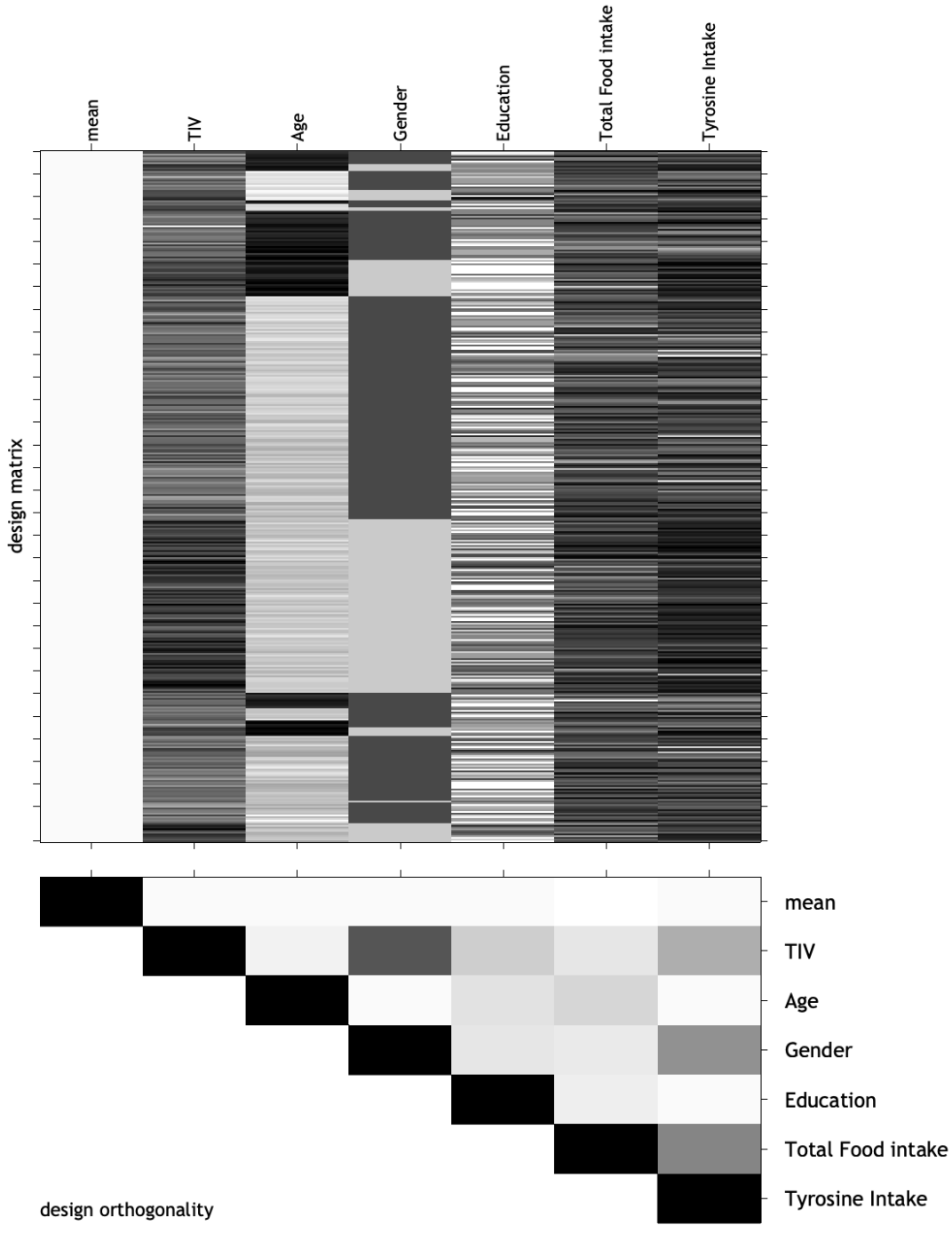
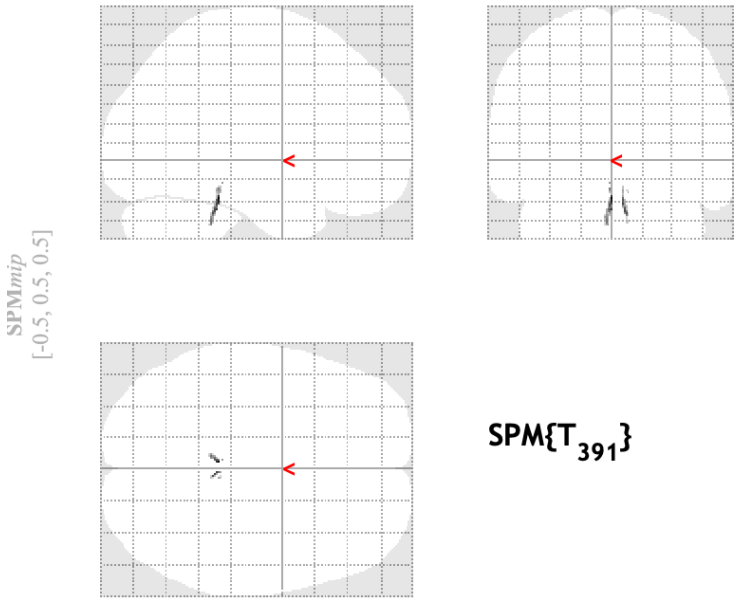
Statistical analysis: Design orthogonality

