

SUPPLEMENTARY DATA

Supplementary Table 1. Associations of regional DA D2R BP_{ND} with individual metabolic measures by region of interest.

	BMI		OGTT S _I		Insulin		Leptin		Acyl ghrelin	
	r	P-value	r	P-value	r	P-value	r	P-value	r	P-value
Caudate	0.603	0.003	-0.525	0.018	0.398	0.066	0.629	0.002	-0.665	0.001
Putamen	0.496	0.019	-0.473	0.035	0.279	0.208	0.483	0.023	-0.624	0.002
Ventral Striatum	0.499	0.018	-0.613	0.004	0.222	0.321	0.529	0.011	-0.842	<0.001
Hypothalamus	0.441	0.040	-0.308	0.186	0.231	0.301	0.519	0.013	-0.472	0.026
Amygdala	0.343	0.118	-0.156	0.512	0.161	0.475	0.279	0.209	-0.569	0.006
Thalamus	0.531	0.011	-0.557	0.011	0.366	0.094	0.446	0.038	-0.264	0.235
Temporal lobe	0.493	0.020	-0.326	0.161	0.533	0.011	0.447	0.037	-0.578	0.005
Substantia Nigra	0.334	0.128	-0.425	0.061	-0.031	0.892	0.341	0.120	-0.303	0.170

Note: P values ≤ 0.006 were interpreted as significant to account for family-wise error.

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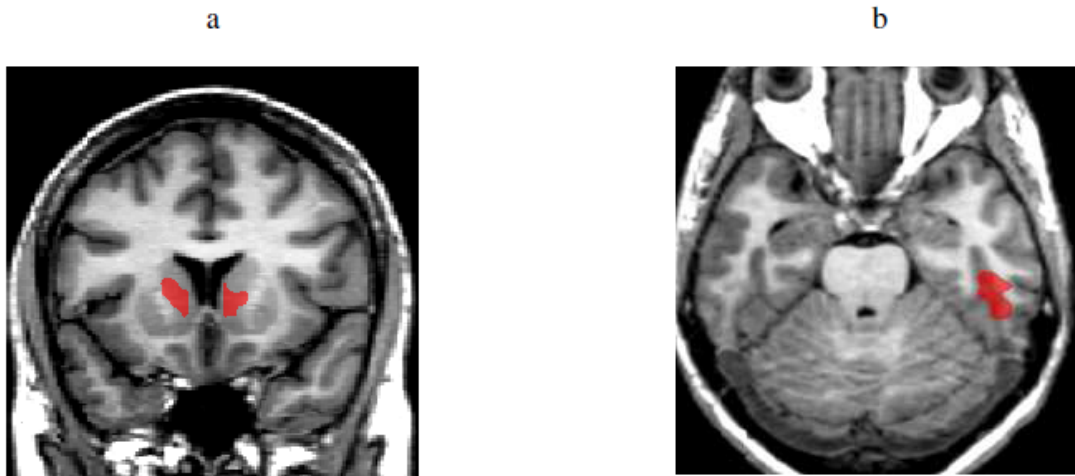
Supplementary Table 2. Association regional D2R BP_{ND} with insulin sensitivity and fasting insulin and leptin levels adjusted for BMI. *Standardized coefficient

