Supplementary material

Associations of dietary glycemic index and load during pregnancy with blood pressure, placental hemodynamic parameters and the risk of gestational hypertensive disorders.

Running title: Dietary glycemic index and load with gestational hypertensive disorders

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### Supplementary Table S1. Non-response analysis: characteristics of the total study population versus participating women without data on dietary intake

|                              | Total group (n=3,378) | Participants without data on dietary intake (n=506) | p-value<sup>b</sup> |
|------------------------------|-----------------------|---------------------------------------------------|---------------------|
| Maternal age at enrolment, years | 31.4 (4.4)            | 30.2 (5.3)                                        | <0.001              |
| Gestational age at intake, weeks | 13.5 (5.4-38.1)      | 14.1 (10.3-30.4)                                  | <0.001              |
| Parity, n nulliparous         | 2019 (59.9)           | 290 (57.8)                                        | 0.27                |
| Prepregnancy BMI, kg/m<sup>2</sup> | 23.1 (3.8)           | 23.1 (4.1)                                        | 0.12                |
| Prepregnancy BMI ≥25, n       | 636 (21.8)            | 96 (22.9)                                         |                     |
| Gestational weight gain, kg   | 10.8 (4.4)            | 11.2 (4.9)                                        | 0.06                |
| Education, n high             | 1985 (59.5)           | 229 (46.5)                                        | <0.001              |
| Smoking, n continued during pregnancy | 531 (17.0)   | 116 (25.7)                                        | <0.001              |
| Alcohol, n continued during pregnancy | 1559 (50.2) | 200 (44.5)                                        | 0.03                |
| Early-pregnancy, ≥1 glass per week | 830 (26.9) | 98 (21.9)                                         | 0.03                |
| Mid-pregnancy, ≥1 glass per week | 378 (12.3)           | 34 (8.9)                                          | 0.06                |
| Late-pregnancy, ≥1 glass per week | 444 (14.7)           | 45 (11.4)                                         | 0.08                |
| Folic acid supplement use, n yes | 2467 (89.1)         | 328 (82.2)                                        | <0.001              |
| Systolic blood pressure, mmHg |                      |                                                  |                     |
| Early-pregnancy               | 117.1 (11.8)          | 117.7 (12.2)                                      | 0.83                |
| Mid-pregnancy                 | 118.4 (11.7)          | 118.6 (10.9)                                      | 0.14                |
| Late-pregnancy                | 120.3 (11.4)          | 119.7 (11.4)                                      | 0.75                |
| Diastolic blood pressure, mmHg|                      |                                                  |                     |
| Early-pregnancy               | 68.4 (9.2)            | 68.0 (11.4)                                       | 0.88                |
| Mid-pregnancy                 | 67.1 (9.2)            | 66.0 (9.4)                                        | 0.29                |
| Late-pregnancy                | 69.3 (9.1)            | 68.0 (9.3)                                        | 0.70                |
| Uterine artery resistance index|                      |                                                  |                     |
| Mid-pregnancy                 | 0.535 (0.089)         | 0.545 (0.090)                                     | 0.72                |
| Late-pregnancy                | 0.483 (0.078)         | 0.480 (0.077)                                     | 0.72                |
| Umbilical artery pulsatility index|                  |                                                  |                     |
| Mid-pregnancy                 | 1.188 (0.183)         | 1.216 (0.180)                                     | 0.85                |
| Late-pregnancy                | 0.977 (0.166)         | 0.985 (0.180)                                     | 0.07                |
| Late-pregnancy uterine artery notching | 48 (2.2) | 2 (0.7)                                           | 0.07                |
| Gestational hypertensive disorders |                  |                                                  |                     |
| Gestational hypertension     | 166 (5.1)             | 24 (5.0)                                          | 0.74                |
| Preeclampsia                  | 58 (1.9)              | 8 (1.7)                                           | 0.80                |

