Supplemental Material

Impact of consuming a Mediterranean-style diet during pregnancy on neurodevelopmental disabilities in offspring: results from the Boston Birth Cohort

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Table S1. Reformatted food frequency questionnaire for use in the Boston Birth Cohort.

Question: During this pregnancy, on average, how often did you eat or drink the following foods per week?

Food Groups	Weekly intake frequency					
	None	<1 day	1-2 days	3-5 days	6-7 days	Don't know
Green vegetables	☐	☐	☐	☐	☐	☐
Orange vegetables (Carrots, Squash, etc..)	☐	☐	☐	☐	☐	☐
Fruits	☐	☐	☐	☐	☐	☐
Meats	☐	☐	☐	☐	☐	☐
Shellfish	☐	☐	☐	☐	☐	☐
Fish	☐	☐	☐	☐	☐	☐
Hen's Egg	☐	☐	☐	☐	☐	☐
Cow's milk / Dairy products /Cheese)	☐	☐	☐	☐	☐	☐
Beans	☐	☐	☐	☐	☐	☐
Rice	☐	☐	☐	☐	☐	☐
Wheat (Pasta, Bread, Cereal)	☐	☐	☐	☐	☐	☐
Soy / Tofu	☐	☐	☐	☐	☐	☐
Seeds (Sesame, Sunflower, Pumpkin)	☐	☐	☐	☐	☐	☐
Calcium-fortified juice	☐	☐	☐	☐	☐	☐
Peanuts	☐	☐	☐	☐	☐	☐
Tree nuts	☐	☐	☐	☐	☐	☐

Table S2. Frequency of intake of food groups among mothers in a subset of the Boston Birth Cohort, stratified by Mediterranean-style diet score (MSDS) quintiles

Reported weekly food intake frequency	MSDS quintiles				
	Quintile1	Quintile2	Quintile3	Quintile4	Quintile5
Green vegetables					
None	60(9.4)	18(2.4)	8(1.1)	15(2.8)	1(0.2)
<1 day	92(14.4)	56(7.4)	24(3.4)	10(1.9)	3(0.6)
1-2 days	257(40.3)	259(34.1)	172(24.7)	96(18.1)	45(8.5)
3-5 days	193(30.3)	338(44.5)	379(54.5)	283(53.5)	193(36.3)
6-7 days	33(5.2)	83(10.9)	111(15.9)	123(23.3)	289(54.4)
Unknown/Missing	2(0.3)	6(0.8)	2(0.3)	2(0.4)	0(0.0)
Orange vegetables #					
None	152(23.9)	57(7.5)	33(4.7)	23(4.3)	7(1.3)
<1 day	206(32.3)	156(20.5)	85(12.2)	27(5.1)	25(4.7)
1-2 days	192(30.1)	305(40.1)	243(34.9)	148(28.0)	75(14.1)
3-5 days	73(11.5)	204(26.8)	291(41.8)	260(49.1)	195(36.7)
6-7 days	10(1.6)	32(4.2)	42(6.0)	69(13.0)	228(42.9)
Unknown/Missing	4(0.6)	6(0.8)	2(0.3)	2(0.4)	1(0.2)
Fruits					
None	19(3.0)	7(0.9)	10(1.4)	16(3.0)	2(0.4)
<1 day	30(4.7)	22(2.9)	6(0.9)	2(0.4)	0(0.0)
1-2 days	156(24.5)	128(16.8)	80(11.5)	32(6.0)	15(2.8)
3-5 days	275(43.2)	346(45.5)	330(47.4)	203(38.4)	104(19.6)
6-7 days	157(24.6)	253(33.3)	268(38.5)	270(51.0)	405(76.3)
Unknown/Missing	0(0.0)	4(0.5)	2(0.3)	6(1.1)	5(0.9)
Meat					
None	8(1.3)	19(2.5)	17(2.4)	18(3.4)	34(6.4)
<1 day	26(4.1)	17(2.2)	32(4.6)	23(4.3)	36(6.8)
1-2 days	74(11.6)	124(16.3)	144(20.7)	103(19.5)	96(18.1)
3-5 days	294(46.2)	341(44.9)	279(40.1)	176(33.3)	160(30.1)
6-7 days	235(36.9)	258(33.9)	223(32.0)	205(38.8)	205(38.6)
Unknown/Missing	0(0.0)	1(0.1)	1(0.1)	4(0.8)	0(0.0)
Fish					
None	245(38.5)	169(22.2)	106(15.2)	61(11.5)	42(7.9)
<1 day	202(31.7)	259(34.1)	205(29.5)	122(23.1)	91(17.1)
1-2 days	162(25.4)	270(35.5)	304(43.7)	250(47.3)	223(42.0)
3-5 days	23(3.6)	55(7.2)	70(10.1)	86(16.3)	133(25.0)
6-7 days	4(0.6)	6(0.8)	9(1.3)	7(1.3)	41(7.7)
Unknown/Missing	1(0.2)	1(0.1)	2(0.3)	3(0.6)	1(0.2)
Hen's Egg					
None	106(16.6)	46(6.1)	34(4.9)	25(4.7)	10(1.9)
<1 day	98(15.4)	109(14.3)	77(11.1)	35(6.6)	24(4.5)
1-2 days	305(47.9)	337(44.3)	275(39.5)	171(32.3)	129(24.3)

