

**Table S1.** Characteristics among mothers who were in the cases and mothers who were excluded in the controls due to diagnosed congenital abnormalities after birth.

| Characteristics                                                          | Cases<br>(N = 474) | Excluded Controls<br>(N = 108) | <i>p</i> * |
|--------------------------------------------------------------------------|--------------------|--------------------------------|------------|
| Socio-demographic characteristics, <i>n</i> (%)                          |                    |                                |            |
| Maternal age ≥ 30 years                                                  | 159 (33.5)         | 38 (35.2)                      | 0.745      |
| Rural residence                                                          | 161 (34.0)         | 37 (34.3)                      | 0.954      |
| Maternal occupation, farmers                                             | 234 (49.5)         | 43 (39.8)                      | 0.073      |
| Maternal education, junior high school or below                          | 195 (41.1)         | 44 (40.7)                      | 0.939      |
| Nulliparity                                                              | 274 (57.8)         | 62 (57.4)                      | 0.940      |
| Maternal health-related factors during the first trimester, <i>n</i> (%) |                    |                                |            |
| Folate supplements use                                                   | 292 (61.6)         | 61 (56.5)                      | 0.325      |
| Anemia                                                                   | 80 (16.9)          | 17 (15.7)                      | 0.775      |
| Passive smoking                                                          | 159 (33.5)         | 42 (38.9)                      | 0.292      |
| Medication use                                                           | 197 (41.6)         | 44 (40.7)                      | 0.876      |
| Neonatal gender, male, <i>n</i> (%)                                      | 248 (52.3)         | 61 (56.5)                      | 0.434      |
| Daily nutrient intakes during pregnancy, mean (SD)                       |                    |                                |            |
| Energy (kcal)                                                            | 1860.5 (868.0)     | 1839.4 (879.6)                 | 0.775      |
| Folate (μg)                                                              | 219.4 (93.4)       | 215.4 (102.2)                  | 0.699      |
| Calcium (mg)                                                             | 421.9 (187.9)      | 388.1 (182.4)                  | 0.272      |
| Iron (mg)                                                                | 19.1 (8.7)         | 18.5 (8.9)                     | 0.628      |

\* Categorical variables are compared between groups by  $\chi^2$  test, and continuous variables are compared between groups by *t* test.

**Table S2.** Dietary pattern scores according to participant characteristics among the cases and controls.

| Characteristics                          | Prudent pattern<br>score <sup>1</sup> |         | Vegetarian pattern<br>score <sup>1</sup> |         | Dairy and egg pattern<br>score <sup>1</sup> |         |
|------------------------------------------|---------------------------------------|---------|------------------------------------------|---------|---------------------------------------------|---------|
|                                          | Case                                  | Control | Case                                     | Control | Case                                        | Control |
| <b>Socio-demographic characteristics</b> |                                       |         |                                          |         |                                             |         |
| <b>Maternal age (years)</b>              |                                       |         |                                          |         |                                             |         |
| < 30                                     | - 0.51                                | - 0.12  | - 0.06                                   | - 0.21  | - 0.56                                      | 0.18    |
| ≥ 30                                     | - 0.51                                | - 0.10  | - 0.04                                   | - 0.29  | - 0.46                                      | 0.15    |
| <i>p</i> <sup>2</sup>                    | 0.600                                 | 0.780   | 0.659                                    | 0.268   | 0.622                                       | 0.322   |
| <b>Residence</b>                         |                                       |         |                                          |         |                                             |         |
| Rural                                    | - 0.62                                | - 0.28  | - 0.01                                   | - 0.09  | - 0.70                                      | 0.06    |
| Urban                                    | - 0.27                                | - 0.03  | - 0.14                                   | - 0.30  | - 0.28                                      | 0.23    |
| <i>p</i> <sup>2</sup>                    | < 0.001                               | < 0.001 | 0.024                                    | 0.028   | < 0.001                                     | 0.007   |
| <b>Maternal occupation</b>               |                                       |         |                                          |         |                                             |         |
| Farmers                                  | - 0.63                                | - 0.21  | - 0.01                                   | - 0.23  | - 0.74                                      | 0.11    |
| Others                                   | - 0.41                                | - 0.08  | - 0.16                                   | - 0.37  | - 0.34                                      | 0.19    |
| <i>p</i> <sup>2</sup>                    | < 0.001                               | 0.012   | 0.023                                    | 0.029   | < 0.001                                     | 0.014   |
| <b>Maternal education</b>                |                                       |         |                                          |         |                                             |         |
| Junior high school or below              | - 0.69                                | - 0.28  | - 0.01                                   | - 0.11  | - 0.94                                      | 0.02    |
| Senior high school or above              | - 0.33                                | - 0.08  | - 0.11                                   | - 0.27  | - 0.31                                      | 0.23    |