Values are means (SD), median (95% range) or n (valid %). *Women of Dutch ethnicity enrolled during pregnancy with singleton live births without data on dietary intake. <sup>b</sup>p-values were obtained independent t-test or Mann-Whitney U-test for continuous variables and chi-square tests for categorical variables.
Supplementary Figure S2. Directed Acyclic Graph for confounder selection.
**Supplementary Table S2.** Longitudinal associations of glycemic index and load with systolic and diastolic blood pressure from repeated measurement models\(^a\)

| Systolic blood pressure in mmHg | Intercept | p-value\(^b\) | Slope (mmHg(95% CI)) | p-value\(^b\) |
|--------------------------------|-----------|---------------|----------------------|---------------|
| GI quartile 1                  | 111.89    | Reference     | Reference            | Reference     |
| GI quartile 2                  | 112.64    | 0.40          | 0.02                 | 0.64          |
| GI quartile 3                  | 113.88    | 0.03          | -0.01                | 0.83          |
| GI quartile 4                  | 112.68    | 0.38          | 0.04                 | 0.25          |
| GL quartile 1                  | 111.66    | <0.001        | Reference            |               |
| GL quartile 2                  | 113.27    | 0.07          | -0.05                | 0.14          |
| GL quartile 3                  | 112.36    | 0.43          | -0.01                | 0.85          |
| GL quartile 4                  | 113.72    | 0.02          | -0.04                | 0.29          |

| Diastolic blood pressure in mmHg | Intercept | p-value\(^b\) | Slope (mmHg(95% CI)) | p-value\(^b\) |
|---------------------------------|-----------|---------------|----------------------|---------------|
| GI quartile 1                   | 99.24     | Reference     | Reference            | Reference     |
| GI quartile 2                   | 98.99     | 0.72          | 0.03                 | 0.26          |
| GI quartile 3                   | 100.08    | 0.23          | 0.002                | 0.93          |
| GI quartile 4                   | 99.75     | 0.47          | 0.02                 | 0.34          |
| GL quartile 1                   | 98.96     | Reference     | Reference            | Reference     |
| GL quartile 2                   | 100.10    | 0.10          | -0.04                | 0.06          |
| GL quartile 3                   | 99.45     | 0.48          | -0.03                | 0.29          |
| GL quartile 4                   | 99.83     | 0.21          | -0.05                | 0.10          |

CI, Confidence interval. \(^a\)Values are based on repeated non-linear regression models and reflect the change in blood pressure in mmHg per glycemic index and glycemic load quartile compared to women with the highest dietary quality (quartile 1) as reference. Models are adjusted for gestational age at the time of intake. \(^b\)P-value reflects the significance level of the estimate.
**Supplementary table 3a.** Basic models: Associations of dietary glycemic index and load quartiles with systolic and diastolic blood pressure during pregnancy in total population (n=3,375)*.

| GI quartile | Early-pregnancy<sup>b</sup> | Mid-pregnancy<sup>b</sup> | Late-pregnancy<sup>b</sup> |
|-------------|-----------------------------|---------------------------|---------------------------|
| 1           | reference                    | reference                  | reference                  |
| 2           | 0.55 (0.69, 1.80)            | 1.47 (0.34, 2.60)*         | 1.20 (0.10, 2.30)*         |
| 3           | 1.66 (0.42, 2.90)*           | 2.00 (0.87, 3.13)*         | 1.63 (0.53, 2.72)*         |
| 4           | 1.03 (-0.21, 2.26)           | 1.85 (0.72, 2.98)*         | 1.83 (0.73, 2.94)*         |

| GL quartile | Early-pregnancy<sup>b</sup> | Mid-pregnancy<sup>b</sup> | Late-pregnancy<sup>b</sup> |
|-------------|-----------------------------|---------------------------|---------------------------|
| 1           | reference                    | reference                  | Reference                  |
| 2           | 1.09 (-0.14, 2.36)           | 0.62 (-0.52, 1.75)         | 0.03 (-1.07, 1.13)         |
| 3           | 0.98 (-0.25, 2.20)           | 0.39 (-0.75, 1.52)         | 0.57 (-0.53, 1.67)         |
| 4           | 2.07 (0.84, 3.31)*           | 0.98 (-0.16, 2.11)         | 1.12 (0.02, 2.22)*         |