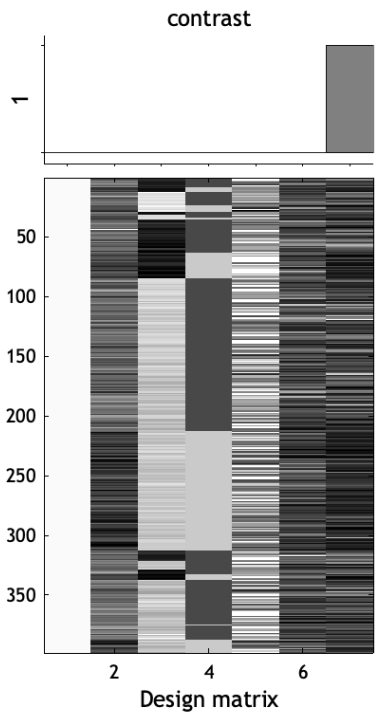


Measure : abs. value of cosine of angle between columns of design matrix
Scale : black - colinear (cos=+1/-1)
white - orthogonal (cos=0)
gray - not orthogonal or colinear

1 (masked [incl.] by LC_omnimask_1mm_sym_last_last.nii)



$SPM\{T_{391}\}$



SPMresults: ./Tyrosine_FoodIntake_last
Height threshold T = 2.335923 {p<0.01 (unc.)}
Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

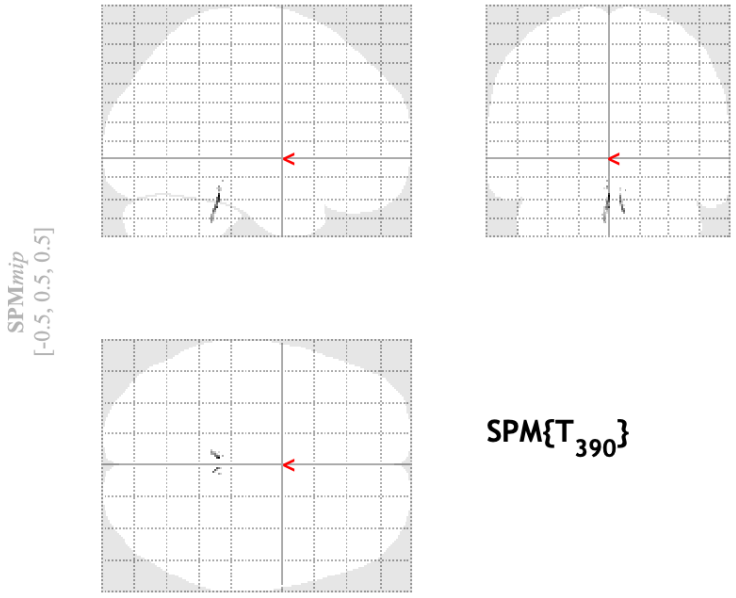
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	(Z_E)	p_{uncorr}	
1.000	5	0.999	0.119	79	0.003	0.633	0.593	5.02	4.93	0.000	-2 -36 -22
						1.000	0.999	3.64	3.61	0.000	-4 -40 -34
		1.000	0.441	42	0.021	1.000	0.999	4.18	4.13	0.000	4 -38 -24
		1.000	0.727	1	0.727	1.000	0.999	3.16	3.14	0.001	-2 -34 -14
		1.000	0.727	4	0.448	1.000	0.999	3.07	3.05	0.001	6 -36 -18
		1.000	0.727	3	0.516	1.000	0.999	2.72	2.71	0.003	6 -40 -34

