Supplementary Online Content

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eMethods. MARBLES Interview Questions on Vitamins and Supplements

eFigure 1. Unadjusted Relative Risk for Associations of Maternal Prenatal Vitamin Use (Yes versus No) For Each Month From 6 Months Before Pregnancy Through the End of Pregnancy With Child 36-month Outcomes of Autism Spectrum Disorder (ASD) and Nontypical Development (Non-TD) Versus Typical Development.

eFigure 2. Adjusted Relative Risk for Associations of Maternal Prenatal Vitamin Use (Yes versus No) For Each Month From 6 Months Before Pregnancy Through the End of Pregnancy With Child 36-month Outcomes of Autism Spectrum Disorder (ASD) and Nontypical Development (Non-TD) Versus Typical Development.

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This supplementary material has been provided by the authors to give readers additional information about their work.

eMethods. MARBLES Interview Questions on Vitamins and Supplements.

Interview 1: Environmental Exposures Questionnaire, First Trimester

The next questions are about prenatal vitamins and other supplements you may have taken.

34a. Since 6 months before this pregnancy until now have you taken any….		34b. What was the brand name you took?	34c. During which months did you take (VITAMIN/ Supp)?	34d. How often/number of capsules
Prenatal vitamins	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Multivitamins	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin A	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin B6	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin B12	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Folic acid	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK

Vitamin C	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin D	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin E	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Iron	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Calcium	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Zinc	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____ _____RF _____DK
Cereals	**Y N** **RF DK**	_____ _____ _____	-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____cups per day _____cups per week _____cups per month ____RF _____DK
Other supplements e.g. Slim Fast, Instant Breakfast, protein	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month ____tablets/capsules everyday Other, specify_____

powder, brewer's yeast				_____RF _____DK
St. John's worts	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Ginseng	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Omega-3 Fatty Acids	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Fish oil	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Other supplements or vitamins	**Y N** **RF DK**		-6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for _____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK

Interview 2: Environmental Exposures Questionnaire, Third Trimester

The next questions are about prenatal vitamins and other supplements you may have taken.

35a. Since the last time we spoke have you taken any….	b. What was the brand name you took?	c. During which months did you take (VITAMIN/Supp)?	d. How often/number of capsules
Prenatal vitamins **Y N RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Multivitamins **Y N RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Vitamin A **Y N RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Vitamin B6 **Y N RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____

				_____DK _____RF
Vitamin B12	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Folic acid	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Vitamin C	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Vitamin D	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Vitamin E	**Y N** **RF DK**		3 4 5 6 7	_____tablets/capsules per day, for_____days _____tablets/capsules per week

			8 9 RF DK	_____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Iron	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Calcium	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Zinc	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Cereals	**Y N** **RF DK**	_____ _____ _____	3 4 5 6 7 8 9 RF DK	_____ cups per day _____cups per week _____cups per month _____DK _____RF

Other supplements e.g. Slim Fast, Instant Breakfast, protein powder, brewer's yeast	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
St. John's worts	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Ginseng	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Omega-3 Fatty Acids	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____DK _____RF
Fish oil	**Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month

			___tablets/capsules everyday
			Other, specify_____
			_____DK _____RF
Other vitamins or supplements **Y N** **RF DK**		3 4 5 6 7 8 9 RF DK	_____tablets/capsules per day, for____days
			_____tablets/capsules per week
			_____tablets/capsules per month
			_____tablets/capsules everyday
			Other, specify_____
			_____DK _____RF

Interview 3: Environmental Exposure Questionnaire, 6 months postnatal

The next questions are about prenatal vitamins and other supplements you may have taken.

36a. Since the last time we spoke through 6 months post-partum *(or the end of BF)* have you taken any….	36b. What was the brand name you took?	36c. During which months did you take (VITAMIN/Supp)?	36d. How often/number of capsules
Prenatal vitamins **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days
			_____tablets/capsules per week
			_____tablets/capsules per month
			_____tablets/capsules everyday
			Other, specify_____
			_____RF _____DK
Multivitamins (not prenatal) **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days
			_____tablets/capsules per week
			_____tablets/capsules per month

|			
			_____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin A **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin B6 **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin B12 **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK

Folic acid	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin C	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin D	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Vitamin E	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days _____tablets/capsules per week _____tablets/capsules per month

|			
			_____tablets/capsules everyday Other, specify_____ _____RF _____DK
Iron **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Calcium **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Zinc **Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK

Cereals	**Y N** **RF** **DK**	_____ _____ _____ _____	4 5 6 7 8 9 BF RF DK	_____cups per day _____cups per week _____cups per month _____RF _____DK
Other supplements e.g. Slim Fast, Instant Breakfast, protein powder, brewer's yeast	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
St. John's worts	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Ginseng	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK

Omega-3 Fatty Acids	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Fish oil	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
Other vitamins or supplements	**Y N** **RF** **DK**		4 5 6 7 8 9 BF RF DK	_____tablets/capsules per day, for_____days _____tablets/capsules per week _____tablets/capsules per month _____tablets/capsules everyday Other, specify_____ _____RF _____DK
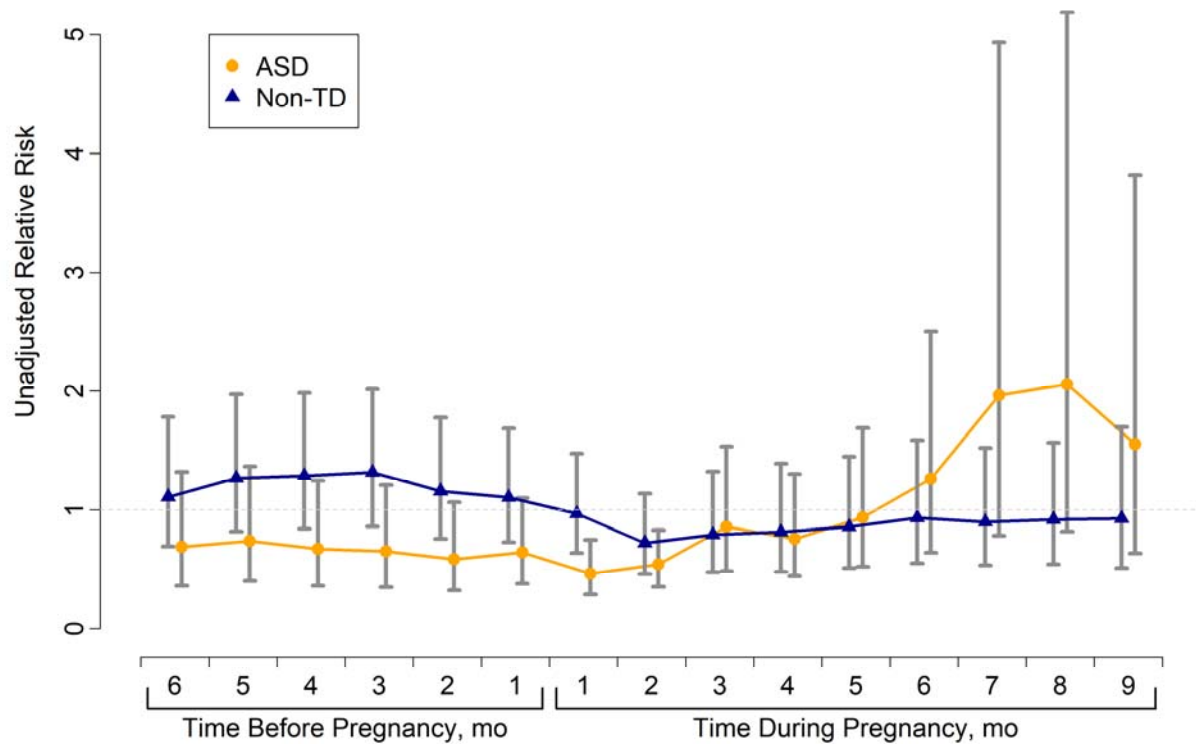
eFigure 1. Unadjusted Relative Risk for Associations of Maternal Prenatal Vitamin Use (Yes versus No) For Each Month From 6 Months Before Pregnancy Through the End of Pregnancy With Child 36-month Outcomes of Autism Spectrum Disorder (ASD) and Nontypical Development (Non-TD) Versus Typical Development. Vertical bars represent 95% confidence intervals.
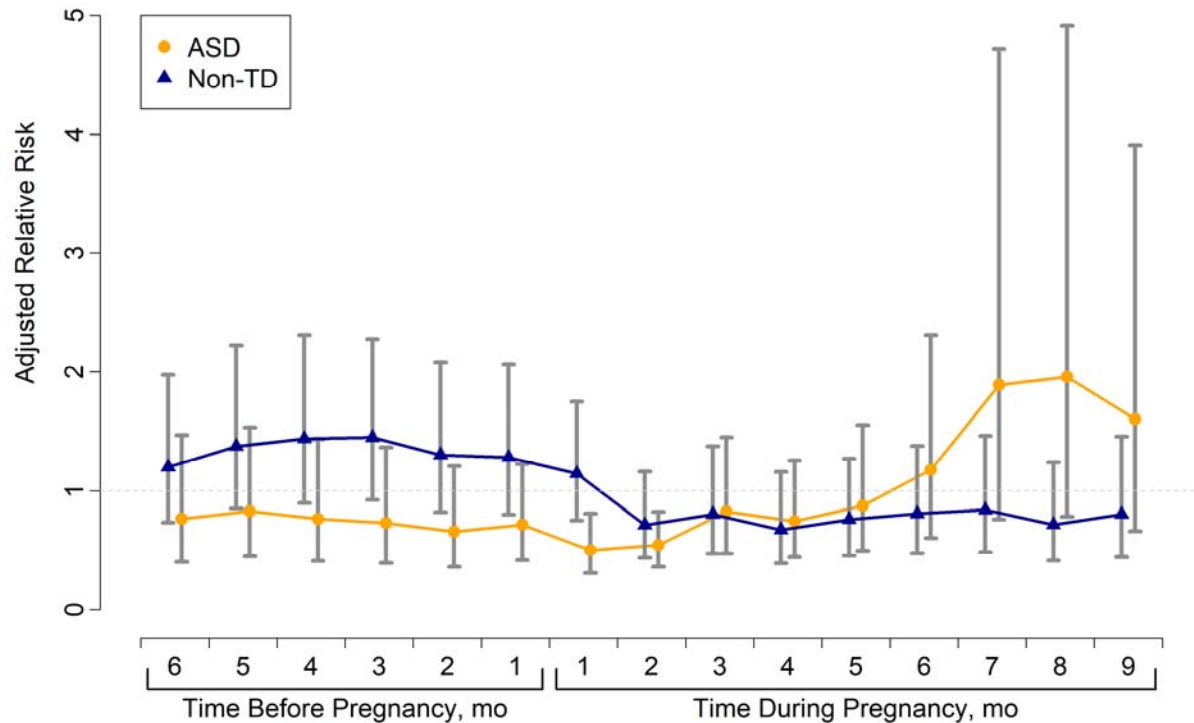
eFigure 2. Adjusted Relative Risk for Associations of Maternal Prenatal Vitamin Use (Yes versus No) For Each Month From 6 Months Before Pregnancy Through the End of Pregnancy With Child 36-month Outcomes of Autism Spectrum Disorder (ASD) and Nontypical Development (Non-TD) Versus Typical Development.