| GI quartile | Early-pregnancy<sup>b</sup> | Mid-pregnancy<sup>b</sup> | Late-pregnancy<sup>b</sup> |
|-------------|-----------------------------|---------------------------|---------------------------|
| 1           | reference                    | reference                  | Reference                  |
| 2           | 0.17 (-0.79, 1.14)           | 0.38 (-0.52, 1.27)         | 0.67 (-0.23, 1.54)         |
| 3           | 0.58 (-0.38, 1.54)           | 1.36 (0.46, 2.25)*         | 0.63 (-0.25, 1.52)         |
| 4           | 0.83 (-0.13, 1.78)           | 1.29 (0.39, 2.18)*         | 0.96 (0.07, 1.84)*         |

| GL quartile | Early-pregnancy<sup>b</sup> | Mid-pregnancy<sup>b</sup> | Late-pregnancy<sup>b</sup> |
|-------------|-----------------------------|---------------------------|---------------------------|
| 1           | reference                    | reference                  | Reference                  |
| 2           | 0.55 (-0.41, 1.50)           | 0.33 (-0.56, 1.23)         | -0.47 (-1.36, 0.42)        |
| 3           | 0.27 (-0.68, 1.22)           | 0.10 (-0.80, 1.00)         | -0.44 (-1.33, 0.44)        |
| 4           | 0.63 (-0.33, 1.58)           | -0.08 (-0.98, 0.81)        | -0.39 (-1.28, 0.49)        |

CI, Confidence Interval. GI, glycemic index. GL, glycemic load. *Values are regression coefficients (95% confidence interval) and reflect the difference in mmHg blood pressure per glycemic index or glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. Estimates are from multiple imputed data. *Models are adjusted for gestational age at time of intake. *Tests for trend were based on multiple linear regression models with glycemic index and load as z-score. *P-value <0.05.
**Supplementary table 3b.** Confounder model: Associations of dietary glycemic index and load quartiles with systolic and diastolic blood pressure during pregnancy in total population (n=3,375)

|                      | Differences in systolic blood pressure in mmHg (95% CI) | Differences in diastolic blood pressure in mmHg (95% CI) |
|----------------------|----------------------------------------------------------|---------------------------------------------------------|
|                      | Early-pregnancy<sup>b</sup> | Mid-pregnancy<sup>b</sup> | Late-pregnancy<sup>b</sup> | Early-pregnancy<sup>b</sup> | Mid-pregnancy<sup>b</sup> | Late-pregnancy<sup>b</sup> |
|                      | n=2,802              | n=3,263                      | n=3,286                      | n=2,802              | n=3,262                      | n=3,285                      |
| GI quartile 1        | reference            | reference                    | reference                    | Reference            | Reference                    | Reference                    |
| GI quartile 2        | -0.03 (-1.20, 1.14) | 0.86 (-0.20, 1.92)           | 0.61 (-0.43, 1.66)           | 0.67 (-0.63, 1.96)  | 0.39 (-0.79, 1.58)           | 0.11 (-1.05, 1.27)           |
| GI quartile 3        | 0.75 (-0.42, 1.92)  | 1.00 (-0.07, 2.07)           | 0.79 (-0.26, 1.84)           | -0.10 (-1.63, 1.43) | -0.50 (-1.89, 0.90)          | 0.07 (-1.30, 1.44)           |
| GI quartile 4        | -0.22 (-1.41, 0.97) | 0.47 (-0.63, 1.56)           | 0.56 (-0.52, 1.64)           | 0.30 (-1.70, 2.29)  | -0.51 (-2.32, 1.31)          | 0.14 (-1.65, 1.92)           |
| GL quartile 1        | Reference            | reference                    | reference                    | Reference            | Reference                    | Reference                    |
| GL quartile 2        | 0.67 (-0.63, 1.96)  | 0.39 (-0.79, 1.58)           | 0.11 (-1.05, 1.27)           | 0.08 (-0.99, 0.82)  | 0.03 (-0.80, 0.86)           | 0.33 (-0.49, 1.15)           |
| GL quartile 3        | -0.10 (-1.63, 1.43) | -0.50 (-1.89, 0.90)          | 0.07 (-1.30, 1.44)           | 0.24 (-0.67, 1.14)  | 0.80 (-0.04, 1.64)           | 0.27 (-0.56, 1.10)           |
| GL quartile 4        | 0.30 (-1.70, 2.29)  | -0.51 (-2.32, 1.31)          | 0.14 (-1.65, 1.92)           | 0.48 (-0.44, 1.40)  | 0.69 (-0.17, 1.54)           | 0.49 (-0.37, 1.34)           |