Region	Model		BMI		Covariate	
	R	P value	β^*	P value	β^*	P value
					SI	
Caudate	0.610	0.019	0.458	0.124	-0.188	0.515
Putamen	0.517	0.071	0.310	0.325	-0.245	0.434
Ventral Striatum	0.617	0.017	0.099	0.729	-0.540	0.072
Hypothalamus	0.438	0.164	0.457	0.173	0.027	0.934
Amygdala	0.367	0.292	0.489	0.159	0.203	0.548
Thalamus	0.667	0.007	0.539	0.059	-0.162	0.552
Temporal lobe	0.505	0.082	0.569	0.082	0.092	0.769
Substantia Nigra	0.430	0.176	0.088	0.788	-0.361	0.279
					Insulin	
Caudate	0.603	0.014	0.214	0.023	0.013	0.958
Putamen	0.499	0.066	0.544	0.051	-0.073	0.782
Ventral Striatum	0.510	0.057	0.592	0.034	-0.144	0.585
Hypothalamus	0.447	0.121	0.503	0.078	-0.095	0.727
Amygdala	0.353	0.282	0.413	0.160	-0.107	0.708
Thalamus	0.532	0.043	0.506	0.062	0.038	0.884
Temporal lobe	0.567	0.025	0.254	0.318	0.368	0.155
Substantia Nigra	0.467	0.097	0.612	0.033	-0.428	0.125
					Leptin	
Caudate	0.636	0.007	0.211	0.587	0.442	0.261
Putamen	0.505	0.061	0.316	0.468	0.203	0.640
Ventral Striatum	0.533	0.042	0.140	0.741	0.404	0.347
Hypothalamus	0.521	0.049	-0.089	0.835	0.598	0.173
Amygdala	0.348	0.294	0.449	0.345	-0.119	0.800
Thalamus	0.533	0.042	0.631	0.148	-0.114	0.789
Temporal lobe	0.494	0.070	0.452	0.306	0.046	0.916
Substantia Nigra	0.348	0.293	0.148	0.753	0.210	0.656

Note: P values ≤ 0.006 were interpreted as significant to account for family-wise error.

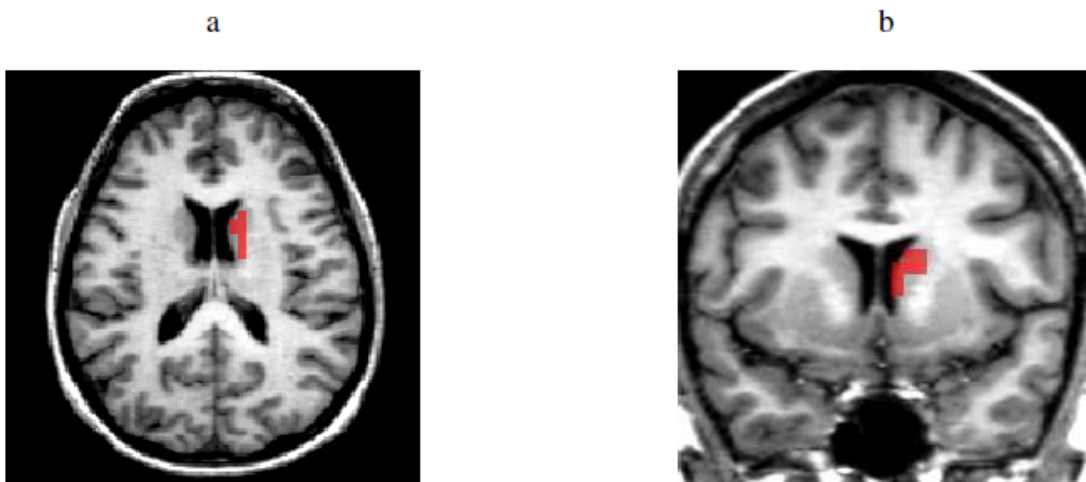
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Supplementary Figure 1. DA D2R BP_{ND} and BMI.



MRI images showing significant clusters from parametric image analyses of DA D2R BP_{ND} and correlation with BMI. Two significant clusters are seen in coronal view involving the ventral caudate bilaterally (a) and a portion of the left temporal lobe along the collateral sulcus seen in axial view (b).

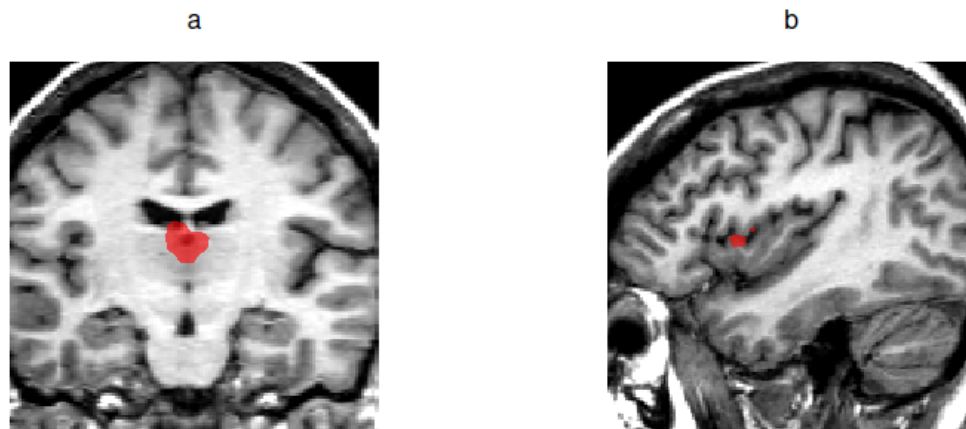
Supplementary Figure 2. DA D2R BP_{ND} and insulin sensitivity.