Relative risks were adjusted for maternal education in the ASD models and for child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant in the Non-TD models. Vertical bars represent 95% confidence intervals.

eTable 1. Results of the Sensitivity Analyses Using MLE and TMLE Approaches for the 233 Participants With Complete Covariate Data

Model	Child 36-mo Outcome	
	ASD RR (95% CI)	**Non-TD RR (95% CI)**
MLE (unadjusted)	0.48 (0.29, 0.78)	0.96 (0.62, 1.47)
MLE (adjusted)[a]	0.51 (0.31, 0.83)	1.07 (0.71, 1.61)
TMLE - Model 1	0.45 (0.27, 0.75)	1.10 (0.68, 1.80)
TMLE - Model 2	0.50 (0.29, 0.87)	1.18 (0.72, 1.92)
TMLE - Model 3	0.42 (0.26, 0.70)	1.10 (0.68, 1.77)
TMLE - Model 4	0.50 (0.31, 0.82)	1.22 (0.93, 1.61)

Abbreviations: MLE, maximum likelihood estimation; TMLE, targeted maximum likelihood estimation; RR, Relative Risk; ASD, autism spectrum disorder; Non-TD, nontypical development.

[a]Adjusted for maternal education in the ASD model and for child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant (yes or no) in the Non-TD model.

TMLE - Model 1: Algorithm estimated using R-package tmle and default Super-Learner (SL) library (SL.glm, SL.step, and SL.glm.interaction) with a set of set of covariates similar to primary analyses (child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant).

TMLE - Model 2: Algorithm estimated using R-package tmle and default SL library (SL.glm, SL.step, and SL.glm.interaction) with a full set of covariates (all covariates in TMLE - Model 1 and child gender and ethnicity, paternal age, maternal pre-pregnancy BMI and place of birth, and home ownership).

TMLE - Model 3: Algorithm computed using R-package tmle, user-supplied SL library (SL.gam, SL.randomForest, and SL.rpart) with a set of set of covariates similar to primary analyses (child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant).