CI, Confidence Interval. GI, glycemic index. GL, glycemic load. *Values are regression coefficients (95% confidence interval) and reflect the difference in mmHg blood pressure per glycemic index and glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. Estimates are from multiple imputed data. Models are adjusted for maternal age, ethnicity, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use and gestational age at time of the measurements. *P-value <0.05.
**Supplementary table 4a.** Basic models: Associations of dietary glycemic index and load quartiles with umbilical artery pulsatility index, uterine artery resistance index and bilateral notching in total population (n=3,090).a.

| Differences in UmPIb (95% CI) | Differences in UtR Ib (95% CI) | Bilateral notchingb (95% CI) |
|-------------------------------|-------------------------------|-----------------------------|
|                               | Mid-pregnancy n=2,505         | Late-pregnancy n=2,751      | Mid-pregnancy n=1,884       | Late-pregnancy n=2,060 | Late-pregnancy ncases=48 |
| GI quartile 1                 | reference                     | reference                   | reference                   | Reference               |                              |
| GI quartile 2                 | 0.015 (-0.005, 0.035)         | 0.001 (-0.016, 0.019)       | -0.008 (-0.019, 0.003)     | -0.004 (-0.013, 0.006)  | 0.72 (0.33, 1.58)           |
| GI quartile 3                 | 0.018 (-0.002, 0.039)         | 0.011 (-0.006, 0.029)       | -0.007 (-0.018, 0.004)     | -0.005 (-0.014, 0.005)  | 0.41 (0.16, 1.06)           |
| GI quartile 4                 | 0.003 (-0.017, 0.023)         | 0.016 (-0.002, 0.033)       | -0.007 (-0.018, 0.005)     | -0.003 (-0.013, 0.006)  | 1.12 (0.55, 2.29)           |
| GL quartile 1                 | reference                     | reference                   | reference                   | reference               |                              |
| GL quartile 2                 | -0.002 (-0.022, 0.018)        | -0.023 (-0.041, -0.006)*    | -0.005 (-0.016, 0.006)     | -0.003 (-0.012, 0.007)  | 0.99 (0.44, 2.23)           |
| GL quartile 3                 | -0.001 (-0.021, 0.019)        | -0.015 (-0.033, 0.002)      | 0.005 (-0.006, 0.016)      | 0.005 (-0.005, 0.014)   | 1.23 (0.57, 2.69)           |
| GL quartile 4                 | -0.006 (-0.026, 0.015)        | 0.000 (-0.018, 0.018)       | -0.003 (-0.015, 0.009)     | -0.001 (-0.011, 0.008)  | 0.90 (0.39, 2.10)           |

UmPI, umbilical artery pulsatility index. UtRI, uterine artery resistance index. CI, Confidence Interval. GI, glycemic index. GL, glycemic load. *Values are regression coefficients (95% confidence interval) and reflect differences in umbilical artery pulsatility index and uterine artery resistance index per glycemic index and glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. †Values are odds ratios (95% confidence interval) that reflect difference in risks of bilateral notching per glycemic index an glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. Estimates are from multiple imputed data. ‡Models are adjusted for gestational age at time of intake. *P-value <0.05.
Supplementary table 4b. Confounder models: Associations of dietary glycemic index and load quartiles with umbilical artery pulsatility index, uterine artery resistance index and bilateral notching in total population (n=3,090)\textsuperscript{a}.

