Supplement 1

Participant Recruitment and Screening. Adult Health and Behavior (AHAB) Project participants were recruited by mass mailings to residents of Allegheny County, PA and were tested between February 2002 and August 2004. Participants in the present study were a subset of AHAB participants who completed a carotid artery ultrasound imaging protocol followed by a neuroimaging protocol (see Methods and Materials). As determined by clinic and laboratory assessments, none of the participants had (1) a history of cardiovascular disease or surgery, including a prior myocardial infarction, angioplasty, or revascularization; (2) a prior stroke or history of cerebrovascular disease; (3) a neurological disorder, prior convulsions, or a concussion involving a loss of consciousness; (4) chronic kidney or liver disease; (5) cancer; (6) insulin-dependent diabetes or a fasting glucose > 124 mg/dL; (7) resting systolic/diastolic blood pressures ≥ 180/110 mm Hg; (8) any condition requiring the use of psychotropic, lipid-lowering, glucocorticoid, or cardiovascular (e.g., antihypertensive) medications; or (9) a DSM-IV Axis-I psychiatric disorder, determined by the Structured Clinical Interview, non-patient edition (1). No participants were on weight-loss medications, and no women were pregnant, lactating, or experiencing menstrual irregularities. Participants' average general intellectual ability score was 118.1 (SD 9.4; range 94-139), determined by the vocabulary and matrix reasoning subtests of the Wechsler Abbreviated Scale of Intelligence (2).
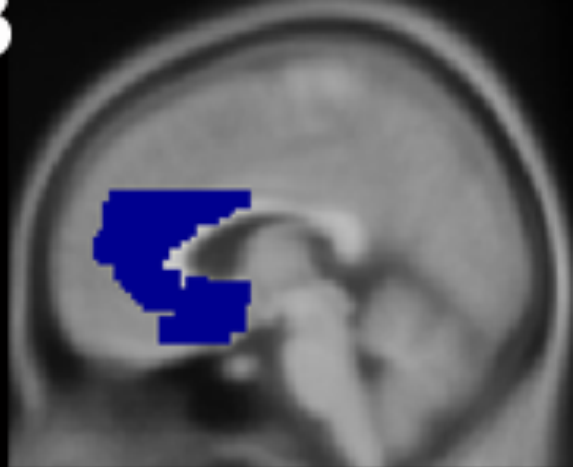
References

1. First MB, Spitzer RL, Gibbon M, Williams JBW (1996): Structured Clinical Interview for DSM-IV Axis I Disorders, research version, non-patient edition. New York: New York State Psychiatric Institute, Biometrics Research Department.

2. Wechsler D (1997): Wechsler Adult Intelligence Scale. San Antonio, TX: Psychological Corporation.

Dorsal / Ventral
Amygdala

Anterior Cingulate
Cortex

Supplement 2. ROI analyses were executed for regression models testing the covariation between carotid IMT and individual differences in dorsal and ventral amygdala reactivity and functional connectivity between the amygdala and anterior cingulate cortex (ACC). ***A***, Illustrations of dorsal (blue) and ventral (red) ROI masks. These masks were created using MarsBar (1). The dorsal amygdala mask was bounded by MNI coordinates *x* +/-21, *y* -4, *z* -13, with widths of 14mm, 8mm and 10mm along the *x*-, *y*-, and *z*-axes, respectively (volume = 1920mm^3 in each hemisphere). The ventral amygdala mask was bounded by MNI coordinates *x* +/-21, *y* -3, *z* -23, with widths of 14mm, 6mm, and 6mm along the *x*-, *y*-, and *z*-axes, respectively (volume = 1024mm^3 in each hemisphere). Note that the boundary widths reflect totals for the ROI masks along each axis, centered at the MNI coordinate anchoring each axis (i.e., with *x* = 21 and width = 14mm, the range of coordinates extends from *x* = 14 to *x* = 28). A larger volume of the dorsal amygdala mask was used to encompass the extended projection of the central nucleus to the substantia inominata and nucleus basalis of Meynert (PJ Whalen, personal communication to AR Hariri). ***B***, Illustration of the ACC ROI mask. This ACC mask was created with the Automated Anatomical Labeling system, as implemented in the Wake Forest University Pick-Atlas SPM toolbox (2, 3) (volume = 54,184mm^3).

