

Supplementary Table 1. The association between protein intake (substituted for carbohydrates¹) during pregnancy and gestational weight gain (g/week), N=46,250

	Gestational weight gain (g/week)			
	Crude (mean Δ , 95% CI)	P	Adjusted ² (mean Δ , 95% CI)	P
Animal protein-Carbohydrate substitution				
Continuous (50kcal/day)	-5 (-7, -3)	<0.0001	-4 (-6, -2)	0.0002
In quintiles		P for trend ³		P for trend
Q1	0 (ref)	0.001	0 (ref)	0.006
Q2	-6 (-13, 0)		-6 (-13, 0)	
Q3	-4 (-11, 3)		-5 (-12, 1)	
Q4	-9 (-16, -3)		-9 (-16, -2)	
Q5	-13 (-20, -5)		-10 (-17, -3)	
Meat protein-Carbohydrate substitution				
Continuous (50kcal/day)	-13 (-17, -10)	<0.0001	-10 (-13, -7)	<0.0001
In quintiles		P for trend		P for trend
Q1	0 (ref)	<0.0001	0 (ref)	<0.0001
Q2	-7 (-13, -0)		-6 (-12, 0)	
Q3	-13 (-20, -7)		-11 (-18, -5)	
Q4	-15 (-21, -8)		-11 (-17, -4)	
Q5	-23 (-30, -17)		-17 (-24, -11)	
Fish protein-Carbohydrate substitution				
Continuous (50kcal/day)	-21 (-28, -14)	<0.0001	-22 (-29, -15)	<0.0001
In quintiles		P for trend		P for trend
Q1	0 (ref)	<0.0001	0 (ref)	<0.0001
Q2	-5 (-11, 2)		-7 (-13, -1)	
Q3	-7 (-14, -1)		-10 (-17, -4)	
Q4	-11 (-18, -5)		-14 (-20, -7)	
Q5	-16 (-23, -10)		-19 (-26, -13)	
Dairy protein-Carbohydrate substitution				
Continuous (50kcal/day)	-1 (-3, 1)	0.31	-1 (-3, 1)	0.28
In quintiles		P for trend		P for trend
Q1	0 (ref)	0.61	0 (ref)	0.53
Q2	4 (-2, 11)		4 (-3, 10)	
Q3	3 (-3, 10)		0 (-6, 7)	
Q4	-2 (-9, 5)		-3 (-10, 4)	

Q5	0 (-7, 8)		0 (-7, 7)	
Vegetable protein-Carbohydrate substitution		P		P
Continuous (50kcal/day)	-14 (-20, -9)	<0.0001	-13 (-18, -7)	<0.0001
In quintiles		P for trend		P for trend
Q1	0 (ref)	0.001	0 (ref)	0.003
Q2	9 (2, 15)		8 (1, 14)	
Q3	0 (-7, 7)		-2 (-8, 5)	
Q4	-1 (-6, 8)		0 (-7, 7)	
Q5	-12 (-20, -4)		-10 (-17, -2)	

¹Isocaloric regression models including all sub-types of protein and fat while excluding carbohydrates.

²Adjusted for parental socioeconomic status, maternal age, parity, maternal prepregnancy BMI, maternal height, maternal smoking, civil status, and total energy intake.

³P-value for trend using the quintile median.

Supplementary Table 2. The association between Glycemic Index during pregnancy and gestational weight gain (g/week).

	Gestational weight gain (g/week)			
	Crude (mean Δ , 95% CI)	P for trend ³	Adjusted ¹ (mean Δ , 95% CI)	P for trend
All (N=46,262)²				
Q1	0 (ref)	0.56	0 (ref)	0.08
Q2	2 (-4, 9)		3 (-3, 10)	
Q3	1 (-5, 8)		4 (-2, 10)	
Q4	9 (2, 15)		9 (3, 16)	
Q5	2 (-5, 9)		6 (-1, 13)	
Normal weight (N=31,633)				
Q1	0 (ref)	<0.0001	0 (ref)	0.01
Q2	5 (-2, 12)		3 (-3, 10)	
Q3	8 (1, 15)		5 (-1, 12)	
Q4	14 (7, 21)		9 (2, 16)	
Q5	16 (8, 23)		10 (2, 17)	
Overweight (N=8,956)				
Q1	0 (ref)	0.57	0 (ref)	0.45
Q2	-3 (-21, 14)		-4 (-21, 13)	
Q3	-7 (-24, 11)		-7 (-24, 10)	
Q4	5 (-12, 23)		2 (-16, 19)	
Q5	-8 (-25, 10)		-9 (-27, 9)	
Obese (N=3,667)				
Q1	0 (ref)	0.96	0 (ref)	0.75
Q2	10 (-25, 45)		13 (-21, 48)	
Q3	12 (-23, 46)		12 (-23, 46)	
Q4	21 (-15, 57)		18 (-18, 54)	
Q5	4 (-31, 39)		2 (-33, 38)	

¹Adjusted for parental socioeconomic status, maternal age, parity, maternal height, maternal smoking, civil status, and total energy intake.²Additionally adjusted for maternal prepregnancy BMI.³P-value for trend using the quintile median.

Supplementary Table 3. The association between sweets intake during pregnancy and gestational weight gain (g/week)

	Gestational weight gain (g/week)			
	Crude (mean Δ , 95% CI)	P for trend ³	Adjusted ¹ (mean Δ , 95% CI)	P for trend
All (N=45,748)²				
Q1	0 (ref)	<0.0001	0 (ref)	<0.0001
Q2	21 (15, 28)		18 (11, 24)	
Q3	31 (25, 37)		26 (20, 32)	
Q4	42 (36, 49)		36 (30, 42)	
Q5	58 (52, 65)		51 (45, 58)	
Normal weight women (N=31,254)				
Q1	0 (ref)	<0.0001	0 (ref)	<0.0001
Q2	15 (8, 22)		13 (6, 19)	
Q3	27 (21, 34)		24 (17, 31)	
Q4	36 (29, 43)		31 (24, 38)	
Q5	52 (45, 59)		46 (39, 53)	
Overweight women (N=8,867)				
Q1	0 (ref)	<0.0001	0 (ref)	<0.0001
Q2	35 (19, 52)		28 (12, 45)	
Q3	38 (22, 55)		32 (16, 49)	
Q4	46 (29, 63)		38 (21, 55)	
Q5	76 (59, 93)		68 (51, 85)	
Obese women (N=3,655)				
Q1	0 (ref)	<0.0001	0 (ref)	<0.0001
Q2	38 (6, 70)		33 (1, 65)	
Q3	59 (27, 91)		53 (21, 85)	
Q4	80 (47, 113)		72 (40, 105)	
Q5	74 (40, 108)		67 (33, 100)	

¹Adjusted for parental socioeconomic status, maternal age, parity, maternal height, maternal smoking, civil status, and total energy intake.

²Additionally adjusted for maternal prepregnancy BMI.

³P-value for trend using the quintile median.