3-5 days	96(15.1)	205(27.0)	230(33.0)	209(39.5)	188(35.4)
6-7 days	32(5.0)	60(7.9)	77(11.1)	86(16.3)	179(33.7)
Unknown/Missing	0(0.0)	3(0.4)	3(0.4)	3(0.6)	1(0.2)
Beans					
None	169(26.5)	77(10.1)	34(4.9)	38(7.2)	25(4.7)
<1 day	102(16.0)	70(9.2)	38(5.5)	20(3.8)	10(1.9)
1-2 days	158(24.8)	245(32.2)	174(25)	91(17.2)	69(13.0)
3-5 days	173(27.2)	292(38.4)	336(48.3)	234(44.2)	157(29.6)
6-7 days	31(4.9)	61(8.0)	97(13.9)	126(23.8)	258(48.6)
Known/Missing	4(0.6)	15(2.0)	17(2.4)	20(3.8)	12(2.3)
Rice					
None	45(7.1)	22(2.9)	28(4.0)	32(6.0)	22(4.1)
<1 day	47(7.4)	35(4.6)	16(2.3)	7(1.3)	3(0.6)
1-2 days	216(33.9)	195(25.7)	111(15.9)	53(10.0)	35(6.6)
3-5 days	241(37.8)	357(47.0)	359(51.6)	229(43.3)	140(26.4)
6-7 days	84(13.2)	137(18.0)	165(23.7)	189(35.7)	319(60.1)
Unknown/Missing	4(0.6)	14(1.8)	17(2.4)	19(3.6)	12(2.3)
Dairy *					
None	69(10.8)	43(5.7)	24(3.4)	30(5.7)	24(4.5)
<1 day	39(6.1)	25(3.3)	18(2.6)	11(2.1)	3(0.6)
1-2 days	113(17.7)	82(10.8)	38(5.5)	17(3.2)	20(3.8)
3-5 days	204(32.0)	272(35.8)	283(40.7)	146(27.6)	69(13.0)
6-7 days	208(32.7)	324(42.6)	315(45.3)	306(57.8)	404(76.1)
Unknown/Missing	4(0.6)	14(1.8)	18(2.6)	19(3.6)	11(2.1)
Wheat ¶					
None	143(22.4)	74(9.7)	36(5.2)	38(7.2)	23(4.3)
<1 day	62(9.7)	33(4.3)	10(1.4)	14(2.6)	5(0.9)
1-2 days	146(22.9)	151(19.9)	106(15.2)	47(8.9)	29(5.5)
3-5 days	171(26.8)	292(38.4)	319(45.8)	208(39.3)	138(26.0)
6-7 days	111(17.4)	196(25.8)	207(29.7)	203(38.4)	322(60.6)
Unknown/Missing	4(0.6)	14(1.8)	18(2.6)	19(3.6)	14(2.6)

#: Orange vegetables include carrots, squash, etc.

*: Dairy foods include cow's milk, dairy products, and cheese.

¶: Wheat includes pasta, bread, and cereals.

Table S3. Characteristics of TD children and children with NDD, Autism, ADHD, and other DD.

Characteristics	Total	TD	NDD	Autism	ADHD	other DD	NDD vs. TD	Autism vs. TD	ADHD vs. TD	other DD vs. TD
No.	3153	1791(56.8)	1362(43.2)	123(3.9)	445(14.1)	794(25.2)	*p*	*p*	*p*	*p*
MSDS (continuous)	25(22-27)	25(23-27)	25(22-27)	25(22-27)	25(22-27)	25(22-27)	0.029	0.393	0.160	0.057
MSDS (categorical)							0.063	0.776	0.156	0.238
Quintile1	637(20.2)	339(18.9)	298(21.9)	28(22.8)	93(20.9)	177(22.3)				
Quintile2	760(24.1)	424(23.7)	336(24.7)	31(25.2)	119(26.7)	186(23.4)				
Quintile3	696(22.1)	415(23.2)	281(20.6)	25(20.3)	86(19.3)	170(21.4)				
Quintile4	529(16.8)	293(16.4)	236(17.3)	20(16.3)	80(18.0)	136(17.1)				
Quintile5	531(16.8)	320(17.9)	211(15.5)	19(15.4)	67(15.1)	125(15.7)				
Maternal age(years)	28(23-33）	28(23-33)	28(24-34)	30(25-34)	27(22-33)	29(24-34)	0.088	0.002	0.058	0.006
Race and ethnicity							0.014	0.231	0.089	0.047
Non-Hispanic Black *	1849(58.6)	1016(56.7)	833(61.2)	67(54.5)	274(61.6)	492(62.0)				
Non-Hispanic White	229(7.3)	145(8.1)	84(6.2)	6(4.9)	31(7.0)	47(5.9)				
Hispanic	702(22.3)	399(22.3)	303(22.2)	36(29.3)	100(22.5)	167(21.0)				
Other †	373(11.8)	231(12.9)	142(10.4)	14(11.4)	40(9.0)	88(11.1)				
Education							0.192	0.319	0.007	0.721
Less than HS	133(4.2)	82(4.6)	51(3.7)	5(4.1)	13(2.9)	33(4.2)				
HS or equivalent	1904(60.4)	1059(59.1)	845(62.0)	65(52.8)	298(67.0)	482(60.7)				
Greater than HS	1116(35.4)	650(36.3)	466(34.2)	53(43.1)	134(30.1)	279(35.1)				
Marriage status							0.206	0.492	<0.001	0.471
Married	1029(32.6)	601(33.6)	428(31.4)	45(36.6)	105(23.6)	278(35.0)				

