

Title: Serum metabolomic biomarkers of perceptual speed in cognitively normal and mildly impaired subjects with fasting state stratification

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Supplemental Table S1. Means and 95% CI for the global cognition, cognitive domains and cognitive tests used to generate cognitive domain scores. NCI - no cognitive impairment; MCI - mild cognitive impairment, no other condition contributing to cognitive impairment.

	Female				Male			
	Fasting		Non-Fasting		Fasting		Non-Fasting	
	NCI (n=48)	MCI (n=6)	NCI (n=89)	MCI (n=21)	NCI (n=13)	MCI (n=4)	NCI (n=27)	MCI (n=4)
Global cognition (mean $\pm$ 95%CI)	0.341 $\pm$ 0.126	-0.00117 $\pm$ 0.478	0.351 $\pm$ 0.0816	-0.204 $\pm$ 0.162	0.514 $\pm$ 0.234	-0.456 $\pm$ 0.529	0.229 $\pm$ 0.177	-0.423 $\pm$ 0.736
Cognitive domains (mean $\pm$ 95%CI)								
Episodic memory	0.427 $\pm$ 0.163	0.0886 $\pm$ 0.748	0.411 $\pm$ 0.0968	-0.397 $\pm$ 0.264	0.432 $\pm$ 0.298	-0.816 $\pm$ 0.79	0.238 $\pm$ 0.175	-0.944 $\pm$ 0.56
Perceptual orientation	0.367 $\pm$ 0.197	-0.455 $\pm$ 0.581	0.29 $\pm$ 0.143	-0.375 $\pm$ 0.361	0.857 $\pm$ 0.327	0.675 $\pm$ 1.21	0.57 $\pm$ 0.261	0.598 $\pm$ 1.69
Perceptual speed	0.33 $\pm$ 0.21	0.134 $\pm$ 0.732	0.314 $\pm$ 0.147	-0.129 $\pm$ 0.352	0.835 $\pm$ 0.47	-0.481 $\pm$ 1.29	0.262 $\pm$ 0.305	-0.301 $\pm$ 1.78
Semantic memory	0.269 $\pm$ 0.16	0.31 $\pm$ 0.476	0.344 $\pm$ 0.106	-0.0605 $\pm$ 0.277	0.338 $\pm$ 0.27	-0.513 $\pm$ 0.284	0.177 $\pm$ 0.273	-0.0983 $\pm$ 0.93
Working memory	0.194 $\pm$ 0.206	-0.309 $\pm$ 0.69	0.264 $\pm$ 0.139	0.166 $\pm$ 0.229	0.457 $\pm$ 0.228	-0.296 $\pm$ 0.492	-0.0063 $\pm$ 0.25	-0.295 $\pm$ 0.609
Tests used for episodic memory (mean $\pm$ 95%CI)								
Logical memory II (delayed recall)	11.4 $\pm$ 1.21	8.57 $\pm$ 5.47	11.8 $\pm$ 0.77	7.24 $\pm$ 2.14	12.5 $\pm$ 2.25	4.5 $\pm$ 4.21	10 $\pm$ 1.37	2 $\pm$ 3.9
Logical memory I (immediate recall)	13 $\pm$ 1.14	12 $\pm$ 4.2	13.3 $\pm$ 0.696	8.95 $\pm$ 1.97	14.2 $\pm$ 2.08	8 $\pm$ 5.03	11.5 $\pm$ 1.24	5 $\pm$ 2.25
word list	20 $\pm$ 1.25	17.1 $\pm$ 5.59	19.2 $\pm$ 0.826	15.9 $\pm$ 1.73	17.7 $\pm$ 2.26	15.3 $\pm$ 7.16	17.8 $\pm$ 1.44	14 $\pm$ 2.91
word list recall	6.84 $\pm$ 0.566	5.57 $\pm$ 2.82	6.46 $\pm$ 0.384	3.52 $\pm$ 1.09	6.67 $\pm$ 0.828	3 $\pm$ 2.25	5.76 $\pm$ 0.632	3.75 $\pm$ 2.72
word list recognition	9.86 $\pm$ 0.0977	9.57 $\pm$ 0.728	9.93 $\pm$ 0.053	8.95 $\pm$ 0.741	9.67 $\pm$ 0.342	8.75 $\pm$ 2.39	9.83 $\pm$ 0.146	9 $\pm$ 1.84
East Boston delayed recall	9.8 $\pm$ 0.531	9.86 $\pm$ 1.72	9.81 $\pm$ 0.343	8 $\pm$ 1.38	9.87 $\pm$ 1.14	6.25 $\pm$ 2.39	9.66 $\pm$ 0.971	6.5 $\pm$ 3.79
East Boston immediate recall	9.96 $\pm$ 0.506	9.43 $\pm$ 1.99	10 $\pm$ 0.327	9 $\pm$ 0.814	10.3 $\pm$ 1.12	7 $\pm$ 1.3	10.6 $\pm$ 0.637	7 $\pm$ 2.91
