SUPPLEMENTARY MATERIAL

SUPPLEMENTARY RESULTS

Self-reported nervousness

For the whole experiment, the 2 (phase) x 3 (stimulus) x 2 (group) mixed design ANOVA on self-reported trial-by-trial nervousness ratings yielded main effects of each of the three factors, group, $F(1,24) = 5.390$, $p = .029$, partial $\eta^2 = .183$, phase, $F(1,24) = 5.835$, $p = .024$, partial $\eta^2 = .196$, and stimulus, $F(1.515,36.352,) = 29.983$, $p < .001$, partial $\eta^2 = .555$. There were also significant two-way interactions between phase and stimulus, $F(2,48) = 4.792$, $p = .013$, partial $\eta^2 = .166$, between stimulus and group, $F(1.515, 36.352) = 3.990$, $p = .037$, partial $\eta^2 = .143$, and between phase and group, $F(1,24) = 4.378$, $p = .047$, partial $\eta^2 = .154$. The three-way interaction was not significant, $p = .807$.

fMRI findings for the [CS+ > CS-] contrast

We analysed the fMRI data for the [CS+ > CS-] contrast first to probe for a group difference (i.e., main effect of anxiety group), second to look for regions where activation for this contrast correlated with age across the whole group, and third to examine whether there were group differences in age correlation. For the first analysis, the non-anxious group showed more robust activation than the anxious group in several regions including medial PFC (paracingulate), left dorsal PFC, and a region incorporating the right vlPFC and insula extending into the right striatum.

Second, across the whole group, significant correlations between activation for the [CS+ > CS-] contrast and age were found in the left parietal lobe and left precentral gyrus. Third, there were no regions showing group differences in age correlation for this contrast.

SUPPLEMENTARY TABLES & FIGURES

Table S1: Correlations between age (in months) and percent signal change for the CS+ and control stimuli separately for each cluster in which a correlation with age was found across the whole group for the [CS+ > control cue] contrast. Note that although the correlations are not significant, the neural data for the [CS+ > control] contrast indicated a significant correlation with age in each of these clusters.

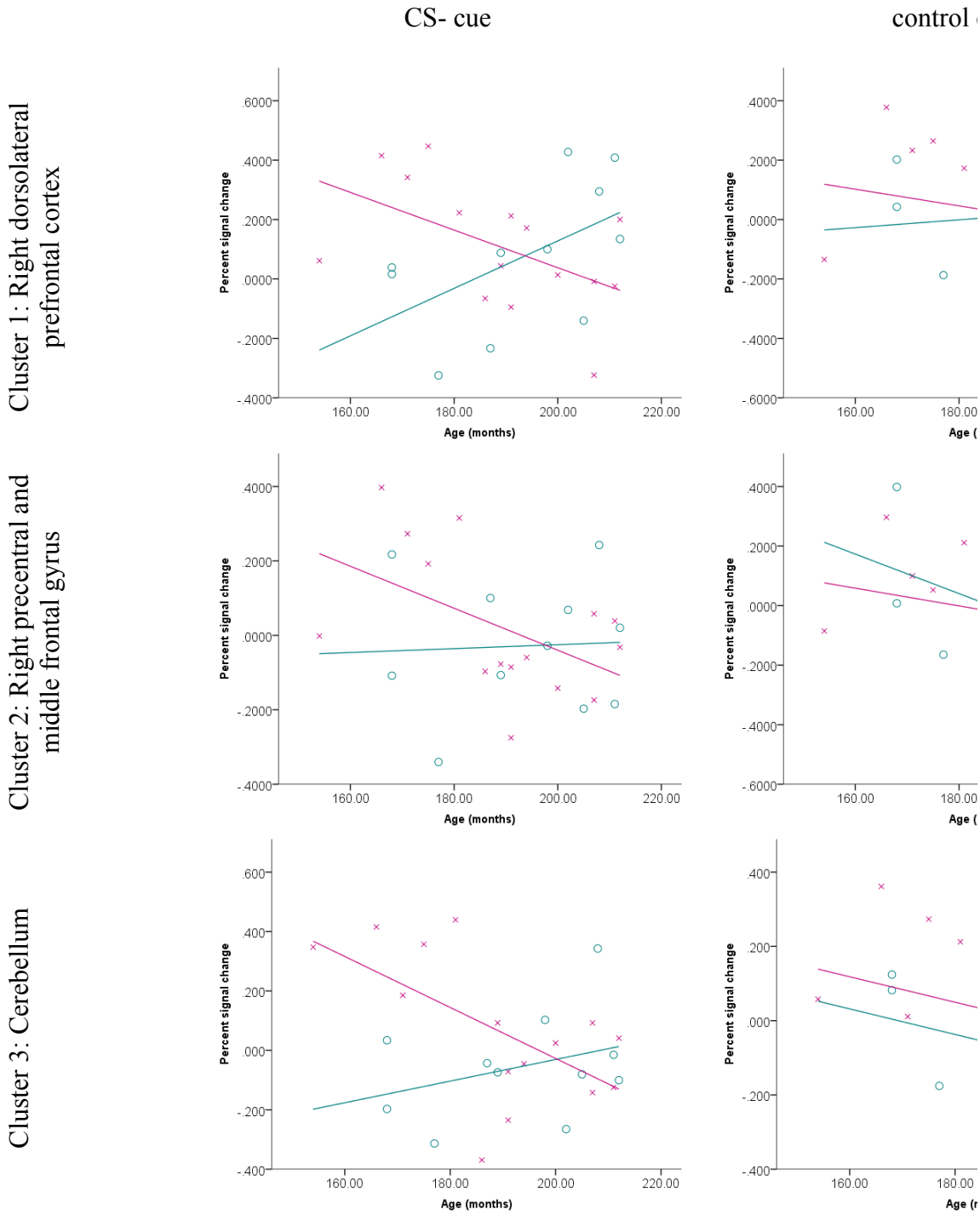
	Correlation[a] with age for CS+	**Correlation[a] with age for control cue**
Cluster 1: Right superior temporal and middle temporal gyrus, extending back to the posterior supramarginal gyrus and angular gyrus	r = .290, p = .151	r = -.141, p = .492
Cluster 2: Left dlPFC extending into insula and left putamen	r = .263, p = .194	r = -.106, p = .606
Cluster 3: Right dlPFC	r = .182, p = .372	r = -.270, p = .182
Cluster 4: Right insula/operculum extending into putamen/caudate	r = .200, p = .328	r = -.196 p = .337
Cluster5: Precuneus cortex, right lateral occipital cortex	r = .307, p = .127	r = -.166, p = .417
Cluster 6: Bilaterally: middle frontal and superior frontal gyri, precentral gyri, together with cingulate and paracingulate gyri	r = .032, p = .876	r = -.346, p = .083

