

Table S1. The associations between child overweight and obesity and cardio-metabolic risk factors.

| | boys | | | | girls | | | |
|--------------------------------|--------------------|-----------|--------------------|---------|--------------------|-----------|-------------------|---------|
| | n | Mean±SD | β (95% CI) | p value | n | Mean±SD | β (95% CI) | p value |
| ZWFL | Glucose (mmol/L) | | | | Glucose (mmol/L) | | | |
| -1 to 1 | 148 | 5.01±0.56 | Ref. | | 138 | 4.85±0.54 | Ref. | |
| >1 to<=2 | 43 | 5.03±0.61 | 0.01(-0.18,0.20) | 0.95 | 42 | 4.82±0.69 | -0.03(-0.24,0.18) | 0.77 |
| >2 | 9 | 5.03±0.62 | 0.01(-0.36,0.39) | 0.94 | 6 | 5.16±0.35 | 0.3(-0.19,0.80) | 0.23 |
| <-1 | 15 | 5.02±0.39 | 0.01(-0.29,0.30) | 0.95 | 16 | 5.06±0.93 | 0.22(-0.10,0.53) | 0.18 |
| ZWFL continuous | 0.01 (-0.07,0.08) | | | | -0.00 (-0.10,0.09) | | | |
| Log (insulin), pmol/L | | | | | | | | |
| -1 to 1 | 148 | 3.22±0.91 | Ref. | | 138 | 3.31±0.82 | Ref. | |
| >1 to<=2 | 43 | 3.5±0.84 | 0.25(-0.06,0.56) | 0.11 | 42 | 3.46±0.83 | 0.14(-0.14,0.43) | 0.32 |
| >2 | 9 | 3.58±1.22 | 0.34(-0.27,0.95) | 0.27 | 6 | 3.92±0.77 | 0.6(-0.07,1.28) | 0.08 |
| <-1 | 15 | 2.76±0.86 | -0.47(-0.94,0.01) | 0.06 | 16 | 3.19±1 | -0.12(-0.55,0.31) | 0.58 |
| ZWFL continuous | 0.19 (0.07, 0.31) | | | | 0.09 (-0.03, 0.22) | | | |
| total cholesterol (TC), mmol/L | | | | | | | | |
| -1 to 1 | 148 | 4.15±0.68 | Ref. | | 138 | 4.17±0.74 | Ref. | |
| >1 to<=2 | 43 | 4.15±0.67 | -0.04(-0.27,0.19) | 0.74 | 42 | 4.35±0.73 | 0.17(-0.08,0.43) | 0.19 |
| >2 | 9 | 4.11±0.45 | -0.07(-0.52,0.38) | 0.76 | 6 | 4.46±0.85 | 0.28(-0.32,0.88) | 0.36 |
| <-1 | 15 | 3.74±0.89 | -0.42(-0.77,-0.06) | 0.02 | 16 | 4.19±0.83 | 0.01(-0.37,0.39) | 0.95 |
| ZWFL continuous | 0.03 (-0.06,0.12) | | | | 0.07 (-0.04,0.18) | | | |
| Triglyceride, mmol/L | | | | | | | | |
| -1 to 1 | 148 | 1.12±0.71 | Ref. | | 138 | 1.02±0.58 | Ref. | |
| >1 to<=2 | 43 | 1.16±0.71 | 0.02(-0.22,0.25) | 0.90 | 42 | 1.04±0.42 | 0.01(-0.17,0.20) | 0.90 |
| >2 | 9 | 0.93±0.28 | -0.21(-0.67,0.25) | 0.37 | 6 | 1.36±0.65 | 0.34(-0.10,0.77) | 0.14 |
| <-1 | 15 | 0.94±0.54 | -0.18(-0.54,0.18) | 0.34 | 16 | 1.26±0.47 | 0.23(-0.05,0.51) | 0.11 |
| ZWFL continuous | 0.02 (-0.07,0.12) | | | | 0.01 (-0.07,0.10) | | | |
| HDL, mmol/L | | | | | | | | |
| -1 to 1 | 148 | 1.41±0.34 | Ref. | | 138 | 1.36±0.29 | Ref. | |
| >1 to<=2 | 43 | 1.41±0.38 | 0(-0.12,0.12) | 0.98 | 42 | 1.41±0.32 | 0.05(-0.05,0.15) | 0.35 |
| >2 | 9 | 1.49±0.46 | 0.08(-0.16,0.31) | 0.51 | 6 | 1.26±0.25 | -0.11(-0.34,0.13) | 0.38 |
| <-1 | 15 | 1.44±0.3 | 0.03(-0.15,0.22) | 0.74 | 16 | 1.36±0.28 | -0.01(-0.16,0.15) | 0.94 |
| ZWFL continuous | 0.00 (-0.04,0.05) | | | | 0.03 (-0.01,0.08) | | | |
| LDL, mmol/L | | | | | | | | |
| -1 to 1 | 148 | 2.34±0.5 | Ref. | | 138 | 2.39±0.58 | Ref. | |
| >1 to<=2 | 43 | 2.29±0.48 | -0.05(-0.22,0.11) | 0.52 | 42 | 2.48±0.49 | 0.08(-0.11,0.27) | 0.41 |
| >2 | 9 | 2.22±0.32 | -0.12(-0.45,0.21) | 0.48 | 6 | 2.57±0.52 | 0.18(-0.27,0.63) | 0.44 |
| <-1 | 15 | 2.09±0.52 | -0.25(-0.51,0.01) | 0.06 | 16 | 2.38±0.6 | -0.02(-0.31,0.26) | 0.88 |
| ZWFL continuous | -0.01 (-0.07,0.06) | | | | 0.03 (-0.05,0.12) | | | |