Tests used for perceptual orientation (mean $\pm$ 95%CI)								
progressive matrices (16 items)	13 $\pm$ 0.663	10.1 $\pm$ 3.18	12.7 $\pm$ 0.499	9.95 $\pm$ 1.42	13.6 $\pm$ 1.28	13 $\pm$ 5.66	13.3 $\pm$ 0.848	13 $\pm$ 2.91
line orientation	10.3 $\pm$ 0.923	7.86 $\pm$ 2.29	10.2 $\pm$ 0.584	8.57 $\pm$ 1.38	12.7 $\pm$ 1.14	12.3 $\pm$ 2.39	11.4 $\pm$ 1.27	11.8 $\pm$ 8.36
Tests used for perceptual speed (mean $\pm$ 95%CI)								
number comparison	26.9 $\pm$ 2.06	26.6 $\pm$ 5.94	26.4 $\pm$ 1.42	23.5 $\pm$ 2.84	31.5 $\pm$ 4.77	22 $\pm$ 4.68	26.1 $\pm$ 2.5	22.5 $\pm$ 12.6
symbol digits modality test (oral)	42.5 $\pm$ 2.37	38.3 $\pm$ 9.94	42.8 $\pm$ 1.71	36.8 $\pm$ 4.58	47.3 $\pm$ 4.5	30.8 $\pm$ 27.6	42.1 $\pm$ 4.16	34.3 $\pm$ 24.1
stroop color naming	20.6 $\pm$ 1.78	21 $\pm$ 4.89	21.2 $\pm$ 1.27	16.4 $\pm$ 3.46	22.5 $\pm$ 4.64	11.8 $\pm$ 7.16	20.4 $\pm$ 2.68	18.8 $\pm$ 17.7
stroop word reading	49.2 $\pm$ 4.01	53.1 $\pm$ 12.8	52.3 $\pm$ 2.46	46.9 $\pm$ 7.13	56.3 $\pm$ 7.53	41.8 $\pm$ 6.15	50.9 $\pm$ 4.84	51.8 $\pm$ 33.2
Tests used for semantic memory (mean $\pm$ 95%CI)								
reading test - (10 items)	8.02 $\pm$ 0.58	7.71 $\pm$ 2.25	8.47 $\pm$ 0.395	8.19 $\pm$ 0.797	8.53 $\pm$ 0.779	5.75 $\pm$ 1.52	7.76 $\pm$ 1.04	7.75 $\pm$ 3.28
Boston naming (15 items)	14.4 $\pm$ 0.244	14.3 $\pm$ 0.699	14.3 $\pm$ 0.179	13.4 $\pm$ 0.669	14.3 $\pm$ 0.442	14 $\pm$ 1.3	14.5 $\pm$ 0.262	14.3 $\pm$ 1.52
CatFlu category fluency (animals - fruits/vegetables)	37.4 $\pm$ 2.45	40.3 $\pm$ 5.31	38.3 $\pm$ 1.68	32.4 $\pm$ 3.57	37.7 $\pm$ 5.67	26 $\pm$ 10.3	34.8 $\pm$ 4.39	28.3 $\pm$ 14.3
Tests used for working memory (mean $\pm$ 95%CI)								
digits backward	6.37 $\pm$ 0.614	5.43 $\pm$ 1.76	6.75 $\pm$ 0.401	6.1 $\pm$ 0.8	6.47 $\pm$ 0.909	5 $\pm$ 2.25	5.52 $\pm$ 0.581	3.75 $\pm$ 1.52
digits forward	8.47 $\pm$ 0.529	7.14 $\pm$ 1.72	8.57 $\pm$ 0.411	8.62 $\pm$ 0.667	9.2 $\pm$ 0.789	8 $\pm$ 3.44	8.17 $\pm$ 0.719	8.5 $\pm$ 2.05
digit ordering	7.76 $\pm$ 0.428	6.86 $\pm$ 1.46	7.68 $\pm$ 0.262	7.67 $\pm$ 0.485	8.53 $\pm$ 0.623	6.5 $\pm$ 0.919	7.62 $\pm$ 0.678	7.25 $\pm$ 0.796
Biometrics (mean $\pm$ SD)								
Age	76.7 $\pm$ 7.95	80.2 $\pm$ 7.07	78.4 $\pm$ 7.39	79.8 $\pm$ 5.05	78.3 $\pm$ 5.79	84.3 $\pm$ 6.44	79.6 $\pm$ 6.98	79.5 $\pm$ 10.9
BMI	27.8 $\pm$ 4.73	30 $\pm$ 4.98	26.8 $\pm$ 4.75	25.4 $\pm$ 3.59	30 $\pm$ 5.02	23.5 $\pm$ 2.76	27.6 $\pm$ 4.57	27.1 $\pm$ 5.18
Education	14.8 $\pm$ 2.46	16.7 $\pm$ 2.5	15.2 $\pm$ 2.62	15.5 $\pm$ 2.27	15.6 $\pm$ 2.97	18 $\pm$ 2.16	15.6 $\pm$ 3.52	15.8 $\pm$ 4.19
Race								
White Caucasians	94%	100%	97%	90%	100%	100%	100%	75%
African American	4%	-	3%	5%	-	-	-	25%
Other	2%	-		5%				