References

1. Brett M, Anton J, Valabregue R, Poline J (2002): Region of interest analysis using an SPM toolbox. *8th International Conference on Functional Mapping of the Human Brain*. Sendai, Japan.
2. 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.
3. Tzourio-Mazoyer N, Landeau B, Papathanassiou D, Crivello F, Etard O, Delcroix N, et al. (2002): Automated anatomical labeling of activations in SPM using a macroscopic anatomical parcellation of the MNI MRI single-subject brain. *NeuroImage* 15:273-289.

< Left - Right >

L Amyg.
Local Maxima
-22, -2, -18
$t = 8.69$ >

R Amyg.
Local Maxima
-22, -2, -14
< $t = 8.71$
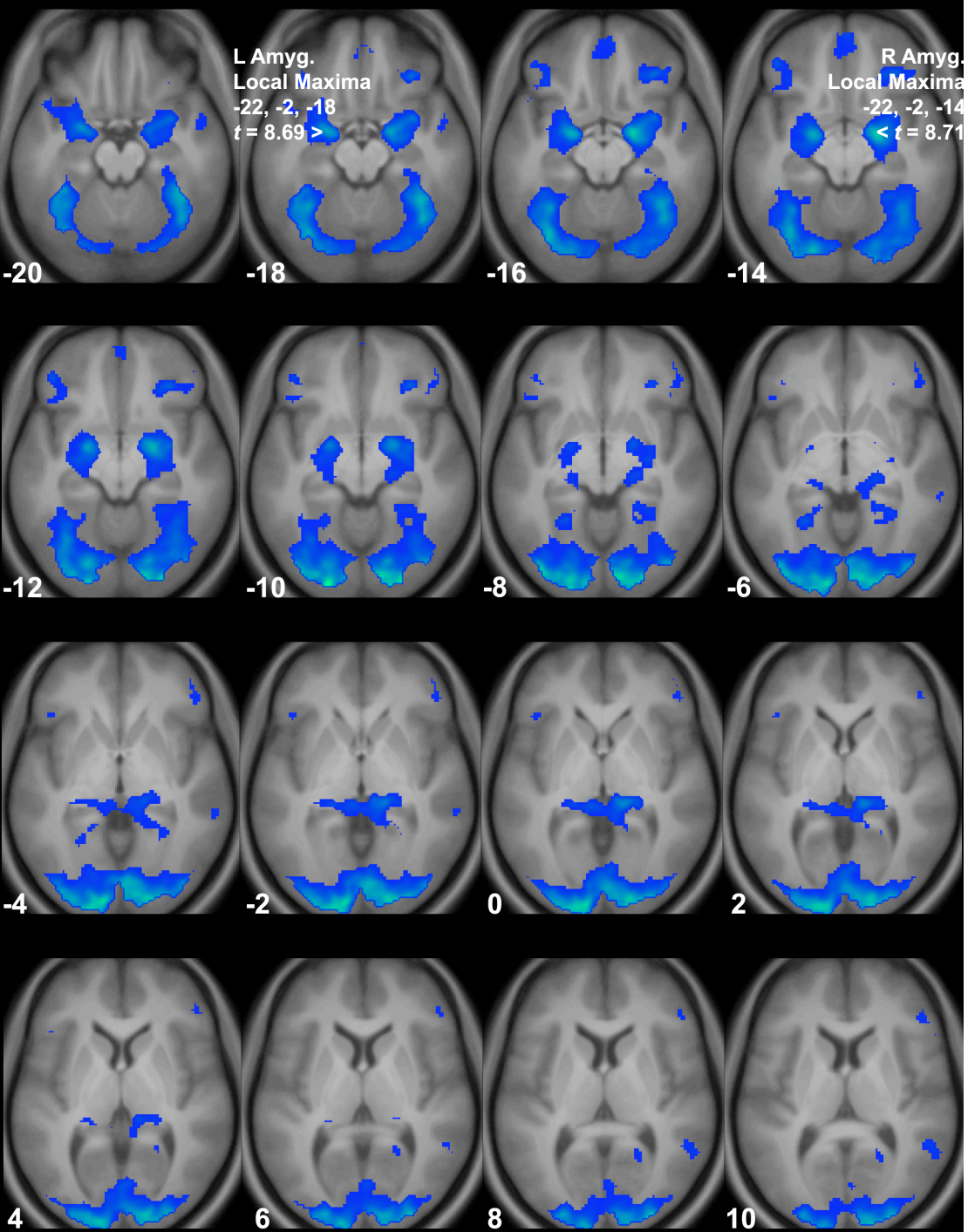
2.81 ▬ t-value ▬ 14.10