|                  | Differences in UmPI\textsuperscript{a} (95% CI) | Differences in UtRI\textsuperscript{a} (95% CI) | Bilateral notching\textsuperscript{b} (95% CI) |
|------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
|                  | Mid-pregnancy n=2,505 | Late-pregnancy n=2,751 | Mid-pregnancy n=1,884 | Late-pregnancy n=2,060 | Late-pregnancy n\textsubscript{cases}=48 |
| GI quartile 1    | reference | reference | reference | reference | reference | |
| GI quartile 2    | 0.011 (-0.009, 0.030) | 0.000 (-0.017, 0.018) | -0.008 (-0.019, 0.003) | -0.003 (-0.013, 0.006) | 0.71 (0.32, 1.53) |
| GI quartile 3    | 0.012 (-0.008, 0.032) | 0.007 (-0.011, 0.024) | -0.007 (-0.018, 0.004) | -0.006 (-0.015, 0.004) | 0.39 (0.15, 1.04) |
| GI quartile 4    | -0.005 (-0.025, 0.015) | 0.010 (-0.008, 0.028) | -0.008 (-0.019, 0.004) | -0.005 (-0.015, 0.005) | 1.06 (0.53, 2.10) |
| GL quartile 1    | reference | reference | reference | reference | reference | |
| GL quartile 2    | -0.001 (-0.023, 0.021) | -0.017 (-0.037, 0.002) | -0.008 (-0.020, 0.005) | -0.009 (-0.019, 0.001) | 1.05 (0.42, 2.59) |
| GL quartile 3    | -0.006 (-0.032, 0.020) | -0.012 (-0.035, 0.011) | 0.000 (-0.015, 0.015) | -0.007 (-0.020, 0.005) | 1.33 (0.46, 3.87) |
| GL quartile 4    | -0.014 (-0.047, 0.020) | 0.003 (-0.027, 0.032) | -0.011 (-0.030, 0.008) | -0.019 (-0.036, -0.003)* | 0.98 (0.24, 4.04) |

UmPI, umbilical artery pulsatility index. UtRI, uterine artery resistance index. CI, Confidence Interval. GI, glycemic index. GL, glycemic load. \textsuperscript{a}Values are regression coefficients (95% confidence interval) and reflect differences in umbilical artery pulsatility index and uterine artery resistance index per glycemic index and glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. \textsuperscript{b}Values are odds ratios (95% confidence interval) that reflect difference in risks of bilateral notching per glycemic index an glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. Estimates are from multiple imputed data. \textsuperscript{*}Models are adjusted for maternal age, ethnicity, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use and gestational age at time of the measurements. \textsuperscript{*}P-value <0.05.
**Supplementary table 5a.** Basic models: Associations of dietary glycemic index and load quartiles with hypertensive disorder of pregnancy, gestational hypertension and preeclampsia in total population (n=3,299)*.

|                        | Gestational hypertensive disorders\(^b\) | Gestational hypertension\(^b\) | Preeclampsia\(^b\) |
|------------------------|-----------------------------------------|---------------------------------|-------------------|
|                        | Odds ratio (95% CI)                      | Odds ratio (95% CI)             | Odds ratio (95% CI) |
| n\(_{cases}\)=224     | n\(_{cases}\)=166                       | n\(_{cases}\)=58               |
| GI quartile 1          | reference                                | reference                       | reference         |
| GI quartile 2          | 1.03 (0.70, 1.52)                        | 1.18 (0.76, 1.84)               | 0.69 (0.32, 1.49) |
| GI quartile 3          | 1.06 (0.72, 1.56)                        | 1.03 (0.65, 1.63)               | 1.14 (0.58, 2.25) |
| GI quartile 4          | 1.07 (0.72, 1.57)                        | 1.16 (0.75, 1.82)               | 0.83 (0.40, 1.74) |
| GL quartile 1          | reference                                | reference                       | reference         |
| GL quartile 2          | 1.06 (0.72, 1.56)                        | 1.35 (0.86, 2.12)               | 0.50 (0.22, 1.11) |
| GL quartile 3          | 1.04 (0.71, 1.54)                        | 1.18 (0.74, 1.87)               | 0.78 (0.39, 1.58) |
| GL quartile 4          | 1.15 (0.78, 1.68)                        | 1.25 (0.79, 1.98)               | 0.95 (0.48, 1.85) |