table shows 3 local maxima more than 8.0mm apart

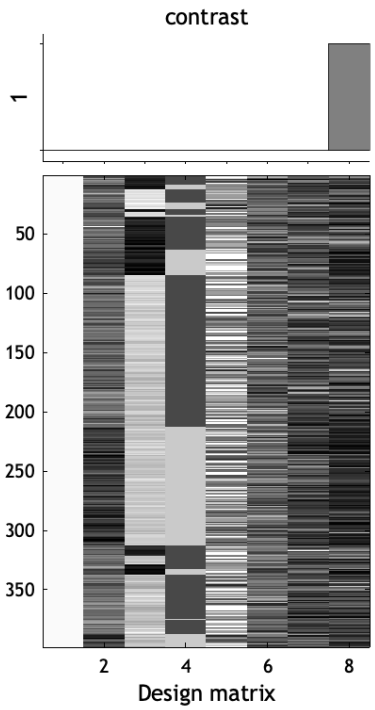
Height threshold: T = 2.34, p = 0.010 (1.000)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 7.399
Expected number of clusters, <c> = 2524.24
FWEp: 5.535, FDRp: Inf, FWEc: 209, FDRc: 111

Degrees of freedom = [1.0, 391.0]
FWHM = 3.0 3.0 2.9 mm mm mm; 3.0 3.0 2.9 {voxels}
Volume: 1752559 = 1752559 voxels = 63448.9 resels
Voxel size: 1.0 1.0 1.0 mm mm mm; (resel = 25.77 voxels)

1 (masked [incl.] by LC_omnimask_1mm_sym_last_last.nii)



$SPM\{T_{390}\}$



SPMresults:..gen,edu,TIV,TotFood,4thVentr
Height threshold T = 2.335947 {p<0.01 (unc.)}
Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	*c*	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	*T*	(Z_E)	p_{uncorr}	
1.000	7	1.000	0.361	48	0.015	0.969	1.000	4.72	4.65	0.000	-2 -36 -22
						1.000	1.000	3.20	3.18	0.001	-4 -40 -34
		1.000	0.727	20	0.095	1.000	1.000	3.85	3.81	0.000	4 -38 -24
		1.000	0.727	4	0.447	1.000	1.000	3.20	3.18	0.001	-2 -36 -16
		1.000	0.727	2	0.602	1.000	1.000	3.03	3.01	0.001	6 -36 -18
		1.000	0.727	1	0.727	1.000	1.000	2.92	2.91	0.002	-2 -34 -14
		1.000	0.727	2	0.602	1.000	1.000	2.56	2.55	0.005	4 -36 -18
		1.000	0.727	1	0.727	1.000	1.000	2.42	2.41	0.008	-4 -36 -18

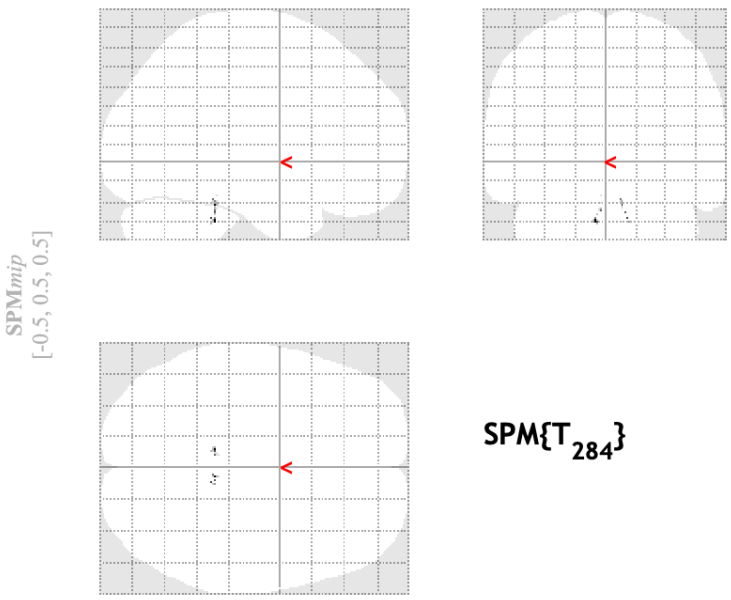
table shows 3 local maxima more than 8.0mm apart