[a]*Note that the percent signal change values are mean values across the whole of the cluster, functionally defined, and so the correlations are indicative of the direction of the effect rather than unbiased measures of effect size*

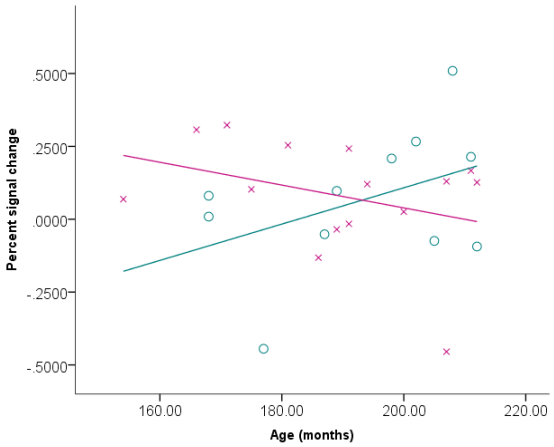
Table S2: Correlation between age (in months) and percent signal change for the CS- and control stimuli separately for each cluster in which a group difference in correlation with age was found for the [CS- > control cue] contrast. Note that although several of the correlations are not significant, the neural data for the [CS- > control] contrast indicated a significant group difference in correlation with age in each of these clusters, with the correlation in the non-anxious group being more positive than that in the anxious group in each case.

