Table S1. Gestational weight gain and risk of LGA/ SGA in underweight and normal weight women

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| --- | --- |
| Underweight women (PPBMI<18.5 kg/m2) | Normal weight women (18.5 kg/m2≤PPBMI<25 kg/m2) |
| GWG | N | LGA | SGA | **GWG** | N | LGA | SGA |
| N/A | N/A | N/A | N/A | **~4.9kg** | 103 | 0.95(0.55-1.66) | 1.67(0.39-7.09) |
| N/A | N/A | N/A | N/A | **5.0~5.9kg** | 134 | 0.52(0.28-0.95) | 3.24(1.23-8.50) |
| N/A | N/A | N/A | N/A | **6.0~6.9kg** | 185 | 0.46(0.26-0.80) | 2.59(1.06-6.32) |
| N/A | N/A | N/A | N/A | **7.0~7.9kg** | 295 | 0.57(0.37-0.88) | 2.53(1.23-5.22) |
| ~8.9kg | 128 | 0.43(0.12-1.52) | 2.55(0.99-6.58) | **8.0~8.9kg** | 497 | 0.64(0.46-0.9) | 2.40(1.32-4.35) |
| 9.0~9.9kg | 143 | 1.00(0.40-2.49) | 2.95(1.26-6.92) | **9.0~9.9kg** | 690 | 0.78(0.58-1.05) | 1.46(0.79-2.71) |
| 10.0~10.9kg | 178 | 1.47(0.68-3.20) | 2.37(1.01-5.53) | **10.0~10.9kg** | 1051 | 0.86(0.66-1.1) | 1.82(1.10-3.01) |
| 11.0~11.9kg | 258 | 0.84(0.37-1.88) | 2.06(0.94-4.53) | **11.0~11.9kg** | 1202 | 1 | 1.95(1.21-3.15) |
| 12.0~12.9kg | 351 | 1 | 1.28(0.56-2.89) | **12.0~12.9kg** | 1591 | 1.10(0.88-1.37) | 1.82(1.15-2.86) |
| 13.0~13.9kg | 420 | 1.46(0.77-2.75) | 1.69(0.81-3.52) | **13.0~13.9kg** | 1864 | 1.25(1.01-1.54) | 1.35(0.85-2.14) |
| 14.0~14.9kg | 490 | 1.98(1.09-3.59) | 1.71(0.84-3.47) | **14.0~14.9kg** | 2021 | 1.29(1.05-1.59) | 1.24(0.78-1.96) |
| 15.0~15.9kg | 573 | 1.48(0.81-2.70) | 1.21(0.58-2.52) | **15.0~15.9kg** | 2250 | 1.57(1.28-1.92) | 1 |
| 16.0~16.9kg | 489 | 1.86(1.02-3.40) | 0.99(0.45-2.20) | **16.0~16.9kg** | 2114 | 1.68(1.37-2.06) | 1.21(0.77-1.91) |
| 17.0~17.9kg | 529 | 2.28(1.28-4.06) | 1 | **17.0~17.9kg** | 1939 | 1.84(1.50-2.26) | 1.02(0.63-1.65) |
| 18.0~18.9kg | 454 | 2.03(1.12-3.71) | 1.23(0.57-2.66) | **18.0~18.9kg** | 1794 | 1.99(1.63-2.45) | 0.71(0.41-1.22) |
| 19.0~19.9kg | 353 | 3.48(1.93-6.26) | 0.84(0.34-2.05) | **19.0~19.9kg** | 1483 | 2.32(1.88-2.86) | 0.99(0.59-1.66) |
| 20.0~20.9kg | 306 | 3.00(1.63-5.51) | 1.11(0.47-2.64) | **20.0~20.9kg** | 1373 | 2.19(1.77-2.71) | 0.93(0.54-1.61) |
| 21.0~21.9kg | 234 | 5.62(3.09-10.22) | 0.32(0.07-1.43) | **21.0~21.9kg** | 972 | 2.50(2.00-3.13) | 1.53(0.91-2.56) |
| 22.0~22.9kg | 168 | 3.76(1.94-7.26) | 0.67(0.19-2.40) | **22.0~22.9kg** | 778 | 2.63(2.08-3.32) | 0.61(0.28-1.33) |
| 23.0~23.9kg | 148 | 3.75(1.92-7.33) | 0.50(0.11-2.27) | **23.0~23.9kg** | 577 | 2.99(2.32-3.84) | 1.13(0.57-2.25) |
| 24.0~24.9kg | 111 | 9.83(5.14-18.82) | 0.98(0.27-3.55) | **24.0~24.9kg** | 410 | 3.37(2.57-4.43) | 1.16(0.53-2.53) |
| 25.0kg~ | 285 | 8.49(4.8-15.01) | 0.50(0.16-1.56) | **25.0kg~** | 1224 | 3.53(2.86-4.36) | 1.03(0.60-1.77) |