|                                                                   |         |         |         |         |         |         |
|-------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|
| $p^2$                                                             | < 0.001 | < 0.001 | 0.033   | 0.018   | < 0.001 | 0.004   |
| <b>Parity</b>                                                     |         |         |         |         |         |         |
| 0                                                                 | - 0.44  | - 0.11  | - 0.07  | - 0.26  | - 0.36  | 0.22    |
| $\geq 1$                                                          | - 0.62  | - 0.22  | - 0.04  | - 0.23  | - 0.83  | 0.02    |
| $p^2$                                                             | 0.002   | 0.027   | 0.316   | 0.231   | < 0.001 | < 0.001 |
| <b>Maternal health-related factors during the first trimester</b> |         |         |         |         |         |         |
| <b>Folate supplements use</b>                                     |         |         |         |         |         |         |
| Yes                                                               | - 0.47  | - 0.11  | - 0.03  | - 0.29  | - 0.44  | 0.18    |
| No                                                                | - 0.56  | - 0.14  | - 0.07  | - 0.20  | - 0.60  | 0.16    |
| $p^2$                                                             | 0.102   | 0.540   | 0.091   | 0.509   | 0.071   | 0.339   |
| <b>Anemia</b>                                                     |         |         |         |         |         |         |
| Yes                                                               | - 0.51  | - 0.19  | - 0.04  | - 0.23  | - 0.63  | 0.11    |
| No                                                                | - 0.50  | - 0.11  | - 0.05  | - 0.26  | - 0.46  | 0.19    |
| $p^2$                                                             | 0.287   | 0.606   | 0.175   | 0.283   | 0.215   | 0.153   |
| <b>Passive smoking</b>                                            |         |         |         |         |         |         |
| Yes                                                               | - 0.55  | - 0.20  | - 0.03  | - 0.23  | - 0.58  | 0.14    |
| No                                                                | - 0.45  | - 0.11  | - 0.07  | - 0.27  | - 0.48  | 0.19    |
| $p^2$                                                             | 0.416   | 0.244   | 0.615   | 0.325   | 0.196   | 0.302   |
| <b>Medication use</b>                                             |         |         |         |         |         |         |
| Yes                                                               | - 0.55  | - 0.13  | - 0.03  | - 0.20  | - 0.48  | 0.14    |
| No                                                                | - 0.45  | - 0.15  | - 0.07  | - 0.29  | - 0.58  | 0.21    |
| $p^2$                                                             | 0.227   | 0.139   | 0.338   | 0.227   | 0.487   | 0.253   |
| <b>Neonatal gender</b>                                            |         |         |         |         |         |         |
| Male                                                              | - 0.48  | - 0.16  | - 0.08  | - 0.18  | - 0.52  | 0.16    |
| Female                                                            | - 0.56  | - 0.09  | - 0.03  | - 0.24  | - 0.53  | 0.18    |
| $p^2$                                                             | 0.088   | 0.170   | 0.846   | 0.161   | 0.742   | 0.818   |
| <b>Daily nutrient intakes during pregnancy<sup>3</sup></b>        |         |         |         |         |         |         |
| <b>Energy</b>                                                     |         |         |         |         |         |         |
| Tertile 1                                                         | - 0.74  | - 0.43  | - 0.39  | - 0.81  | - 0.84  | - 0.04  |
| Tertile 2                                                         | - 0.32  | - 0.07  | 0.10    | - 0.17  | - 0.39  | 0.36    |
| Tertile 3                                                         | 0.48    | 0.68    | 0.89    | 0.70    | 0.01    | 0.41    |
| $p^4$                                                             | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| <b>Folate</b>                                                     |         |         |         |         |         |         |
| Tertile 1                                                         | - 0.01  | - 0.08  | - 0.34  | - 0.18  | - 0.44  | - 0.21  |
| Tertile 2                                                         | - 0.06  | 0.23    | 0.14    | - 0.11  | - 0.57  | 0.46    |
| Tertile 3                                                         | 0.60    | 0.90    | 1.03    | 0.81    | 0.06    | 0.41    |
| $p^4$                                                             | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.017   | < 0.001 |
| <b>Calcium</b>                                                    |         |         |         |         |         |         |
| Tertile 1                                                         | - 0.69  | - 0.42  | - 0.27  | - 0.71  | - 0.85  | - 0.27  |
| Tertile 2                                                         | - 0.27  | - 0.13  | 0.10    | - 0.23  | 0.02    | 0.39    |
| Tertile 3                                                         | 0.58    | 0.58    | 0.61    | 0.43    | 0.03    | 0.66    |
| $p^4$                                                             | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| <b>Iron</b>                                                       |         |         |         |         |         |         |
| Tertile 1                                                         | - 0.70  | - 0.37  | - 0.39  | - 0.83  | - 0.73  | - 0.08  |
| Tertile 2                                                         | - 0.38  | - 0.16  | 0.08    | - 0.19  | - 0.35  | 0.41    |
| Tertile 3                                                         | 0.28    | 0.50    | 0.60    | 0.57    | - 0.29  | 0.32    |
| $p^4$                                                             | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.011   | < 0.001 |

<sup>1</sup>Values are mean dietary pattern scores obtained by principal component factor analysis and the scores are not adjusted for confounders.

<sup>2</sup>Mann-Whitney *U* test.

<sup>3</sup>Participants were grouped into three categories according to the tertiles of daily nutrient intake among the controls.

<sup>4</sup>Test for linear trend.