

Supplementary Material

Supplementary Table 1. Association between maternal pre-pregnancy BMI and maternal FPG in first trimester.

	Beta (95%CI)	<i>P</i>
Model 1	0.011 (0.007, 0.015)	<0.001
Model 2	0.010 (0.006, 0.015)	<0.001

Model 1 adjusted for maternal age, education level, physical activity level.

Model 2 further adjusted for parity, family history of hypertension disease, and family history of diabetes.

Supplementary Table 2. A stratified analysis for maternal age, parity, family history of diabetes, and fetal sex.

Variable	Beta/OR	95%CI		P	Beta/OR	95%CI		P
		Lower	Upper			Lower	Upper	
		Age<35			Age≥35			
Mid pregnancy								
HC	0.002	-0.010	0.013	0.789	0.000	-0.006	0.006	0.983
AC	0.015	0.001	0.028	0.036	0.011	0.003	0.018	0.005
FL	0.005	-0.011	0.022	0.524	0.010	0.000	0.020	0.041
EFW	0.024	0.007	0.041	0.006	0.018	0.008	0.028	0.000
Late pregnancy								
HC	0.015	-0.005	0.035	0.148	-0.014	-0.073	0.046	0.652
AC	0.013	-0.004	0.031	0.141	0.001	-0.044	0.046	0.962
FL	0.019	-0.001	0.039	0.062	0.018	-0.035	0.071	0.510
EFW	0.015	0.001	0.030	0.039	0.013	0.005	0.021	0.001
Birth size								
Height	0.012	-0.008	0.033	0.236	0.019	0.008	0.030	0.001
Weight	0.033	0.015	0.051	0.000	0.034	0.024	0.043	0.000
birth outcome								
PB	1.035	0.981	1.091	0.207	0.954	0.871	1.046	0.320
LGA	1.131	1.095	1.168	0.000	1.111	1.050	1.176	0.000
LBW	0.989	0.933	1.049	0.712	0.971	0.873	1.080	0.591

Macrosomia	1.140	1.085	1.197	0.000	1.137	1.039	1.245	0.005
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Parity=0

Parity≥1

Mid pregnancy

HC	0.001	-0.006	0.007	0.785	-0.003	-0.014	0.008	0.583
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AC	0.012	0.004	0.019	0.002	0.012	-0.002	0.025	0.095
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FL	0.009	-0.001	0.019	0.072	0.008	-0.008	0.023	0.334
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EFW	0.020	0.010	0.030	0.000	0.016	0.001	0.032	0.041
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Late pregnancy

HC	-0.010	-0.069	0.049	0.741	0.008	-0.011	0.027	0.419
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AC	-0.003	-0.048	0.042	0.899	0.024	0.005	0.043	0.012
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FL	0.017	-0.036	0.069	0.534	0.027	0.005	0.048	0.015
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EFW	0.011	0.004	0.019	0.004	0.023	0.008	0.038	0.003
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Birth size

Height	0.017	0.006	0.028	0.002	0.021	0.000	0.041	0.048
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Weight	0.033	0.023	0.043	0.000	0.037	0.020	0.055	0.000
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birth outcome

PB	1.045	0.990	1.104	0.113	1.086	0.983	1.199	0.103
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LGA	1.126	1.086	1.167	0.000	1.111	1.049	1.176	0.000
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LBW	1.015	0.957	1.076	0.622	1.026	0.890	1.183	0.725
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Macrosomia	1.145	1.085	1.209	0.000	1.103	1.006	1.209	0.037
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Female