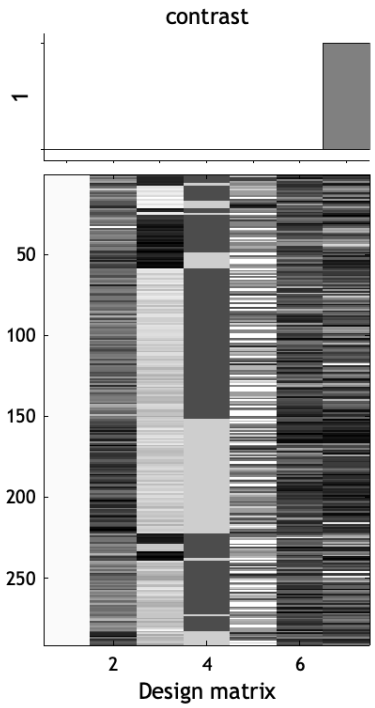
Height threshold: T = 2.34, p = 0.010 (1.000)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 7.370
Expected number of clusters, <c> = 2534.02
FWEp: 5.536, FDRp: Inf, FWEc: 207, FDRc: 109

Degrees of freedom = [1.0, 390.0]
FWHM = 3.0 3.0 2.9 mm mm mm; 3.0 3.0 2.9 {voxels}
Volume: 1752559 = 1752559 voxels = 63700.2 resels
Voxel size: 1.0 1.0 1.0 mm mm mm; (resel = 25.67 voxels)

LC-Tyrosine Timpe Point 2 results

1 (masked [incl.] by LC_omnimask_1mm_sym_last_last.nii)





SPMresults:..ater_age,gen,edu,tiv,totfood
Height threshold T = 1.650237 {p<0.05 (unc.)}
Extent threshold k = 0 voxels

Statistics: ***p-values adjusted for search volume***

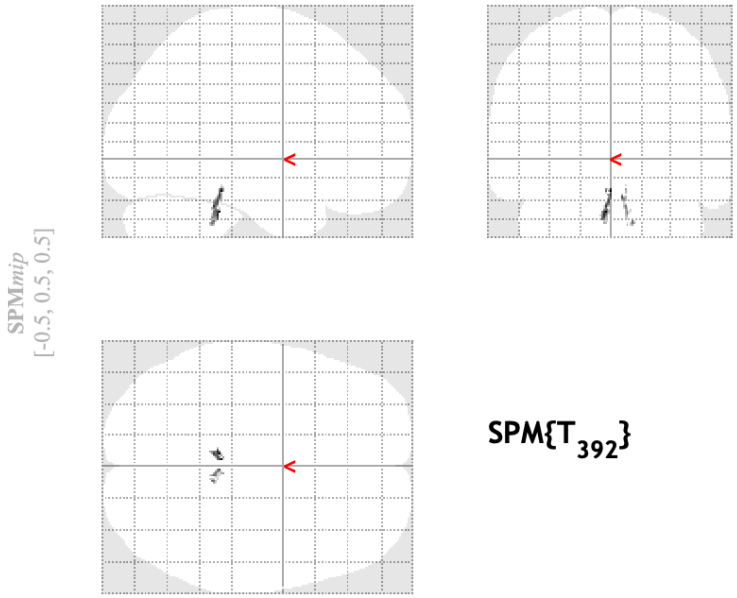
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	(Z_E)	p_{uncorr}	
1.000	9	1.000	0.879	12	0.508	1.000	1.001	2.53	2.52	0.006	-8 -38 -34
		1.000	0.879	12	0.508	1.000	1.001	2.50	2.49	0.006	6 -38 -24
		1.000	0.879	1	0.879	1.000	1.001	2.26	2.25	0.012	10 -40 -32
		1.000	0.879	1	0.879	1.000	1.001	2.17	2.17	0.015	8 -38 -28
		1.000	0.879	4	0.722	1.000	1.001	2.15	2.14	0.016	-4 -38 -28
		1.000	0.879	2	0.814	1.000	1.001	1.93	1.93	0.027	10 -38 -34
		1.000	0.879	1	0.879	1.000	1.001	1.81	1.81	0.035	-6 -38 -30
		1.000	0.879	1	0.879	1.000	1.001	1.69	1.70	0.045	-4 -36 -20
		1.000	0.879	1	0.879	1.000	1.001	1.69	1.70	0.045	-4 -36 -24

