SUPPLEMENTARY METHODS

Functional Data Analysis

Anatomical and functional images were processed using Statistical Parametric Mapping software (SPM2, Wellcome Department of Imaging Neuroscience, London, UK). Raw functional data were preprocessed following standard procedures, starting with correcting for head movement. None of the subjects had head movement more than 1.5 mm in any direction. Functional images were then normalized to standard space using the Montreal Neurological Institute (MNI)-152 template. Spatial smoothing was applied to the normalized functional images using a Gaussian kernel of 6 mm full width at half maximum. By using a boxcar function convolved with the hemodynamic response function and covariates of no interests (a session mean, a linear trend for each run, and six movement parameters derived from realignment corrections), linear contrast maps for fearful versus neutral, fearful versus fixation, and neutral versus fixation were generated for each subject. Contrast maps were then entered into a random effects model, which accounts for inter-subject variability and allows population based inferences to be drawn.

Given this study's focus on the amygdala, an anatomical region of interest (ROI) mask was created using the Wake Forest University Pick Atlas (Maldjian et al., 2003) to determine the peak activation voxel. The ROI mask was dilated by an expanding factor of 1 to fully encompass the entire amygdala (Etkin et al., 2004; Gianaros et al., 2008). We imposed a significance threshold of $p < 0.05$ corrected for multiple comparisons over the extended amygdala volume (~12,000 mm^3), as determined by Monte Carlo simulations implemented in AlphaSim within AFNI software (Cox, 1996).

Cox RW (1996) AFNI: software for analysis and visualization of functional magnetic resonance neuroimages. Comput Biomed Res 29:162-173.

Etkin A, Klemenhagen KC, Dudman JT, Rogan MT, Hen R, Kandel ER, Hirsch J (2004) Individual differences in trait anxiety predict the response of the basolateral amygdala to unconsciously processed fearful faces. Neuron 44:1043-1055.

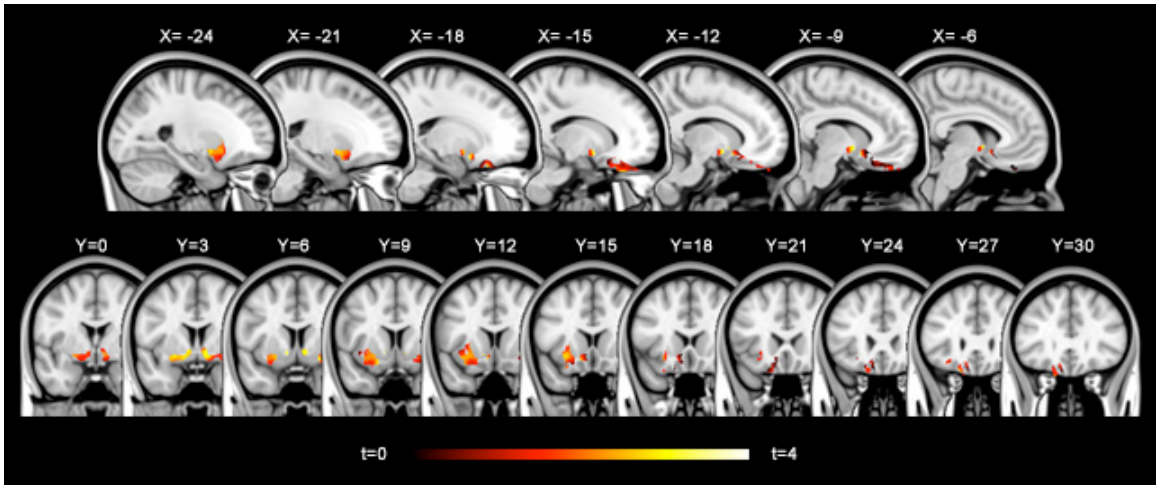
Gianaros PJ, Sheu LK, Matthews KA, Jennings JR, Manuck SB, Hariri AR (2008) Individual differences in stressor-evoked blood pressure reactivity vary with activation, volume, and functional connectivity of the amygdala. J Neurosci 28:990-999.