TMLE - Model 4: Algorithm computed using R-package tmle, user-supplied SL library (SL.gam, SL.randomForest, and SL.rpart) with a full set of covariates (all covariates in TMLE - Model 3 and child gender and ethnicity, paternal age, maternal pre-pregnancy BMI and place of birth, and home ownership).

eTable 2. Stratified Unadjusted and Adjusted Associations of Maternal Prenatal Vitamin Use in the First Month of Pregnancy and Child 36-month Outcomes

Variable	Frequency taking vitamin (%)			ASD vs. TD		Non-TD vs. TD	
	ASD (n = 55)	Non-TD (n = 60)	TD (n = 126)	RR (95% CI)	Interaction P-Value	RR (95% CI)	Interaction P-Value
Child Sex							
No. Male Sex	38	37	65				
Male (crude)	16 (42%)	23 (62%)	34 (52%)	0.77 (0.46, 1.29)		1.30 (0.76, 2.22)	
No. Female Sex	17	23	61				
Female (crude)	2 (12%)	12 (52%)	41 (67%)	0.11 (0.03, 0.44)	0.01	0.64 (0.32, 1.27)	0.11
Male (adjusted[a])				0.86 (0.51, 1.42)		1.80 (0.99, 3.28)[#]	
Female (adjusted[a])				0.11 (0.03, 0.46)	0.01	0.75 (0.32, 1.74)	0.13
Child Race							
No. White	36	34	89				
White (crude)	11 (31%)	22 (65%)	54 (61%)	0.41 (0.22, 0.75)[*]		1.13 (0.62, 2.07)	
No. Non-White	19	26	37				
Non-White (crude)	7 (37%)	13 (50%)	21 (57%)	0.58 (0.27, 1.26)	0.47	0.85 (0.47, 1.54)	0.51
White (adjusted[a])				0.44 (0.24, 0.83)[*]		1.32 (0.66, 2.62)	
Non-White (adjusted[a])				0.61 (0.28, 1.31)	0.53	1.07 (0.57, 2.00)	0.48
Child Ethnicity							
No. Hispanic	21	19	37				
Hispanic (crude)	7 (33%)	8 (42%)	22 (59%)	0.50 (0.24, 1.06)[#]		0.63 (0.30, 1.33)	
No. Non-Hispanic	34	41	89				
Non-Hispanic (crude)	11 (32%)	27 (66%)	53 (60%)	0.44 (0.24, 0.82)[*]	0.80	1.21 (0.70, 2.07)	0.17
Hispanic (adjusted[a])				0.57 (0.26, 1.23)		0.81 (0.32, 2.07)	
Non-Hispanic (adjusted[a])				0.46 (0.25, 0.86)[*]	0.73	1.29 (0.69, 2.43)	0.29

Supplement eTable 2. (continued) Stratified Unadjusted and Adjusted Associations of Maternal Prenatal Vitamin Use in the First Month of Pregnancy and Child 36-Month Outcomes

Variable	Frequency taking vitamin (%)			ASD vs. TD		Non-TD vs. TD	
	ASD (*n* = 55)	Non-TD (*n* = 60)	TD (*n* = 126)	RR (95% CI)	Interaction *P*-Value	RR (95% CI)	Interaction *P*-Value
Child Mullen Composite Score[b]							
No. 70 or higher	25	52	126				
70 or higher (crude)	7 (28%)	30 (58%)	75 (60%)	0.33 (0.15, 0.74)[*]		0.95 (0.60, 1.50)	
No. < 70	22	6	0				
< 70 (crude)[d]	7 (32%)	3 (50%)	–	0.38 (0.16, 0.87)[*]	NA[c]	0.69 (0.15, 3.30)	NA[c]
70 or higher (adjusted[a])				0.33 (0.15, 0.76)[*]		1.13 (0.71, 1.80)	
< 70 (adjusted[a])[d]				0.44 (0.19, 1.01)[#]	NA[c]	–	NA[c]
Maternal Age (Years)							
No. 35 or older	27	29	48				
35 or older (crude)	10 (37%)	15 (52%)	30 (63%)	0.51 (0.27, 0.97)[*]		0.76 (0.43, 1.35)	
35 or older	28	31	78				
No. < 35	8 (29%)	20 (65%)	45 (58%)	0.40 (0.19, 0.83)[*]	0.61	1.23 (0.66, 2.31)	0.27
35 or older (adjusted[a])				0.53 (0.28, 1.02)[#]		0.95 (0.45, 1.97)	
< 35 (adjusted[a])				0.47 (0.23, 0.94)[*]	0.43	1.39 (0.75, 2.57)	0.47

Abbreviations: ASD, autism spectrum disorder; Non-TD, nontypical development; TD, typical development.

[a]Adjusted for maternal education in the ASD model and for child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant (yes or no) in the Non-TD model.