ZWFL: weight-for-length z-score; All models were adjusted for child age.

Table S2. Age-adjusted partial Pearson correlation coefficients between cardio-metabolic risk factors among term-born Chinese boys and girls aged 2 years

| | SBP (mmHg) | DBP (mmHg) | Glucose (mmol/L) | log(insulin), pmol/L | TC (mmol/L) | Triglyceride, mmol/L | HDL, mmol/L |
|--------------|---------------|---------------|---------------------|-------------------------|----------------|-------------------------|----------------|
| boys | | | | | | | |
| SBP | 1 | | | | | | |
| DBP | 0.69*** | 1 | | | | | |
| Glucose | -0.06 | -0.04 | 1 | | | | |
| log(insulin) | 0.16* | -0.02 | 0.43*** | 1 | | | |
| TC | -0.04 | -0.05 | -0.12 | 0.02 | 1 | | |
| TG | 0.04 | -0.01 | 0.11 | 0.05 | 0.09 | 1 | |
| HDL | 0.06 | 0.08 | -0.05 | 0.14 | 0.41*** | -0.21** | 1 |
| LDL | -0.12 | -0.10 | -0.12 | -0.02 | 0.91*** | -0.10 | 0.30*** |
| girls | | | | | | | |
| SBP | 1 | | | | | | |
| DBP | 0.61*** | 1 | | | | | |
| Glucose | 0.003 | 0.03 | 1 | | | | |
| log(insulin) | 0.09 | 0.14 | 0.26** | 1 | | | |
| TC | 0.07 | -0.01 | -0.046 | -0.10 | 1 | | |
| TG | 0.05 | 0.11 | 0.04 | 0.01 | 0.001 | 1 | |
| HDL | 0.04 | -0.03 | -0.08 | -0.08 | 0.41*** | -0.32*** | 1 |
| LDL | 0.04 | -0.05 | -0.03 | -0.09 | 0.94*** | -0.10 | 0.31*** |

* p < 0.05; ** p < 0.01; *** p < 0.001

TC: total cholesterol

Sample size varies from 558 to 424 in serum measures due to missing blood samples.