CI, Confidence Interval. GI, glycemic index. GL, glycemic load. *Values are odds ratios (95% confidence interval) that reflect difference in risks of Gestational hypertensive disorders, gestational hypertension and preeclampsia per glycemic index and glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. Estimates are from multiple imputed data. \(^b\)Models are adjusted for gestational age at time of intake. \(^*\)P-value <0.05.
**Supplementary table 5b.** Confounder models: Associations of dietary glycemic index and load quartiles with hypertensive disorder of pregnancy, gestational hypertension and preeclampsia in total population (n=3,299)*.

| Gestational hypertensive disorders* | Gestational hypertension* | Preeclampsia* |
|-------------------------------------|----------------------------|---------------|
| Odds ratio (95% CI)                 | Odds ratio (95% CI)         | Odds ratio (95% CI) |
| n_cases=224                        | n_cases=166                 | n_cases=58     |
| GI quartile 1                       | reference                   | reference      | reference      |
| GI quartile 2                       | 1.00 (0.67, 1.48)           | 1.12 (0.71, 1.76) | 0.68 (0.31, 1.50) |
| GI quartile 3                       | 0.97 (0.65, 1.45)           | 0.91 (0.57, 1.47) | 1.09 (0.54, 2.21) |
| GI quartile 4                       | 1.03 (0.68, 1.54)           | 1.10 (0.69, 1.77) | 0.84 (0.39, 1.81) |
| GL quartile 1                       | reference                   | reference      | reference      |
| GL quartile 2                       | 1.10 (0.70, 1.71)           | 1.50 (0.90, 2.51) | 0.41 (0.17, 0.98)* |
| GL quartile 3                       | 1.05 (0.63, 1.77)           | 1.35 (0.73, 2.48) | 0.55 (0.21, 1.40) |
| GL quartile 4                       | 1.14 (0.57, 2.24)           | 1.54 (0.70, 3.41) | 0.51 (0.15, 1.78) |

CI, Confidence Interval. GI, glycemic index. GL, glycemic load. *Values are odds ratios (95% confidence interval) that reflect difference in risks of Gestational hypertensive disorders, gestational hypertension and preeclampsia per glycemic index and glycemic load quartile. Groups are compared to women with the highest dietary quality (quartile 1) as reference. Estimates are from multiple imputed data. *Models are adjusted for maternal age, ethnicity, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use and gestational age at time of the measurements. *P*-value <0.05.
**Supplementary table 6a.** Sensitivity analysis: Associations of dietary glycemic index with clinical cut-off for low- and normal-glycemic diet with systolic and diastolic blood pressure during pregnancy (n=3,374)*.

|                      | Differences in systolic blood pressure in mmHg (CI 95%) |                      | Differences in diastolic blood pressure in mmHg (CI 95%) |
|----------------------|----------------------------------------------------------|----------------------|----------------------------------------------------------|
|                      | Early-pregnancy                                         | Mid-pregnancy        | Late-pregnancy                                           |
| Normal-GI            | reference n=1938                                        | reference n=2238     | reference n=2262                                        |
| Low-GI               | Basic model\(^b\)                                       |                      | Lifestyle model\(^c\)                                    |                      |
|                      | -0.92 (-1.87, 0.03)                                     | -1.58 (-2.45, -0.72)*| -1.18 (-2.02, -0.34)*                                   |
|                      | n=863                                                    | -0.63 (1.45, -1.19)  | -0.36 (-1.17, 0.45)                                     |
|                      |                                                          |                      | n=1024                                                   |
|                      |                                                          |                      |                                                          |
|                      | -0.61 (-1.35, 0.12)                                     | -1.03 (0.34, 1.71)*  | -0.64 (-1.32, 0.03)                                     |
|                      | n=863                                                    |                      |                                                          |