Maldjian JA, Laurienti PJ, Kraft RA, Burdette JH (2003) An automated method for neuroanatomic and cytoarchitectonic atlas-based interrogation of fMRI data sets. Neuroimage 19:1233-1239.

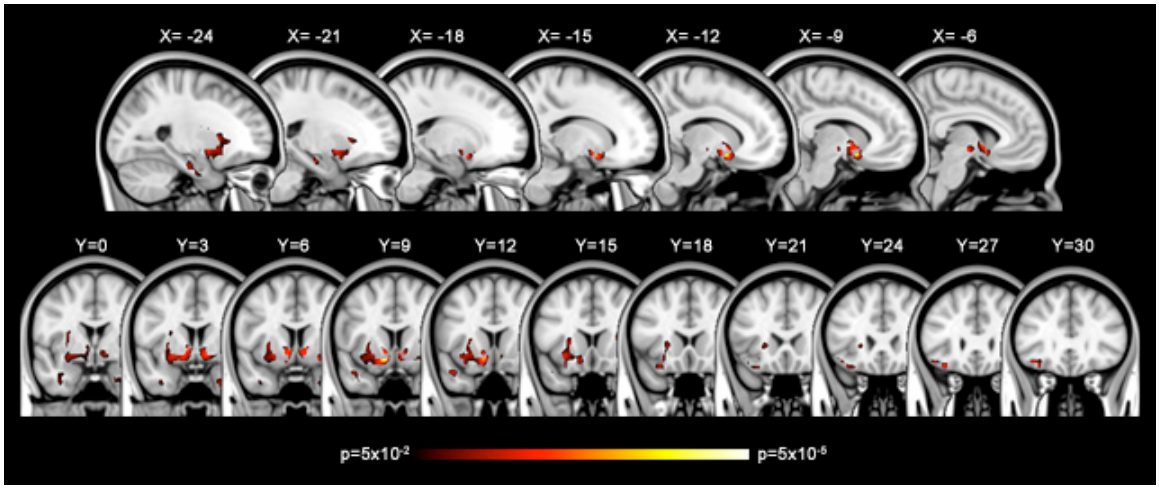
SUPPLEMENTARY FIGURES 1 & 2

Diffusion Data Analysis

Two additional analyses were performed on the FA images. First, in order to assess how the magnitude of the correlation between FA and trait anxiety changes along the amygdala-vmPFC pathway, a voxelwise regression analysis on the FA images was performed using trait anxiety as a regressor, and the statistical map was subsequently masked with the amygdala-vmPFC pathway voxels (Supplementary Figure 1). Second, to determine the anatomical specificity of this relationship between FA and trait anxiety, an additional whole brain voxelwise regression analysis was performed on the FA images, using trait anxiety as a regressor (Supplementary Figure 2).



Supplementary Figure 1. Statistical map showing the magnitude of the correlation between FA values of the amygdala-vmPFC pathway and trait anxiety in sagittal and coronal slices. Color bars indicate *t*-values. The strongest correlation between FA values and trait anxiety was located within the posterior region of the identified amygdala-vmPFC pathway, adjacent to the ventral striatum (MNI -10, 12, -11, $t_{(18)} = 4.12$). In general, the magnitude of the correlation was stronger in the posterior region as opposed to the anterior region of the amygdala-vmPFC pathway, which is in accordance with the whole-brain voxelwise regression analysis (see Supplementary Figure 2).



Supplementary Figure 2. Statistical map showing fractional anisotropy (FA) voxels that are negatively correlated with trait anxiety across the whole brain ($p < 0.05$, corrected for multiple comparisons over the frontal and temporal white matter tissue) in sagittal and coronal slices. Color bars indicate *p*-values. Voxels identified from this analysis were primarily overlapping with the voxels within an amygdala-vmPFC pathway supporting the anatomical specificity of the relationship between the identified amygdala-vmPFC pathway and trait anxiety. No significant voxels were identified outside of the *a priori* frontal or temporal white matter.