table shows 3 local maxima more than 8.0mm apart

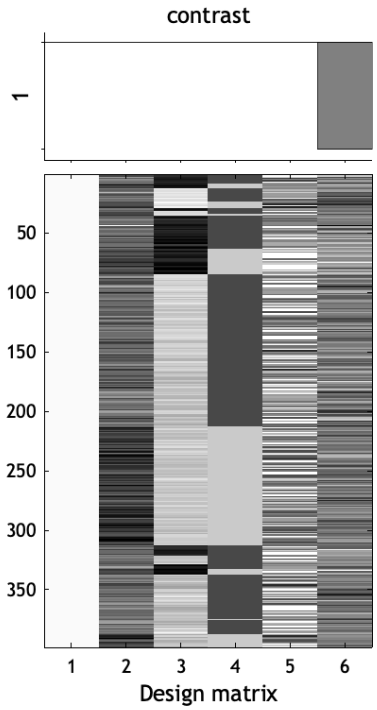
Height threshold: T = 1.65, p = 0.049 (1.000)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 28.565
Expected number of clusters, <c> = 3524.12
FWEp: 5.576, FDRp: Inf, FWEc: 820, FDRc: 458

Degrees of freedom = [1.0, 284.0]
FWHM = 3.1 3.1 3.0 mm mm mm; 3.1 3.1 3.0 {voxels}
Volume: 1742097 = 1742097 voxels = 54879.5 resels
Voxel size: 1.0 1.0 1.0 mm mm mm; (resel = 29.67 voxels)

-1 (masked [incl.] by LC_omnimask_1mm_sym_last_last.nii)



$SPM\{T_{392}\}$



SPMresults: ./BASEII_Analyses/BrainPAD_LC
Height threshold T = 2.335898 {p<0.01 (unc.)}
Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	(Z_E)	p_{uncorr}	
1.000	6	0.575	0.013	125	0.000	0.998	0.015	4.56	4.50	0.000	-2 -36 -18
						0.999	0.016	4.54	4.48	0.000	-4 -36 -30
		1.000	0.212	51	0.012	1.000	0.118	3.78	3.74	0.000	4 -36 -22
						1.000	0.210	3.50	3.47	0.000	6 -40 -30
		1.000	0.726	16	0.131	1.000	0.229	3.46	3.43	0.000	10 -40 -34
		1.000	0.726	3	0.514	1.000	0.483	3.02	3.00	0.001	6 -40 -36
		1.000	0.726	5	0.392	1.000	0.490	3.01	2.99	0.001	6 -34 -18
		1.000	0.726	1	0.726	1.000	0.912	2.45	2.44	0.007	6 -36 -16

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 2.34, p = 0.010 (1.000)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 7.347
Expected number of clusters, <c> = 2541.57
FWEp: 5.535, FDRp: 4.136, FWEc: 203, FDRc: 90

Degrees of freedom = [1.0, 392.0]
FWHM = 3.0 3.0 2.9 mm mm mm; 3.0 3.0 2.9 {voxels}
Volume: 1752559 = 1752559 voxels = 63898.8 resels
Voxel size: 1.0 1.0 1.0 mm mm mm; (resel = 25.59 voxels)