Other	2124(67.4)	1190(66.4)	934(68.6)	78(63.4)	340(76.4)	516(75.0)				
Pre-pregnancy BMI							0.001	0.050	0.040	0.009
<25 kg/m2	1438(45.6)	862(48.1)	576(42.3)	48(39.0)	190	338				
>=25 kg/m2	1715(54.4)	929(51.9)	786(57.7)	75(61.0)	255(57.3)	456(57.4)				
Parity							0.933	0.454	0.988	0.699
0	1350(42.8)	768(42.9)	582(42.7)	57(46.3)	191(42.9)	334(42.1)				
>0	1803(57.2)	1023(57.1)	780(57.3)	66(53.7)	254(57.1)	460(5.0)				
Diabetes							0.059	0.013	0.362	0.189
Yes	344(10.9)	179(10.0)	165(12.1)	21(17.1)	51(11.5)	93(11.7)				
No	2809(89.1)	1612(90.0)	1197(87.9)	102(82.9)	394(88.5)	701(88.3)				
Preeclampsia							0.119	0.739#	0.452	0.016
Mild	128(4.1)	64(3.6)	64(4.7)	5(4.1)	21(4.7)	38(4.8)				
Severe	225(7.1)	119(6.6)	106(7.8)	6(4.9)	26(5.8)	74(9.3)				
No	2800(88.8)	1608(89.8)	1192(87.5)	112(91.1)	398(89.4)	682(85.9)				
Ever smoke							<0.001	0.457	<0.001	0.051
Yes	580(18.4)	289(16.1)	291(21.4)	23(18.7)	115(25.8)	153(19.3)				
No	2573(81.6)	1502(83.9)	1071(78.6)	100(81.3)	330(74.2)	641(80.7)				
Alcohol use							0.160	0.332	0.078	0.616
Yes	251(8.0)	132(7.4)	119(8.7)	12(9.8)	44(9.9)	63(7.9)				
No	2897(91.9)	1659(92.6)	1243(91.3)	111(90.2)	401(90.1)	731(92.1)				
Child sex							<0.001	<0.001	<0.001	<0.001
Male	1588(50.4)	750(41.9)	838(61.5)	91(74.0)	316(71.0)	431(54.3)				
Female	1565(49.6)	1041(58.1)	524(38.5)	32(26.0)	129(29.0)	363(45.7)				
LBW							<0.001	0.006	0.008	<0.001
≤2,500 g	871(27.6)	427(23.8)	444(32.6)	43(35.0)	133(29.9)	268(33.8)				
>2,500 g	2282(72.4)	1364(76.2)	918(67.4)	80(65.0)	312(70.1)	526(66.2)				

PTB							<0.001	<0.001	0.014	<0.001
Yes	902(28.6)	438(24.5)	464(34.1)	48(39.0)	134(30.1)	282(35.5)				
No	2251(71.4)	1353(75.5)	898(65.9)	75(61.0)	311(69.9)	512(64.5)				
Soft drink consumption							0.803	0.094	0.032	0.575
≤1 cup per month	1390(44.1)	793(44.3)	597(43.8)	64(52.0)	172(38.7)	361(45.5)				
>1 cup per month	1763(55.9)	998(55.7)	765(56.2)	59(48.0)	273(61.3)	433(54.5)				
Folate (nmol/L) ¶	31(20-44)	30(21-45)	30(20-43)	33(23-43)	29(18-43)	31(21-43)	0.113	0.249	0.025	0.251
Vitamin B 12 (pmol/L) ¶	263(214-323)	262(211-319)	266(214-329)	282(232-351)	264(219-318)	265(219-334)	0.091	0.054	0.760	0.113

Abbreviations: HS, high school; BMI, body mass index, LBW, low birth weight; PTB, preterm birth; TD, typically developing; NDD, neurodevelopmental disabilities; ADHD, attention-deficit/hyperactivity disorder; other DD, other developmental disabilities. p-values derived using the χ^2 test, Fisher's exact test, or Kruskal-Wallis test. Percentages may not add to 100% due to rounding.

#: Fisher's Exact test.

*: Included self-reported identification as African American and Haitian. †: Included self-reported identification as Asian, Cape Verdean, Pacific Islander, More than one race and ethnicity, and Other race and ethnicity.

¶: Included 2068 mothers.

Table S4. Adjusted associations of maternal Mediterranean-style diet score (MSDS) with offspring Autism, ADHD, and other DD among women with OWO/DM.