[b]Frequency data missing for 8 children in ASD group and 2 in Non-TD.

[c]Estimates were not reported and interaction *p*-values were not calculated when expected cell sizes (based on the margin totals) were less than 5 and due to quasi-complete separation in the logistic models.

[d]The reference group for this models is the TD group; [*]$p < .05$; [#]$p < .10$.

eTable 3. Results of the Sensitivity Analyses Examining Associations of Maternal Mean Daily Intake of Folic Acid and Iron Supplements in the First Month of Pregnancy With Child 36-month Outcome Using MLE and TMLE Approaches for the 233 Participants With Complete Covariate Data

	ASD		Non-TD	
	RR (95% CI)		RR (95% CI)	
	Tertile 2 vs. Tertile 1[a]	Tertile 3 vs. Tertile 1[a]	Tertile 2 vs. Tertile 1[a]	Tertile 3 vs. Tertile 1[a]
Folic Acid				
MLE (unadjusted)	0.66 (0.41, 1.05)	0.41 (0.17, 0.97)	0.94 (0.57, 1.55)	1.05 (0.58, 1.89)
MLE (adjusted)[b]	0.68 (0.43, 1.08)	0.46 (0.19, 1.10)	1.04 (0.65, 1.66)	1.26 (0.67, 2.35)
TMLE - Model 1	0.68 (0.43, 1.08)	0.24 (0.10, 0.60)	1.02 (0.63, 1.65)	1.78 (1.01, 3.14)
TMLE - Model 2	0.67 (0.44, 1.01)	0.22 (0.09, 0.52)	1.10 (0.73, 1.66)	1.77 (1.16, 2.70)
TMLE - Model 3	0.65 (0.43, 0.98)	0.26 (0.11, 0.59)	1.03 (0.65, 1.63)	1.76 (1.06, 2.92)
TMLE - Model 4	0.63 (0.47, 0.85)	0.44 (0.31, 0.61)	1.16 (0.84, 1.61)	1.59 (1.13, 2.23)
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MLE (unadjusted)	0.58 (0.33, 1.01)	0.54 (0.31, 0.97)	0.79 (0.48, 1.30)	0.72 (0.43, 1.22)
MLE (adjusted)[b]	0.61 (0.35, 1.05)	0.57 (0.32, 1.01)	0.85 (0.52, 1.38)	0.78 (0.47, 1.28)
TMLE - Model 1	0.54 (0.31, 0.95)	0.57 (0.32, 1.03)	0.89 (0.54, 1.47)	0.74 (0.40, 1.34)
TMLE - Model 2	0.59 (0.36, 0.97)	0.59 (0.35, 1.00)	0.79 (0.50, 1.25)	0.69 (0.44, 1.08)
TMLE - Model 3	0.56 (0.33, 0.96)	0.56 (0.32, 0.98)	0.89 (0.55, 1.45)	0.80 (0.49, 1.31)
TMLE - Model 4	0.60 (0.39, 0.92)	0.61 (0.37, 1.02)	0.74 (0.56, 0.98)	0.77 (0.59, 1.02)

Abbreviations: MLE, maximum likelihood estimation; TMLE, targeted maximum likelihood estimation; RR, Relative Risk; ASD, autism spectrum disorder; Non-TD, nontypical development.

[a]TMLE algorithms were implemented separately for Tertile 2 vs. Tertile 1 and Tertile 3 vs. Tertile 1 comparisons.

[b]Adjusted for maternal education in the ASD model and for child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant (yes or no) in the Non-TD model.

TMLE - Model 1: Algorithm estimated using R-package tmle and default Super-Learner (SL) library (SL.glm, SL.step, and SL.glm.interaction) with a set of set of covariates similar to primary analyses (child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant).

TMLE - Model 2: Algorithm estimated using R-package tmle and default SL library (SL.glm, SL.step, and SL.glm.interaction) with a full set of covariates (all covariates in TMLE - Model 1

and child gender and ethnicity, paternal age, maternal pre-pregnancy BMI and place of birth, and home ownership).

TMLE - Model 3: Algorithm computed using R-package tmle, user-supplied SL library (SL.gam, SL.randomForest, and SL.rpart) with a set of set of covariates similar to primary analyses (child white or non-white race, maternal age and education, insurance delivery type, and maternal intention to become pregnant).

TMLE - Model 4: Algorithm computed using R-package tmle, user-supplied SL library (SL.gam, SL.randomForest, and SL.rpart) with a full set of covariates (all covariates in TMLE - Model 3 and child gender and ethnicity, paternal age, maternal pre-pregnancy BMI and place of birth, and home ownership).