Male

Mid pregnancy

HC	-0.001	-0.009	0.007	0.834	0.004	-0.004	0.012	0.339
AC	0.012	0.002	0.021	0.014	0.012	0.003	0.022	0.010
FL	0.006	-0.005	0.017	0.268	0.010	-0.002	0.022	0.117
EFW	0.016	0.003	0.029	0.015	0.022	0.012	0.033	0.000
Late pregnancy								
HC	-0.020	-0.113	0.072	0.668	0.007	-0.006	0.020	0.310
AC	-0.009	-0.079	0.061	0.800	0.017	0.006	0.028	0.003
FL	0.025	-0.057	0.107	0.549	0.009	-0.005	0.022	0.223
EFW	0.015	0.006	0.025	0.002	0.013	0.003	0.023	0.009
Birth size								
Height	0.014	0.000	0.028	0.046	0.022	0.008	0.035	0.002
Weight	0.037	0.025	0.049	0.000	0.031	0.019	0.043	0.000
birth outcome								
PB	1.149	1.074	1.231	0.000	0.988	0.924	1.057	0.728
LGA	1.106	1.061	1.154	0.000	1.144	1.096	1.195	0.000
LBW	1.044	0.971	1.123	0.242	0.974	0.898	1.058	0.536
Macrosomia	1.128	1.051	1.209	0.001	1.144	1.074	1.218	0.000
	Family history of diabetes=NO				Family history of diabetes=YES			
Mid pregnancy								
HC	0.001	-0.005	0.008	0.660	-0.004	-0.017	0.009	0.566
AC	0.010	0.003	0.017	0.007	0.017	0.002	0.032	0.031
FL	0.009	0.000	0.019	0.050	0.010	-0.009	0.029	0.290

EFW	0.018	0.009	0.027	0.000	0.024	0.002	0.045	0.029
Late pregnancy								
HC	-0.012	-0.069	0.045	0.686	0.010	-0.011	0.030	0.362
AC	0.000	-0.043	0.043	0.999	0.016	-0.002	0.035	0.085
FL	0.020	-0.031	0.070	0.449	0.013	-0.010	0.035	0.269
EFW	0.014	0.006	0.021	0.001	0.014	-0.003	0.030	0.108
Birth size								
Height	0.018	0.007	0.028	0.002	0.020	-0.003	0.042	0.082
Weight	0.034	0.024	0.043	0.000	0.032	0.012	0.052	0.002
birth outcome								
PB	1.059	1.005	1.117	0.033	1.054	0.941	1.181	0.365
LGA	1.140	1.102	1.179	0.000	1.064	0.997	1.135	0.061
LBW	1.030	0.969	1.094	0.344	0.941	0.828	1.071	0.357
Macrosomia	1.135	1.076	1.196	0.000	1.123	1.016	1.241	0.024

Abbreviations: HC, head circumference; AC, abdominal circumference; FL, femur length; EFW, estimated fetal weight. PB, premature birth; LGA, large for gestational age; LBW, low birth weight; OR, odds ratio; CI, confidence interval.

All models were conducted adjusted for maternal age, education level, physical activity level, parity, gestational weight gain throughout pregnancy, family history of hypertension disease, and family history of diabetes.

Supplementary Table 3. Interaction P-values of age, parity, family history of diabetes, and fetal sex with pre-pregnancy BMI.

Characteristics	P-interact			
	Age	Parity	Family history of diabetes	Sex
Mid pregnancy				
HC	0.801	0.318	0.887	0.408
AC	0.275	0.759	0.453	0.542
FL	0.400	0.781	0.678	0.665
EFW	0.581	0.955	0.722	0.246
Late pregnancy				
HC	0.478	0.693	0.616	0.441
AC	0.803	0.467	0.811	0.406
FL	0.919	0.723	0.908	0.981
EFW	0.997	0.160	0.495	0.715
Birth size				
Weight	0.817	0.714	0.984	0.368
Height	0.948	0.689	0.375	0.976
Neonatal outcome				
PB	0.118	0.894	0.406	0.002
LGA	0.652	0.728	0.042	0.075
LBW	0.811	0.612	0.221	0.168
macrosomia	0.858	0.838	0.526	0.468

Abbreviations: HC, head circumference; AC, abdominal circumference; FL, femur length; EFW, estimated fetal weight. PB, premature birth; LGA, large for gestational age; LBW, low birth weight; OR, odds ratio; CI, confidence interval.

All models were conducted adjusted for maternal age, education level, physical activity level, parity, gestational weight gain throughout pregnancy, family history of hypertension disease, and family history of diabetes.