Characteristics		TD		Autism			ADHD			other DD	
		n	n	OR (95%CI)	*p*	n	OR (95%CI)	*p*	n	OR (95%CI)	*p*
MSDS (per 1 SD increase)											
Model A#		974	77	0.758(0.589-0.976)	0.032	265	0.934(0.810-1.077)	0.347	476	0.936(0.835-1.050)	0.260
Model B¶		612	53	0.658(0.472-0.913)	0.013	185	0.866(0.718-1.042)	0.127	330	0.876(0.757-1.012)	0.072
MSDS quintiles											
Model A#	Q1	192	23	Ref		62	Ref		101	Ref	
	Q2	220	20	0.661(0.332-1.305)	0.233	67	0.986(0.647-1.504)	0.947	108	0.966(0.684-1.365)	0.844
	Q3	230	13	0.347(0.158-0.731)	0.006	47	0.653(0.415-1.021)	0.063	111	0.891(0.631-1.260)	0.515
	Q4	156	12	0.702(0.312-1.516)	0.377	54	1.277(0.811-2.011)	0.291	80	1.033(0.708-1.504)	0.867
	Q5	176	9	0.422(0.172-0.963)	0.047	35	0.766(0.465-1.249)	0.289	76	0.838(0.573-1.224)	0.361
	Q3-Q5*	562	34	0.451(0.247-0.832)	0.01	136	0.848(0.589-1.231)	0.381	267	0.914(0.681-1.233)	0.554
Model B¶	Q1	99	14	Ref		42	Ref		69	Ref	
	Q2	140	15	0.652(0.279-1.524)	0.319	48	0.804(0.473-1.367)	0.419	72	0.748(0.482-1.160)	0.195
	Q3	152	12	0.314(0.124-0.773)	0.012	34	0.473(0.269-0.825)	0.009	81	0.699(0.454-1.076)	0.104
	Q4	104	7	0.403(0.135-1.108)	0.087	39	1.102(0.625-1.943)	0.737	57	0.819(0.512-1.307)	0.403

Q5	117	5	0.265(0.079-0.773)	0.020	22	0.537(0.283-1.001)	0.053	51	0.632(0.392-1.013)	0.058
Q3-Q5*	373	24	0.321(0.149-0.706)	0.004	95	0.643(0.405-1.030)	0.063	189	0.712(0.489-1.038)	0.076

Abbreviations: OWO, overweight/obese; DM, diabetes mellitus.

*: Combined group includes those in quintiles 3, 4, and 5.

#: Controlled for MSDS (continuous or categorical), race and ethnicity, education, maternal age, parity, marriage status, pre-pregnancy BMI, DM, preeclampsia, smoking and alcohol consumption anytime from six months before pregnancy to delivery, soft drink consumption, child sex, low birthweight, and preterm birth.

¶: Additionally controlled for plasma folate and vitamin B12 levels.

Table S5. Adjusted associations of maternal Mediterranean-style diet score (MSDS) with offspring Autism, ADHD, and other DD among women without OWO or DM.

Characteristics		TD	Autism			ADHD			other DD		
		n	n	OR (95%CI)	*p*	n	OR (95%CI)	*p*	n	OR (95%CI)	*p*
MSDS (per 1 SD increase)											
Model A#		817	46	1.254(0.0.884-1.795)	0.209	180	1.112(0.926-1.339)	0.259	318	0.881(0.763-1.016)	0.082
Model B¶		529	20	1.293(0.826-2.048)	0.266	115	1.093(0.863-1.389)	0.464	206	0.900(0.751-1.077)	0.249
MSDS quintiles											
Model A#	Q1	147	5	Ref		31	Ref		76	Ref	
	Q2	204	11	1.531(0.515-5.181)	0.46	52	1.478(0.880-2.519)	0.144	78	0.725(0.488-1.075)	0.109
	Q3	185	12	1.609(0.546-5.425)	0.408	39	1.192(0.685-2.090)	0.535	59	0.618(0.405-0.941)	0.025
	Q4	137	8	1.721(0.528-6.145)	0.376	26	1.137(0.614-2.098)	0.681	56	0.793(0.512-1.224)	0.296
	Q5	144	10	1.756(0.558-6.190)	0.350	32	1.602(0.883-2.921)	0.122	49	0.656(0.415-1.030)	0.068
	Q3-Q5*	466	30	1.682(0.654-5.250)	0.318	97	1.279(0.797-2.096)	0.317	164	0.682(0.481-0.970)	0.032
Model B¶	Q1	96	3	Ref		20	Ref		46	Ref	
	Q2	132	10	2.411(0.630-12.189)	0.231	33	1.526(0.786-3.027)	0.217	52	0.821(0.497-1.358)	0.442
	Q3	115	9	2.151(0.527-11.393)	0.316	26	1.164(0.580-2.369)	0.67	40	0.699(0.410-1.186)	0.185

Q4	97	5	1.715(0.361-9.640)	0.507	14	0.854(0.378-1.896)	0.699	37	0.785(0.453-1.355)	0.386
Q5	89	6	2.550(0.547-14.562)	0.251	22	1.751(0.830-3.734)	0.143	31	0.713(0.399-1.264)	0.250
Q3-Q5*	301	20	2.084(0.597-10.116)	0.296	62	1.205(0.663-2.260)	0.55	108	0.731(0.470-1.143)	0.166

*: Combined group includes those in quintiles 3, 4, and 5.