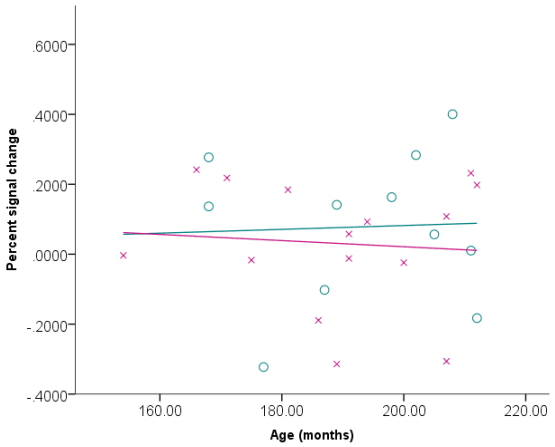
	Correlation[a] with age for CS-		**Correlation[a] with age for control**	
	Healthy control	**Anxious**	**Healthy control**	**Anxious**
Cluster 1: Right dorsolateral prefrontal cortex	r = .436, p = .180	r = -.382, p = .160	r = -.234, p = .488	r = .135, p = .632
Cluster 2: Right precentral and middle frontal gyrus	r = .358, p = .279	r = -.421, p = .118	r = -.007, p = .985	r = -.159, p = .572
Cluster 3: Cerebellum	r = .090, p = .792	r = -.490, p = .063	r = -.395, p = .229	r = -.159, p = .570
Cluster 4: Left dorsal prefrontal cortex extending into paracingulate cortex	r = .639, p = .034	r = -.536, p = .040	r = .052, p = .879	r = -.135, p = 631
Cluster 5: Left insula extending into left putamen/caudate	r = .418, p = .200	r = -.344, p = .209	r = .042, p = .903	r = -.083, p = .770
Cluster 6: Right insula, extending forwards into the lateral OFC and frontal pole and temporal pole	r = .332, p = .319	r = -.606, p = .017	r = -.371, p = .262	r = -.348, p = .204
Cluster 7: Lateral occipital cortex	r = .048, p = .889	r = -.505, p = .055	r = -.499, p = .118	r = -.272, p = .327
Cluster 8: Bilateral precuneus cortex and (predominantly on the right) lateral occipital cortex extending forward into right superior parietal lobule.	r = .540, p = .086	r = -.526, p = .044	r = .104, p = .761	r = -.215, p = .441
Left amygdala (ROI analysis only)	r = .429, p = .188	r = -.249, p = .371	r = -.185, p = .587	r = -.202, p = .471

[a]*Note that the percent signal change values are mean values across the whole of the cluster, functionally defined, and so the correlations are indicative of the direction of the effect rather than unbiased measures of effect size*

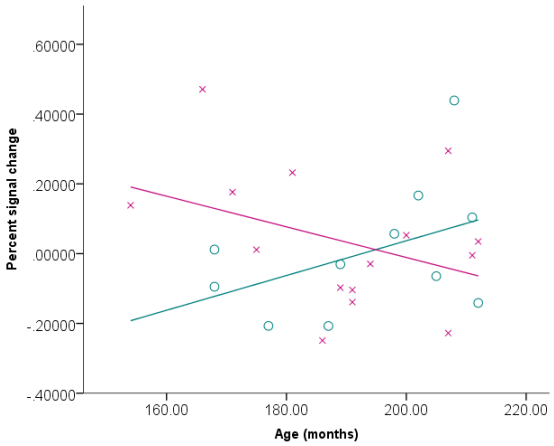

CS- cue
control
Cluster 1: Right dorsolateral prefrontal cortex
Cluster 2: Right precentral and middle frontal gyrus
Cluster 3: Cerebellum
Percent signal change
Age (months)
160.00
180.00
200.00
220.00

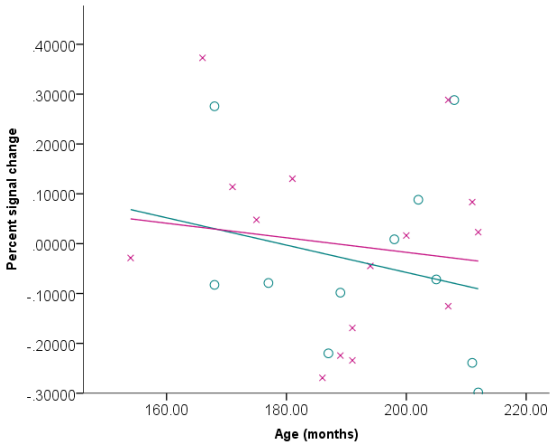
Cluster 4: Left dorsal prefrontal cortex extending into paracingulate cortex