Faces > Shapes

Supplement 3. Parametric maps profiling areas of BOLD activation determined by the 'faces > shapes' contrast in a whole-brain mixed-effects analysis. Maps are displayed at a corrected voxel-wise threshold ($p_{FDR} < .$ 05), with an extent threshold of $k = 20$. Maps are superimposed onto axial slices of an MNI-transformed template derived from the study sample. The table in Supplement 4 provides Brodmann areas, MNI coordinates, and t-values for voxels of peak activation (global maxima) profiled in this map. Values in the lower left corner of each slice correspond to z coordinates in MNI space.

Supplement 4

Table. Areas of BOLD activation identified by the 'faces > shapes' contrast in a whole-brain mixed-effects analysis employing a

corrected false discovery rate threshold of $p < .05$ and extent threshold of $k = 20$.

Side	Region	BA	MNI Coordinates			t-value	voxels
			x	y	z		
L	Inferior occipital gyrus (parastriate area)	17/18	-22	-94	-10	14.08	10,894
R	Inferior/middle frontal gyrus	46	44	24	24	7.21	1340
L	Inferior frontal gyrus (ventrolateral orbitofrontal cortex)	11/47	-44	40	-14	6.05	245
L	Inferior frontal gyrus	46	-44	16	26	5.25	351
R	Medial frontal gyrus (ventromedial prefrontal cortex)	10/12	2	60	-14	5.07	133
R	Superior temporal/angular gyrus	19/39	48	-62	20	4.34	83
R	Middle temporal gyrus	21	54	-46	10	4.32	137
R	Middle temporal gyrus / temporal pole	21/38	50	0	-22	4.13	81
R	Posterior cingulate cortex	30	22	-52	8	3.82	41
R	Middle temporal gyrus	21	62	-36	-4	3.74	27

Note. Next to each left (L) and right (R) region and approximate Brodmann area (BA) are MNI coordinates, *t*-values for voxels