#: Controlled for MSDS (continuous or categorical), race and ethnicity, education, maternal age, parity, marriage status, pre-pregnancy BMI, DM, preeclampsia, smoking and alcohol consumption anytime from six months before pregnancy to delivery, soft drink consumption, child sex, low birthweight, and preterm birth.

¶: Additionally controlled for plasma folate and vitamin B12 levels.

Table S6. Unadjusted and adjusted associations of maternal MSDS with NDD, Autism, ADHD, and other DD in offspring. [a]

Characteristics		TD	NDD			Autism			ADHD			other DD		
		n	n	OR (95%CI)	*p*	n	OR (95%CI)	*p*	n	OR (95%CI)	*p*	n	OR (95%CI)	*p*
MSDS (per 1 SD increase)														
Unadjusted		1783	1351	0.923(0.859-0.990)	0.026	121	0.938(0.781-1.129)	0.497	440	0.928(0.836-1.029)	0.156	790	0.918(0.844-0.998)	0.044
Model A#		1783	1351	0.943(0.874-1.017)	0.127	121	0.941(0.768-1.155)	0.561	440	1.007(0.900-1.128)	0.897	790	0.919(0.841-1.004)	0.062
Model B¶		1140	916	0.910(0.826-1.001)	0.053	84	0.907(0.700-1.177)	0.460	299	0.948(0.822-1.094)	0.468	533	0.900(0.805-1.005)	0.062
MSDS quintiles														
Unadjusted	Q1	336	292	Ref		27	Ref		90	Ref		175	Ref	
	Q2	424	336	0.901(0.730-1.114)	0.336	31	0.885(0.520-1.512)	0.652	119	1.023(0.754-1.392)	0.884	186	0.840(0.654-1.079)	0.173
	Q3	415	281	0.770(0.620-0.957)	0.019	25	0.729(0.415-1.275)	0.268	86	0.755(0.545-1.047)	0.092	170	0.785(0.608-1.012)	0.062
	Q4	293	236	0.916(0.727-1.155)	0.459	20	0.826(0.450-1.490)	0.530	80	0.995(0.709-1.394)	0.978	136	0.889(0.676-1.167)	0.398
	Q5	315	206	0.750(0.594-0.947)	0.016	18	0.719(0.388-1.304)	0.283	65	0.763(0.537-1.080)	0.129	123	0.748(0.567-0.984)	0.039
	Q3-Q5*	1023	723	0.806(0.671-0.967)	0.020	63	0.754(0.480-1.211)	0.229	231	0.826(0.632-1.086)	0.166	429	0.803(0.649-0.995)	0.044
Model A#	Q1	336	292	Ref		27	Ref		90	Ref		175	Ref	
	Q2	424	336	0.952(0.763-1.188)	0.664	31	0.842(0.480-1.482)	0.547	119	1.156(0.836-1.601)	0.382	186	0.859(0.663-1.113)	0.249
	Q3	415	281	0.799(0.636-1.004)	0.054	25	0.650(0.358-1.172)	0.152	86	0.842(0.596-1.190)	0.330	170	0.776(0.595-1.011)	0.061

	Q4	293	236	0.995(0.779-1.271)	0.969	20	0.892(0.469-1.671)	0.722	80	1.232(0.858-1.769)	0.258	136	0.934(0.703-1.240)	0.637
	Q5	315	206	0.818(0.638-1.048)	0.112	18	0.724(0.374-1.375)	0.327	65	1.022(0.701-1.487)	0.909	123	0.765(0.572-1.021)	0.070
	Q3-Q5*	1023	723	0.860(0.708-1.044)	0.127	63	0.734(0.451-1.220)	0.221	231	1.000(0.750-1.341)	0.999	429	0.817(0.653-1.025)	0.079
Model B¶	Q1	194	192	Ref		16	Ref		62	Ref		114	Ref	
	Q2	272	230	0.894(0.676-1.181)	0.430	25	0.961(0.488-1.932)	0.910	81	1.012(0.676-1.520)	0.953	124	0.795(0.574-1.102)	0.168
	Q3	272	202	0.739(0.556-0.982)	0.037	21	0.702(0.344-1.446)	0.331	60	0.690(0.449-1.057)	0.088	121	0.721(0.518-1.003)	0.052
	Q4	201	159	0.863(0.636-1.170)	0.343	12	0.668(0.289-1.500)	0.333	53	1.038(0.661-1.629)	0.872	94	0.842(0.592-1.195)	0.336
	Q5	201	133	0.720(0.527-0.983)	0.039	10	0.608(0.255-1.398)	0.247	43	0.856(0.534-1.364)	0.514	80	0.682(0.474-0.978)	0.038
	Q3-Q5*	674	494	0.769(0.602-0.983)	0.036	43	0.668(0.361-1.280)	0.209	156	0.828(0.578-1.194)	0.306	295	0.745(0.562-0.989)	0.041

[a]: In this sensitivity analysis, women with MSDSs lower than 12 or higher than 35 were removed.

