Gyrus	9	0	60	30	4.396	<0.001	0.016	1	
R	Cerebellum		3	-90	-33	5.699	<0.001	<0.001	2	10773
L	Cerebellum, Pyramis		-24	-84	-33	4.897	<0.001	0.002	2	
L	Cerebellum, Uvula		-18	-93	-24	4.716	<0.001	0.004	2	
L	Thalamus, Anterior Nucleus		-3	3	6	4.782	<0.001	0.003	3	11556
L	Thalamus, Medial Dorsal Nucleus		-3	-9	0	4.713	<0.001	0.004	3	
	Caudate Body		0	6	6	4.701	<0.001	0.005	3	
R	Medial Globus Pallidus		15	-6	-6	4.616	<0.001	0.007	3	
L	Thalamus, Pulvinar		-6	-30	-3	4.569	<0.001	0.008	3	
	Thalamus		0	-12	-6	4.389	<0.001	0.016	3	
L	Parahippocampal Gyrus		-18	-39	0	4.21	<0.001	0.032	3	
R	Caudate Head		6	12	-3	4.155	<0.001	0.04	3	
R	Cerebellum, Inferior Semi-Lunar Lobule		36	-78	-51	5.017	<0.001	0.001	4	6885
R	Cerebellum, Tuber		51	-66	-33	4.646	<0.001	0.006	4	
R	Cerebellar Tonsil		54	-66	-36	4.519	<0.001	0.01	4	
R	Cerebellum, Pyramis		42	-81	-33	4.38	<0.001	0.017	4	
R	Insula	13	36	27	-9	5.693	<0.001	<0.001	5	5562
L	Superior Occipital Gyrus	19	-42	-81	42	5.524	<0.001	<0.001	6	11853
L	Superior Parietal Lobule	7	-39	-75	57	4.766	<0.001	0.003	6	
L	Middle Temporal Gyrus	39	-51	-63	27	4.675	<0.001	0.005	6	
L	Angular Gyrus	39	-57	-69	42	4.457	<0.001	0.013	6	
L	Inferior Parietal Lobule	7	-45	-69	60	4.296	<0.001	0.023	6	
L	Middle Frontal Gyrus	8	-54	24	48	6.304	<0.001	<0.001	7	6534
L	Middle Frontal Gyrus	6	-51	18	54	5.334	<0.001	<0.001	7	
R	Middle Temporal Gyrus	21	54	-6	-21	5.196	<0.001	<0.001	8	2997
R	Superior Temporal Gyrus	38	48	9	-30	4.718	<0.001	0.004	8	
R	Inferior Frontal Gyrus	45	66	27	15	4.684	<0.001	0.005	9	3591
R	Middle Frontal Gyrus	46	45	27	18	4.449	<0.001	0.013	9	
L	Inferior Frontal Gyrus	47	-36	27	-9	5.772	<0.001	<0.001	10	3375
R	Red Nucleus		3	-24	-18	4.807	<0.001	0.003	11	1890
L	Red Nucleus		-3	-24	-18	4.677	<0.001	0.005	11	