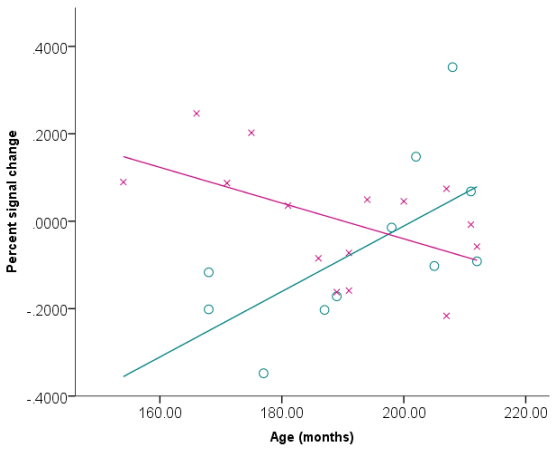


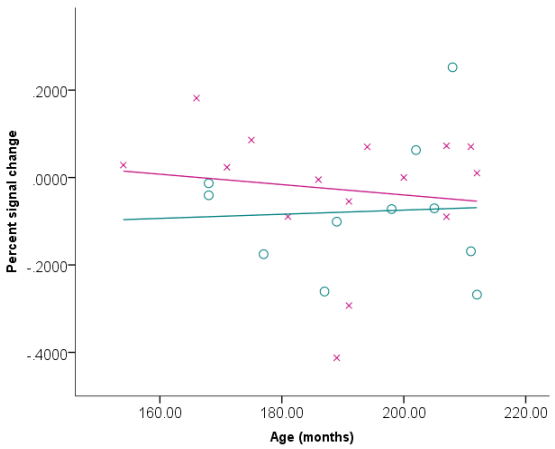
Cluster 5: Left insula extending into left putamen/caudate



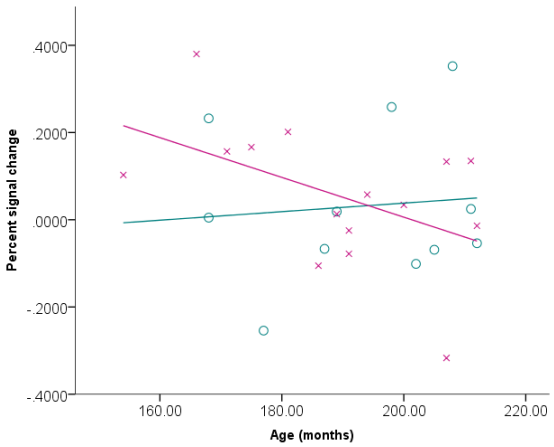


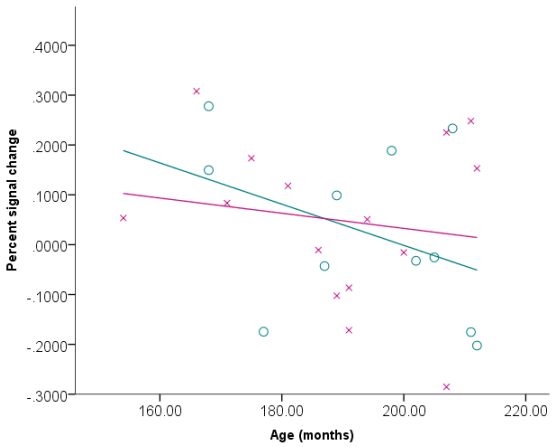
Cluster 6: Right insula, extending forwards into the lateral OFC and frontal pole and temporal pole





Cluster 7: Lateral occipital cortex





Cluster 8: Bilateral precuneus cortex and (predominantly on the right) lateral occipital cortex extending forward into right superior parietal lobule

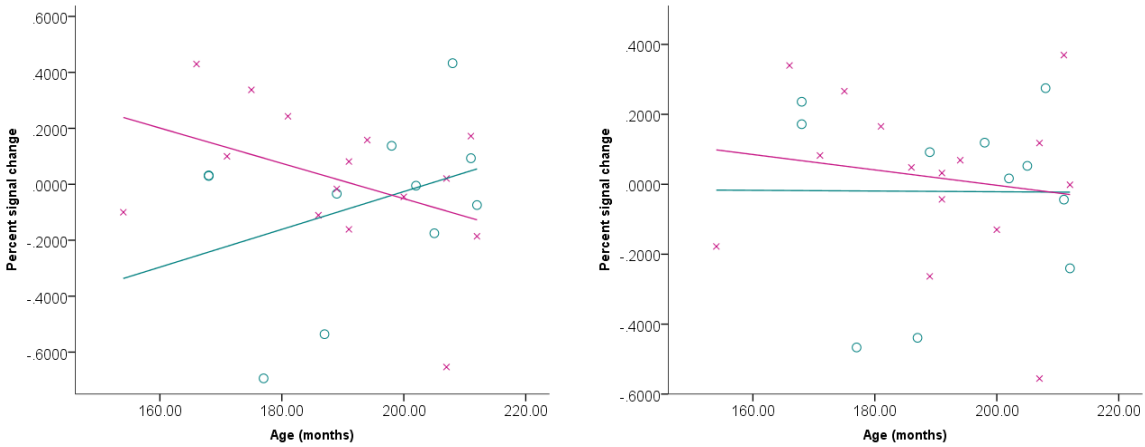


Figure S1: Scatterplots showing percent signal change against age for the healthy (o; cyan) and anxious (x; pink) groups for the CS- (left) and control (right) cues for each cluster from the whole brain analysis.