*: Combined group includes those in quintiles 3, 4, and 5.

#: Controlled for MSDS (continuous or categorical), race and ethnicity, education, maternal age, parity, marriage status, pre-pregnancy BMI, DM, preeclampsia, smoking and alcohol consumption anytime from six months before pregnancy to delivery, soft drink consumption, child sex, low birthweight, and preterm birth.

¶: Additionally controlled for plasma folate and vitamin B12 levels.

Table S7. Adjusted associations between maternal MSDS and NDD in offspring stratified by maternal smoking prior to and during pregnancy. [b]

Characteristics		Ever smoked				Never smoked			
		TD		NDD		TD		NDD	
		n	n	OR (95%CI)	*p*	n	n	OR (95%CI)	*p*
MSDS (per 1 SD increase)									
Model A #		289	291	0.999(0.840-1.188)	0.989	1502	1071	0.926(0.851-1.008)	0.075
Model B ¶		163	193	0.938(0.743-1.183)	0.588	983	1086	0.899(0.808-0.999)	0.049
MSDS quintiles									
Model A #	Q1	97	100	Ref		242	198	Ref	
	Q2	78	68	0.921(0.582-1.457)	0.726	346	268	0.932(0.722-1.204)	0.591
	Q3	57	56	1.032(0.628-1.698)	0.901	358	225	0.747(0.575-0.970)	0.029
	Q4	30	40	1.471(0.819-2.667)	0.199	263	196	0.920(0.698-1.211)	0.550
	Q5	27	27	0.976(0.508-1.877)	0.943	293	184	0.774(0.587-1.019)	0.068
	Q3-Q5*	114	123	1.132(0.752-1.706)	0.553	914	605	0.804(0.643-1.007)	0.057
Model B ¶	Q1	47	63	Ref		148	131	Ref	
	Q2	49	47	0.792(0.439-1.428)	0.439	223	183	0.902(0.655-1.244)	0.530
	Q3	31	42	0.915(0.481-1.739)	0.785	241	160	0.689(0.498-0.952)	0.024

Q4	20	24	0.969(0.458-2.061)	0.934	181	135	0.843(0.599-1.186)	0.327
Q5	16	17	0.778(0.335-1.806)	0.557	190	120	0.699(0.495-0.985)	0.041
Q3-Q5*	67	83	0.898(0.527-1.526)	0.691	612	415	0.736(0.556-0.975)	0.032

b: smoking time period was defined as anytime from six months before pregnancy to delivery

*: Combined group includes those in quintiles 3, 4, and 5.

#: Controlled for race and ethnicity, education, maternal age, parity, marriage status, pre-pregnancy BMI, DM, preeclampsia, alcohol consumption anytime from six months before pregnancy to delivery, soft drink consumption, MSDS (continuous or categorical), child sex, LBW, and PTB.

¶: Additionally controlled for plasma folate and vitamin B12 levels.

†: Based on model B, treating maternal smoking as a binary variable (ever smoked or never smoked anytime from six months before pregnancy) and Mediterranean diet score as either a categorical or continuous variable.

Table S8. Adjusted associations between maternal MSDS and NDD in offspring stratified by preterm birth (PTB).

Characteristics		PTB				Non-PTB			
		TD	NDD			TD	NDD		
		n	n	OR (95%CI)	*p*	n	n	OR (95%CI)	*p*
MSDS (per 1 SD increase)									
Model A #		438	464	0.983(0.848-1.139)	0.820	1353	898	0.916(0.838-1.001)	0.053
Model B ¶		249	285	0.937(0.767-1.143)	0.519	897	637	0.886(0.793-0.990)	0.032
MSDS quintiles									
Model A #	Q1	86	97	Ref		253	201	Ref	
	Q2	113	126	1.186(0.787-1.789)	0.414	311	210	0.866(0.664-1.128)	0.285
	Q3	115	89	0.735(0.476-1.133)	0.163	300	192	0.821(0.626-1.075)	0.151
	Q4	57	81	1.450(0.896-2.354)	0.131	236	155	0.863(0.647-1.150)	0.314
	Q5	67	71	1.023(0.637-1.642)	0.926	253	140	0.723(0.538-0.970)	0.031
	Q3-Q5*	239	241	0.979(0.675-1.420)	0.910	789	487	0.804(0.640-1.012)	0.063
Model B ¶	Q1	43	58	Ref		152	136	Ref	
	Q2	63	79	0.991(0.568-1.729)	0.976	209	151	0.866(0.624-1.200)	0.387
	Q3	74	60	0.553(0.309-0.980)	0.044	198	142	0.806(0.579-1.122)	0.201

Q4	31	46	1.108(0.571-2.164)	0.762	170	113	0.776(0.547-1.099)	0.154
Q5	38	42	0.825(0.433-1.571)	0.558	168	95	0.668(0.465-0.958)	0.029
Q3-Q5*	143	148	0.736(0.442-1.221)	0.237	536	350	0.756(0.570-1.004)	0.053

*: Combined group includes those in quintiles 3, 4, and 5.