	L Medial Frontal Gyrus	11	-6	54	-21	4.871	<0.001	0.002	12	891	
	R Inferior Occipital Gyrus	18	36	-90	-6	4.722	<0.001	0.004	13	1053	
	R Cerebellum, Nodule		3	-57	-33	4.608	<0.001	0.007	14	972	
	R Superior Temporal Gyrus	39	69	-60	27	4.639	<0.001	0.006	15	1188	
	L Superior Temporal Gyrus	21	-60	-12	-6	4.652	<0.001	0.006	17	945	
	L Superior Temporal Gyrus	22	-51	-18	-12	4.171	<0.001	0.037	17		
	L Middle Temporal Gyrus	22	-57	-36	0	4.368	<0.001	0.018	18	1053	
	L Middle Temporal Gyrus		-54	-36	-3	4.2	<0.001	0.034	18		
<b>PO &gt; PT</b>			<b>MNI Coordinates</b>					<b>Corrected</b>		<b>Cluster</b>	<b>Cluster</b>
	<b>Brain Region</b>	<b>Brodmann Area</b>	<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Z-value</b>	<b>p-value</b>	<b>p-value</b>	<b>ID</b>	<b>Size (mm<sup>3</sup>)</b>	
	L Supramarginal Gyrus	40	-42	-36	39	6.366	<0.001	<0.001	1	129114	
	L Superior Parietal Lobule	7	-21	-57	66	6.166	<0.001	<0.001	1		
	L Postcentral Gyrus	3	-36	-27	63	5.992	<0.001	<0.001	1		
	R Superior Parietal Lobule	7	27	-57	69	5.945	<0.001	<0.001	1		
	R Postcentral Gyrus	5	42	-36	66	5.818	<0.001	<0.001	1		
	R Paracentral Lobule	6	3	-24	69	5.601	<0.001	<0.001	1		
	L Inferior Parietal Lobule	40	-54	-30	33	5.512	<0.001	<0.001	1		
	R Precentral Gyrus	4	30	-15	63	5.393	<0.001	<0.001	1		
	L Precentral Gyrus	6	-27	-9	66	5.358	<0.001	<0.001	1		
	R Postcentral Gyrus	43	57	-12	18	5.248	<0.001	<0.001	1		
	R Precentral Gyrus	6	33	-12	60	5.234	<0.001	<0.001	1		
	L Postcentral Gyrus	5	-36	-42	69	5.227	<0.001	<0.001	1		
	L Sub-Gyral	40	-36	-45	39	5.174	<0.001	0.001	1		
	R Insula	13	51	-15	21	5.149	<0.001	0.001	1		
	R Inferior Parietal Lobule	40	45	-36	54	5.146	<0.001	0.001	1		
	R Postcentral Gyrus	4	48	-12	48	5.133	<0.001	0.001	1		
	L Precentral Gyrus	4	-42	-9	39	4.958	<0.001	0.001	1		
	R Postcentral Gyrus	3	30	-24	69	4.933	<0.001	0.002	1		

L	Precuneus	7	-6	-45	66	4.894	<0.001	0.002	1	
L	Postcentral Gyrus	40	-66	-18	18	4.779	<0.001	0.003	1	
	Medial Frontal Gyrus	6	0	-18	57	4.771	<0.001	0.003	1	
	Paracentral Lobule	6	0	-24	60	4.763	<0.001	0.003	1	
L	Medial Frontal Gyrus	6	-6	-3	51	4.73	<0.001	0.004	1	
L	Insula	13	-42	-21	21	4.68	<0.001	0.005	1	
L	Postcentral Gyrus	2	-48	-30	69	4.548	<0.001	0.009	1	
L	Postcentral Gyrus	43	-69	-15	21	4.471	<0.001	0.012	1	
R	Inferior Frontal Gyrus	9	48	3	21	4.443	<0.001	0.013	1	
L	Transverse Temporal Gyrus	42	-63	-12	15	4.329	<0.001	0.021	1	
L	Cingulate Gyrus	24	-15	9	45	4.238	<0.001	0.029	1	
R	Precuneus	7	9	-45	66	4.196	<0.001	0.034	1	
R	Cingulate Gyrus	31	27	-45	33	4.174	<0.001	0.037	1	
R	Middle Temporal Gyrus	37	48	-60	6	4.239	<0.001	0.029	2	5157
R	Lingual Gyrus	19	36	-60	-3	4.147	<0.001	0.041	2	
R	Precentral Gyrus	44	54	0	3	6.255	<0.001	<0.001	3	5724
R	Precentral Gyrus	6	75	0	9	4.57	<0.001	0.008	3	
R	Cerebellar Tonsil	*	45	-51	-45	5.176	<0.001	0.001	4	1782
L	Superior Temporal Gyrus	22	-51	-3	0	5.325	<0.001	<0.001	6	2322
L	Posterior Cingulate	30	-24	-69	18	4.528	<0.001	0.009	8	675
L	Subcallosal Gyrus	11	-12	27	-21	4.238	<0.001	0.029	15	297
R	Middle Frontal Gyrus	10	48	72	6	4.269	<0.001	0.026	17	324
L	Inferior Temporal Gyrus	20	-69	-39	-21	4.722	<0.001	0.004	27	297

Supplementary Table S3. Gray matter regions in which activation differs between PT and PO conditions ( $p < 0.05$  corrected for whole brain volume, cluster extent threshold  $> 250 \text{ mm}^3$ ).