MRI images showing a significant cluster from parametric image analyses of DA D2R BP_{ND} that negatively correlated with insulin sensitivity from OGTT. The cluster is seen involving the left caudate as shown on axial (a) and coronal view (b).

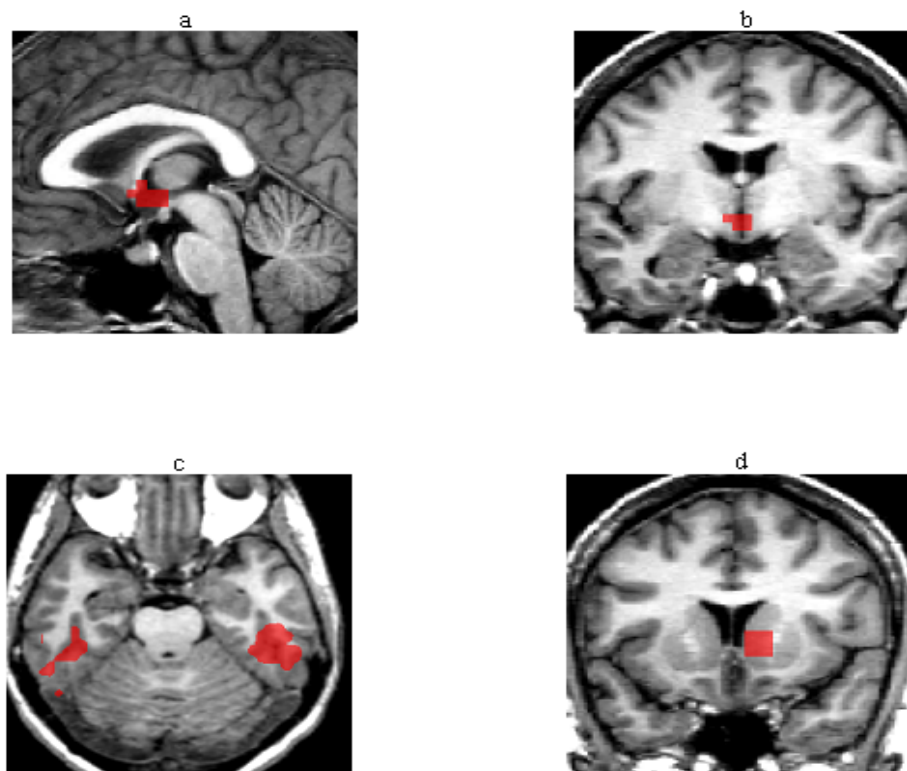
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Supplementary Figure 3. DA D2R BP_{ND} and fasting insulin levels.



MRI images showing significant clusters from parametric image analyses of DA D2R BP_{ND} correlation with fasting insulin levels involving the dorsal medial thalamus in coronal view (a) and a portion of the right superior insular cortex in sagittal view (b).

Supplementary Figure 4. DA D2R BP_{ND} and fasting leptin levels.



MRI images showing significant clusters from parametric image analyses of DA D2R BP_{ND} correlation with fasting leptin levels. Three significant clusters were identified: correlations involving the region of the hypothalamus seen on sagittal view (a) and coronal view (b). Leptin also correlated with BP_{ND} in the regions of the bilateral collateral sulci (c) and a cluster involving the left ventral striatum and caudate (d).

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Supplementary Figure 5. Dot plot of DA D2R BP_{ND} in caudate for lean and obese.