#: Controlled for race and ethnicity, education, maternal age, parity, marriage status, pre-pregnancy BMI, DM, preeclampsia, smoking and alcohol consumption anytime from six months before pregnancy to delivery, soft drink consumption, MSDS (continuous or categorical), child sex, and LBW.

¶: Additionally controlled for plasma folate and vitamin B12 levels.

Table S9. Adjusted associations between maternal MSDS and NDD in offspring stratified by low birthweight (LBW).

Characteristics		LBW				Non-LBW			
		TD		NDD		TD		NDD	
		n	n	OR (95%CI)	*p*	n	n	OR (95%CI)	*p*
MSDS (per 1 SD increase)									
Model A #		427	444	0.942(0.812-1.093)	0.432	1364	918	0.927(0.848-1.012)	0.092
Model B ¶		232	268	0.969(0.788-1.191)	0.765	914	654	0.879(0.787-0.981)	0.022
MSDS quintiles									
Model A #	Q1	94	102	Ref		245	196	Ref	
	Q2	114	121	1.081(0.721-1.623)	0.705	310	215	0.891(0.683-1.163)	0.396
	Q3	108	84	0.675(0.438-1.038)	0.074	307	197	0.828(0.632-1.085)	0.172
	Q4	55	73	1.239(0.765-2.011)	0.385	238	163	0.909(0.682-1.211)	0.516
	Q5	56	64	0.974(0.596-1.593)	0.915	264	147	0.739(0.551-0.988)	0.042
	Q3-Q5*	219	221	0.887(0.614-1.282)	0.525	809	507	0.825(0.655-1.039)	0.101
Model B ¶	Q1	46	57	Ref		149	137	Ref	
	Q2	65	75	1.032(0.595-1.789)	0.911	207	155	0.855(0.616-1.186)	0.348
	Q3	65	54	0.555(0.308-0.991)	0.048	207	148	0.789(0.568-1.097)	0.159

Q4	28	46	1.281(0.661-2.506)	0.465	173	113	0.755(0.531-1.072)	0.116
Q5	28	36	0.912(0.458-1.821)	0.794	178	101	0.661(0.455-0.929)	0.018
Q3-Q5*	121	136	0.795(0.477-1.319)	0.376	558	362	0.737(0.555-0.979)	0.035

*: Combined group includes those in quintiles 3, 4, and 5.

#: Controlled for race and ethnicity, education, maternal age, parity, marriage status, pre-pregnancy BMI, DM, preeclampsia, smoking and alcohol consumption anytime from six months before pregnancy to delivery, soft drink consumption, MSDS (continuous or categorical), low birthweight, and PTB.

¶: Additionally controlled for plasma folate and vitamin B12 levels.

Table S10. Interaction effects of MSDS and maternal age on Autism and other DD

Characteristics		TD	Autism		other DD	
		n	n	p (MSDS-maternal age interaction)	n	p (MSDS-maternal age interaction)
MSDS (per 1 SD increase)						
Model A#		1783	121	0.732	790	0.142
Model B¶		1140	84	0.896	533	0.964
MSDS quintiles						
	Q1	336	27	Ref	175	Ref
	Q2	424	31	0.506	186	0.741
	Q3	415	25	0.479	170	0.549
	Q4	293	20	0.888	136	0.198
Model A#	Q5	315	18	0.636	123	0.370
	Q1	194	16	Ref	114	Ref
	Q2	272	25	0.925	124	0.555
	Q3	272	21	0.739	121	0.878
	Q4	201	12	0.135	94	0.806
Model B¶	Q5	201	10	0.622	80	0.721

#: Controlled for race and ethnicity, education, maternal age, parity, marriage status, pre-pregnancy BMI, DM, preeclampsia, smoking and alcohol consumption anytime from six months before pregnancy to delivery, soft drink consumption, MSDS (continuous or categorical), low birthweight, and PTB.