IOM recommended upper and lower limits of GWG was used as reference level. ORs for LGA were calculated using 12.0~12.9kg and 11.0~11.9kg as the reference group, while ORs for SGA were calculated using 17.0~17.9kg and 15.0~15.9kg as the reference group in underweight/ normal weight women, respectively.

OR was adjusted for age, parity, pre-pregnancy PPBMI, height, GDM and PIH.

PPBMI, pre-pregnancy body mass index; LGA, large for gestational age; SGA, small for gestational age; GDM, gestational diabetes mellitus; PIH, pregnancy induced hypertension.

Table S2. Gestational weight gain and risk of LGA/ SGA in overweight and obese women

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| --- | --- |
| Overweight women (25 kg/m2≤PPBMI<30 kg/m2) | Obese women (PPBMI≥30 kg/m2) |
|  | N | LGA | SGA |  | N | LGA | SGA |
| ~1.9kg | 30 | 1.43(0.56-3.63) | - | **~1.9kg** | 63 | 2.05(0.92-4.53) | - |
| 2.0~3.9kg | 44 | 1.66(0.74-3.71) | 5.54(1.34-22.92) | **2.0~3.9kg** | 44 | 1.51(0.65-3.52) | 1.37(0.25-7.55) |
| 4.0~5.9kg | 118 | 0.97(0.52-1.79) | 0.64(0.08-5.31) | **4.0~5.9kg** | 85 | 1 | 0.95(0.18-5.15) |
| 6.0~7.9kg | 210 | 1 | 1.08(0.27-4.27) | **6.0~7.9kg** | 122 | 1.93(1.00 -3.80) | 0.66(0.15-2.86) |
| 8.0~9.9kg | 334 | 1.54(0.99-2.42) | 1.39(0.48-4.05) | **8.0~9.9kg** | 154 | 1.82(0.94-3.50) | 1 |
| 10.0~11.9kg | 462 | 1.94(1.27-2.96) | 1 | **10.0~11.9kg** | 150 | 1.50(0.77-2.92) | 0.15(0.02-1.28) |
| 12.0~13.9kg | 526 | 2.57(1.70-3.88) | 0.9(0.31-2.61) | **12.0~13.9kg** | 108 | 2.58(1.29-5.19) | 0.18(0.02-1.55) |
| 14.0~15.9kg | 518 | 2.57(1.70-3.90) | 0.49(0.14-1.71) | **14.0~15.9kg** | 100 | 2.90(1.45-5.80) | 0.37(0.07-1.93) |
| 16.0~17.9kg | 410 | 3.82(2.49-5.84) | 0.3(0.06-1.47) | **16.0~17.9kg** | 61 | 1.73(0.78-3.81) | 1.00(0.23-4.36) |
| 18.0~19.9kg | 286 | 3.21(2.05-5.03) | 0.46(0.09-2.26) | **18.0kg~** | 108 | 3.81(1.91-7.57) | 0.19(0.02-1.66) |
| 20.0~21.9kg | 191 | 4.63(2.87-7.45) | 0.31(0.04-2.59) | **N/A** | N/A | N/A | N/A |
| 22.0~23.9kg | 114 | 5.87(3.45-9.98) | - | **N/A** | N/A | N/A | N/A |
| 24.0kg~ | 139 | 5.45(3.26-9.10) | 0.42(0.05-3.55) | **N/A** | N/A | N/A | N/A |

IOM recommended upper and lower limits of GWG was used as reference level. ORs for LGA were calculated using 6.0~7.9kg and 4.0~5.9kg as the reference group, while ORs for SGA were calculated using 10.0~11.9kg and 8.0~9.9kg as the reference group in overweight and obese women, respectively.

OR was adjusted for age, parity, pre-pregnancy PPBMI, height, GDM and PIH.

PPBMI, pre-pregnancy body mass index; LGA, large for gestational age; SGA, small for gestational age; GDM, gestational diabetes mellitus; PIH, pregnancy induced hypertension.