of peak activation, and corresponding cluster sizes.
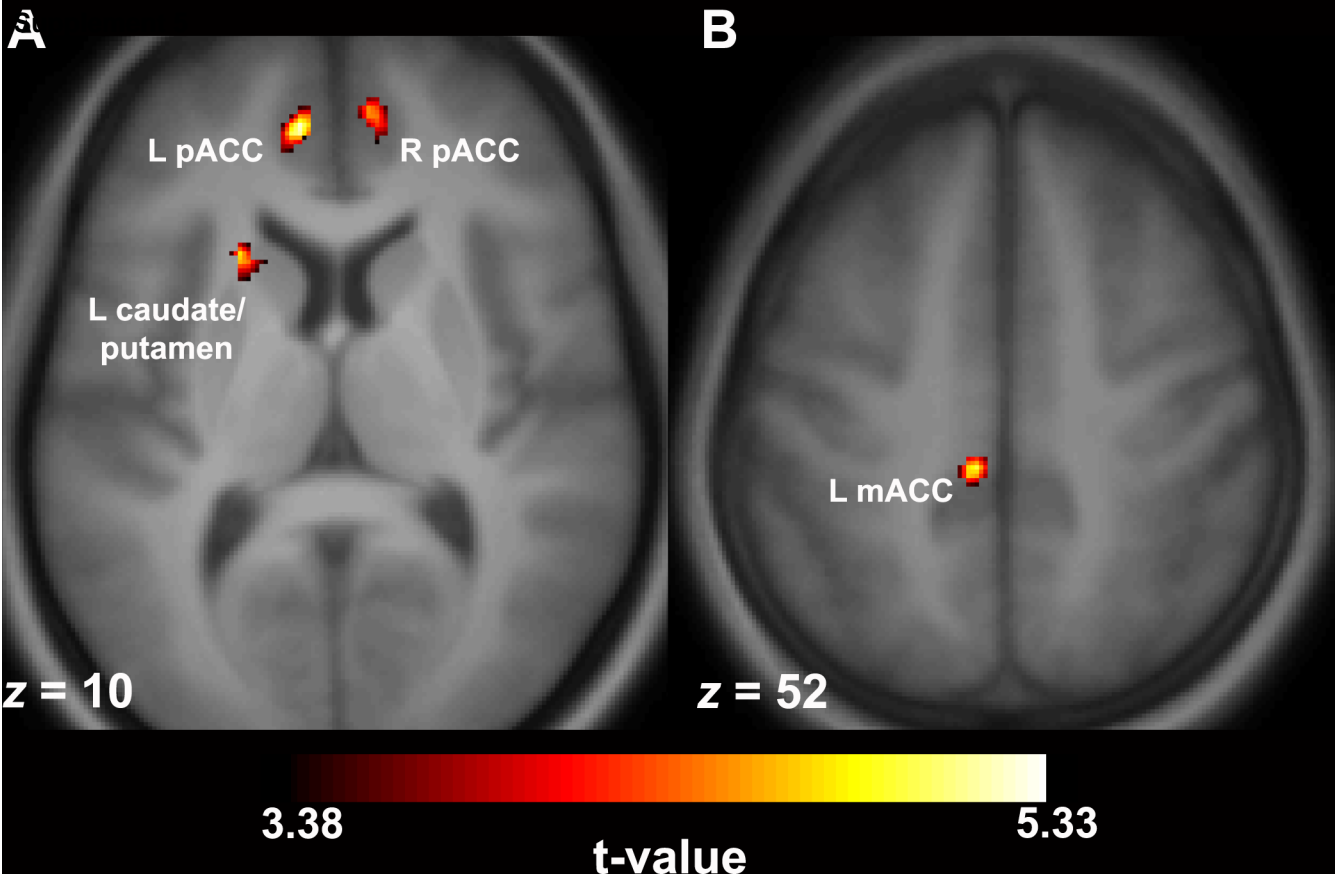
Supplement 5. Statistical parametric maps from a whole-brain regression analysis profiling areas where functional connectivity with the right dorsal amygdala covaried with carotid IMT. Maps are displayed at an uncorrected threshold (*p* < .001), with an extent threshold of *k* = 20. *A*, Areas profiled include the same left perigenual anterior cingulate (L pACC: *x, y, z*: -8, 50, 12, *t*[30] = 5.33, *z* = 4.44, *k* = 98) and right pACC (R pACC: 12, 50, 8, *t*[30] = 4.56, *z* = 3.94, *k* = 41) areas shown in Figure 3 of the manuscript, which provides corresponding correlation coefficients for carotid IMT and extracted connectivity values. Also profiled in *A* is a striatal area at the border of the left (L) caudate and putamen (-22, 20, 10, *t*[30] = 4.78, *z* = 4.09, *k* = 42, *r* between carotid IMT and extracted connectivity values = .65, *p* < .001). *B*, Area profiled is the left posterior mid-cingulate cortex (L mACC: -6, -30, 52, *t*[30] = 4.95, *z* = 4.20, *k* = 36, *r* = .66, *p* < .001).