¶: Additionally controlled for plasma folate and vitamin B12 levels.
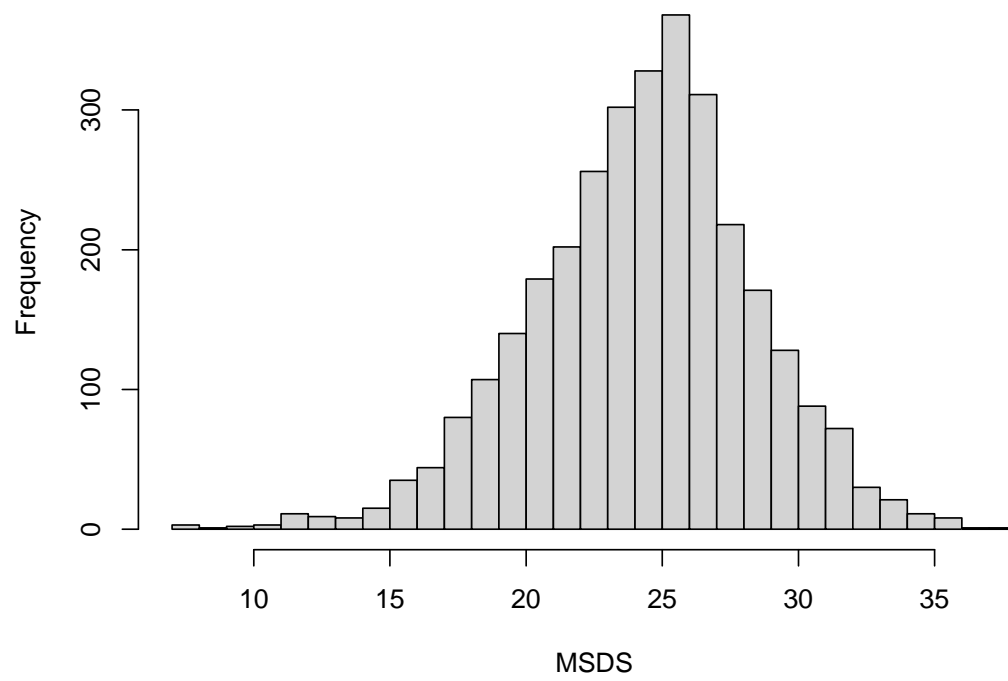
Figure S1. The distribution of maternal Mediterranean-style diet scores (MSDSs).
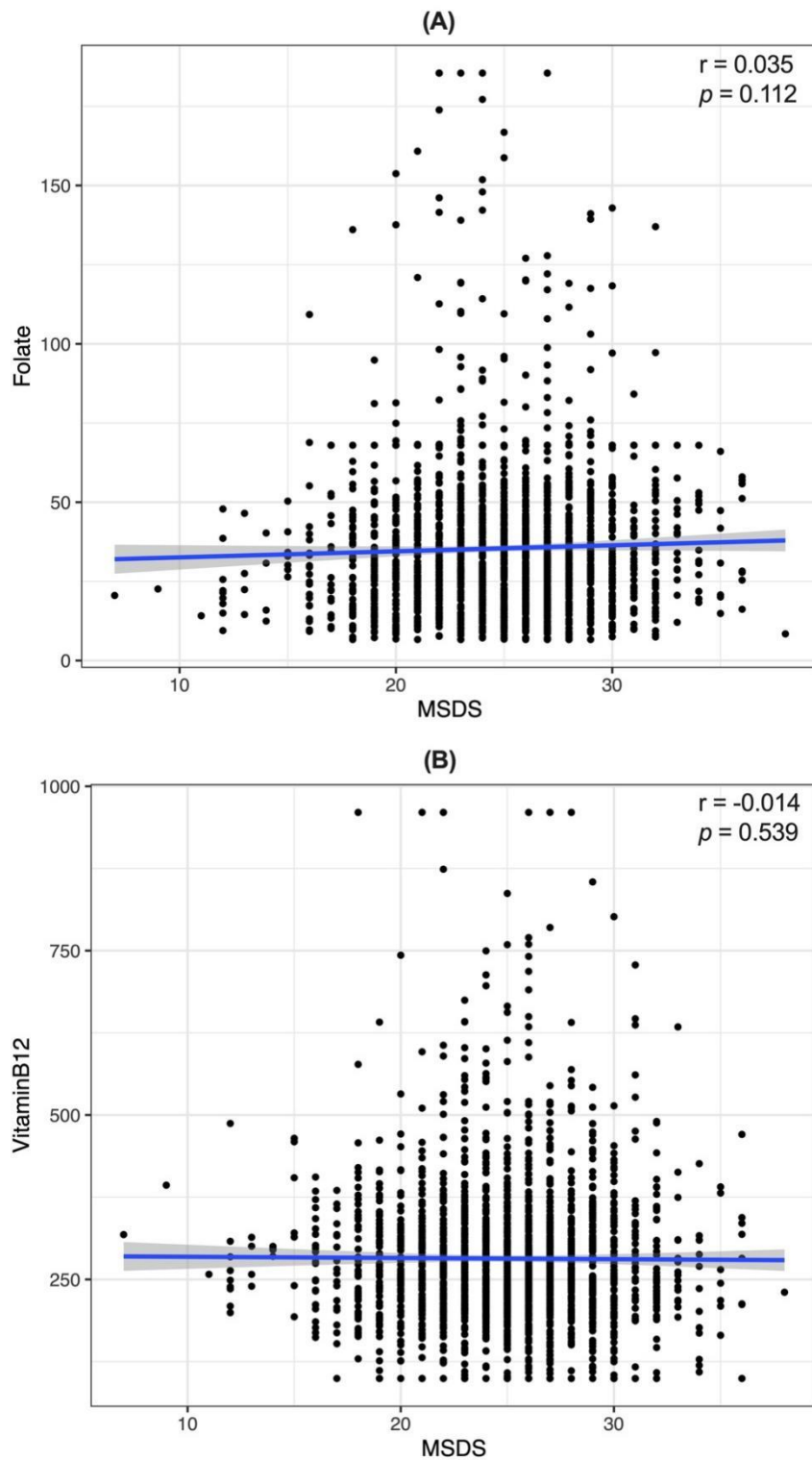
Figure S2. A scatter plot of correlation between maternal MSDSs versus maternal plasma folate levels (A), and a scatter plot of correlation between maternal MSDSs versus maternal plasma vitamin B12 levels (B).