

Supplemental Material Table 1. Comparison of regional brain activation in response to food > non-food stimuli after a period of restricted sleep.¹

Anatomical Region	Brodmann Area	Clusters (voxels)	Z score	Montreal Neurological Institute Coordinates		
				x ^a	y ^b	z ^c
Cuneus	18	10	2.52	-26	-72	12
Inferior Frontal Gyrus	13	46	2.81	38	12	-10
Inferior Frontal Gyrus	47	82	2.86	-34	20	-2
Superior Temporal Gyrus	47		2.58	-48	14	-4
*Inferior Parietal Lobule	7/40	1065	3.88	-36	-64	46
*Precuneus	19		3.14	-24	-84	42
*Inferior Parietal Lobule	39/40	2004	3.75	40	-68	42
*Precuneus	39		3.59	30	-62	42
Inferior Parietal Lobule	40	12	2.51	-58	-52	40
Inferior Temporal Gyrus	20/21	23	2.82	-48	0	-38
Insula	13	27	2.61	-36	4	-6
*Insula	13	158	3.06	-42	-10	10
Lateral Ventricle		38	2.78	34	-60	0
Lateral Ventricle		58	2.80	24	-34	-2
Lentiform nucleus/Putamen		39	2.71	-20	4	4
*Lingual Gyrus	18	5943	4.44	16	-82	-12
*Middle Occipital Gyrus	18		3.92	14	-96	10
*Middle Frontal Gyrus	8/10	10389	4.48	-50	10	46

*Cingulate Gyrus	23		4.40	4	-36	28
*Middle Frontal Gyrus	10		4.06	-34	54	4
*Middle Frontal Gyrus	11	150	4.26	-28	36	-16
*Middle Temporal Gyrus	21	143	3.09	64	-34	-12
Paracentral Lobule	6	17	2.50	6	-36	62
Parahippocampal gyrus		31	2.79	32	-10	-14
Postcentral Gyrus	40	45	2.83	-64	-20	14
*Precentral Gyrus	44/45	96	3.00	-58	12	10
Inferior Frontal Gyrus	44		2.47	-60	6	20
Precuneus	7	74	2.69	6	-64	38
Precuneus	7	26	2.56	14	-72	38
*Pyramis		266	3.80	8	-68	-32
Nodule			2.88	-4	-62	-32
Culmen			2.88	2	-48	-26
*Superior Frontal Gyrus	9/10	231	3.39	-22	46	42
Medial Frontal Gyrus	9		2.58	-8	42	28
Superior Frontal Gyrus	9	23	2.56	22	46	42
Superior Occipital Gyrus	19	12	2.46	-30	-76	24
Thalamus/Pulvinar		10	2.47	-16	-32	10

¹ Contrasts for food > nonfood were performed for each subject and averaged, n = 26.

Thresholds for active brain regions were set at a cluster extent of at least 10 voxels and a voxel-level $P < 0.01$. Statistical analyses were performed using SPM5. * Regions with voxel-level $P \leq 0.001$.

a: Positive x-coordinate indicates right hemisphere

b: Positive y-coordinate indicates anterior to commissure landmark

c: Positive z-coordinate indicates above anterior-posterior commissure line

Supplemental Material Table 2. Comparison of regional brain activation in response to food > nonfood stimuli after a period of restricted sleep > habitual sleep.¹

Anatomical Region	Brodmann Area	Clusters (voxels)	Z score	Montreal Neurological Institute Coordinates		
				x ^a	y ^b	z ^c
Caudate/Nucleus accumbens		14	2.57	-12	14	-10
Cingulate Gyrus		18	2.78	-10	-10	32
Corpus Callosum ¹		28	2.60	6	-34	14
Corpus Callosum		12	2.59	8	-18	26
Culmen		19	2.72	-10	-68	-8
*Inferior Frontal Gyrus	44	394	3.42	50	-2	22
Middle Frontal Gyrus	9		2.65	50	24	36
*Inferior Frontal Gyrus	46	150	3.35	48	40	12
*Inferior Frontal Gyrus	10	162	3.21	-40	48	4
*Middle Frontal Gyrus	10		3.20	-40	56	2
Inferior Frontal Gyrus	47	119	2.95	-42	18	0
Inferior Frontal Gyrus	13/45/47	89	2.74	50	20	8
*Inferior Parietal Lobule	7/19	167	3.16	-36	-62	46
*Inferior Parietal Lobule	40	63	3.13	-58	-54	38
Insula	13	40	2.94	32	4	12
Inferior Frontal Gyrus			2.52	38	6	20
Insula	13	50	2.89	-36	-8	6

