

**Supplementary Table 3.** Interaction of *APOE*  $\epsilon 4$  carrier status with body composition measurements for inter-network FC between DMN and CEN

Predictor	Estimate	SE	95% confidence interval		t	p	Standard estimate	95% confidence interval	
			Lower	Upper				Lower	Upper
Body fat mass index									
Model Coefficients-DMN_CEN									
Intercept <sup>†</sup>	0.02893	0.09991	-0.16826	0.22612	0.28953	0.773			
<i>APOE</i> $\epsilon 4$ carrier status carrier–noncarrier	0.08524	0.04722	-0.00795	0.17843	1.80532	0.073	-0.0387	-0.341	0.26337
Age	6.48e–4	0.00120	-0.00172	0.00302	0.53942	0.590	0.0401	-0.107	0.18695
Sex	-0.01421	0.01847	-0.05067	0.02224	-0.76951	0.443	-0.0654	-0.233	0.10236
Education	-7.32e–6	0.00165	-0.00327	0.00326	-0.00443	0.996	-3.59e–4	-0.160	0.15966
BFMI	-0.00123	0.00370	-0.00854	0.00608	-0.33225	0.740	-0.0330	-0.229	0.16283
BFMI* <i>APOE</i> $\epsilon 4$ carrier status									
BFMI* (carrier–noncarrier)	-0.01144	0.00571	-0.02272	-1.59e–4	-2.00151	0.047	-0.3064	-0.609	-0.00426
Visceral fat area									
Model Coefficients-DMN_CEN									
Intercept <sup>†</sup>	0.0177	0.09860	-0.17689	0.21232	0.17968	0.858			
<i>APOE</i> $\epsilon 4$ carrier status carrier–noncarrier	0.0831	0.04287	-0.00151	0.16769	1.93838	0.054	-0.02901	-0.331	0.2729
Age	6.86e–4	0.00120	-0.00168	0.00306	0.57119	0.569	0.04248	-0.104	0.1893
Sex	-0.0177	0.01800	-0.05328	0.01778	-0.98596	0.326	-0.08168	-0.245	0.0818
Education	7.29e–5	0.00165	-0.00318	0.00332	0.04426	0.965	0.00357	-0.156	0.1629
VFA	-2.76e–7	2.71e–4	-5.35e–4	5.35e–4	-0.00102	0.999	-1.03e–4	-0.199	0.1990
VFA* <i>APOE</i> $\epsilon 4$ carrier status									
VFA* (carrier–noncarrier)	-8.71e–4	4.03e–4	-0.00167	-7.51e–5	-2.16011	0.032	-0.32393	-0.620	-0.0280
Ratio of waist circumference to hip circumference									
Model Coefficients–inter-network FC (DMN-CEN)									
Intercept <sup>†</sup>	-0.1224	0.19251	-0.50237	0.25755	-0.6358	0.526			
<i>APOE</i> $\epsilon 4$ carrier status carrier – noncarrier	0.4871	0.23450	0.02422	0.94988	2.0770	0.039	-0.02751	-0.3322	0.2772
Age	4.39e–4	0.00121	-0.00194	0.00282	0.3638	0.716	0.02723	-0.1205	0.1749
Sex	-0.0284	0.01751	-0.06299	0.00613	-1.6238	0.106	-0.13084	-0.2899	0.0282
Education	-1.26e–4	0.00165	-0.00339	0.00314	-0.0759	0.940	-0.00615	-0.1662	0.1539
WHR	0.1896	0.17779	-0.16132	0.54049	1.0663	0.288	0.10696	-0.0910	0.3049
WHR* <i>APOE</i> $\epsilon 4$ carrier status									
WHR* (carrier–noncarrier)	-0.5570	0.26578	-1.08155	-0.03242	-2.0957	0.038	-0.31425	-0.6102	-0.0183

<sup>†</sup>represents reference level. *APOE*, apolipoprotein E; FC, functional connectivity; DMN, default mode network; CEN, central executive network; SE, standard error; BFMI, body fat mass index; VFA, visceral fat area; WHR, waist-hip circumference ratio