Clastrum	13		2.69	-32	0	6
Insula	13	21	2.63	-40	-26	14
Insula	13	13	2.58	-28	-18	22
*Lateral Ventricle/Corpus		55	3.08	-12	-26	26
Callosum						
Lentiform Nucleus/Putamen		46	2.92	28	-6	10
Lingual Gyrus	18	18	2.54	12	-74	-2
*Medial Frontal Gyrus	10	71	3.22	-18	68	-2
*Superior Frontal Gyrus	10		2.99	-26	64	-4
*Medial Frontal Gyrus	10	78	2.97	2	60	26
*Middle Frontal Gyrus	6	231	3.34	-18	-2	64
Superior Frontal Gyrus	6		2.87	-20	12	64
*Middle Frontal Gyrus	9	122	3.07	36	36	42
*Middle Frontal Gyrus	9	67	3.56	32	8	32
*Middle Frontal Gyrus	9	88	3.19	-34	36	42
Superior Frontal Gyrus	9		2.73	-22	48	40
Middle/Inferior Frontal Gyrus	8	75	2.83	-24	12	32
Middle Frontal Gyrus		50	2.82	30	40	-10
Middle Frontal Gyrus		17	2.77	20	-20	66
*Middle Occipital Gyrus	30	453	3.69	-28	-74	10
*Cuneus	18		3.12	-18	-80	14
Nucleus		24	2.93	12	14	-8
accumbens/Putamen						

*Paracentral Lobule	9	138	3.42	8	-36	64
Paracentral Lobule	5	31	2.69	-6	-48	60
*Precentral Gyrus	6	323	3.33	-48	0	50
*Middle Frontal Gyrus	6		3.16	-50	10	46
Inferior Frontal Gyrus	9		2.90	-48	8	38
Precentral Gyrus	44	50	2.97	-58	12	8
*Precuneus	19	160	3.79	-24	-84	42
Subcallosal Gyrus	34	13	2.86	-22	6	-16
*Superior Frontal Gyrus	8	180	3.62	6	32	50
*Superior Frontal Gyrus	10	111	3.09	8	70	2
Superior Frontal Gyrus	6	224	2.94	2	8	54
Superior Frontal Gyrus	6	190	2.86	24	4	54
Superior Frontal Gyrus	8	17	2.58	-22	28	56
Superior Frontal Gyrus	9	23	2.71	-12	50	26
*Superior Temporal Gyrus	22/42	214	3.29	-62	-28	12
*Superior Temporal Gyrus	22	48	3.08	58	-6	2
*Supramarginal Gyrus	40	592	3.31	52	-40	36
*Thalamus		306	3.41	-18	-36	10
*Thalamus		198	3.34	6	-10	6
*Transverse Temporal Gyrus	41	769	3.32	44	-22	10
*Insula	13		3.30	32	-30	20

¹ Contrasts for food > nonfood were performed for each subject and averaged, n = 26.

Thresholds for active brain regions were set at a cluster extent of at least 10 voxels and

a voxel-level $P < 0.01$. Following individual analyses, a paired t-test for group analysis was performed using the same statistical parameters to compare regional brain activity with food > nonfood for restricted sleep > habitual sleep. Statistical analyses were performed using SPM5. * Regions with voxel-level $P \leq 0.001$.

a: Positive x-coordinate indicates right hemisphere

b: Positive y-coordinate indicates anterior to commissure landmark

c: Positive z-coordinate indicates above anterior-posterior commissure line