**GI,** glycemic index. *Values are regression coefficients (95% confidence interval) and reflect the difference in mmHg blood pressure of a low-glycemic index diet compared to women with a normal-glycemic index diet as reference. Estimates are from multiple imputed data. \(^b\)Basic models are adjusted for gestational age at time of intake. \(^c\)Confounder models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. \(^*\)P-value <0.05.
Supplementary table 6b. Sensitivity analysis: Associations of dietary glycemic index with clinical cut-off for low- and normal-glycemic diet with umbilical artery pulsatility index, uterine artery resistance index and bilateral notching (n=3,089) a.

|                      | Differences in UmPI (95% CI)a | Differences in UtRI (95% CI)a | Bilateral notching (95% CI)b |
|----------------------|-------------------------------|-------------------------------|-------------------------------|
|                      | Mid-pregnancy                 | Late-pregnancy                | Mid-pregnancy                 | Late-pregnancy                | Late-pregnancy                |
| Normal-GI            | reference                     | reference                     | reference                     | reference                     | reference                     |
|                      | n=1,706                       | n=1,897                       | n=1,255                       | n=1,409                       | n=cases=30                    |
| Low-GI               | Basic model -0.006 (-0.021, 0.009) | -0.006 (-0.007, 0.020)       | 0.006 (-0.003, 0.014)        | 0.005 (-0.002, 0.012)        | 1.32 (0.73, 2.39)             |
|                      | n=799                         | n=853                         | n=629                         | n=651                         | n_cases=18                    |
|                      | Lifestyle model -0.001 (-0.017, 0.014) | -0.001 (-0.014, 0.013)       | 0.006 (-0.003, 0.014)        | 0.006 (-0.001, 0.013)        | 1.41 (0.77, 2.60)             |

UmPI, umbilical artery pulsatility index. UtRI, uterine artery resistance index. CI, Confidence Interval. GI, glycemic index. aValues are regression coefficients (95% confidence interval) and reflect the differences in umbilical artery pulsatility index and uterine artery resistance index of women with a low-glycemic index diet compared to women with a normal-glycemic index diet as reference. Estimates are from multiple imputed data. bValues are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the differences in risks of bilateral notching of women with a normal-glycemic index diet compared to women with a low-glycemic index diet as reference. Estimates are from multiple imputed data. cBasic models are adjusted for gestational age at time of intake. dConfounder models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. *P-value <0.05.
Supplementary table 6c. Sensitivity analysis: Associations of dietary glycemic index with clinical cut-off for low and normal glycemic diet with hypertensive disorder of pregnancy, gestational hypertension and preeclampsia (n=3,298) a.

|                     | Gestational hypertensive disorders | Gestational hypertension | Preeclampsia |
|---------------------|-----------------------------------|---------------------------|--------------|
|                     | OR (95% CI)                        | OR (95% CI)               | OR (95% CI)  |
| Normal-GI n=2,262  | reference                         | reference                 | reference    |
|                     | n_cases=155                       | n_cases=115               | n_cases=40   |
| Low-GI n=1,036     | Basic model b                     | 0.97 (0.73, 1.30)         | 0.97 (0.69, 1.36) | 0.97 (0.56, 1.71) |
|                     | Lifestyle model c                 | 1.03 (0.75, 1.40)         | 1.05 (0.74, 1.50) | 0.98 (0.55, 1.74) |
|                     | n_cases=69                        | n_cases=51                | n_cases=18   |

OR, odds ratio. CI, Confidence Interval. GI, glycemic index. aValues are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the difference in risks of gestational hypertensive disorders, gestational hypertension and preeclampsia of women with a low-glycemic index diet compared to women with a normal-glycemic index diet as reference. Estimates are from multiple imputed data. bBasic models are adjusted for gestational age at time of intake. cConfounder models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. *P-value <0.05.
Supplementary table 7a. Sensitivity analysis: Associations of dietary glycemic index and load with systolic and diastolic blood pressure during pregnancy in population with BMI≥25 (n=766).

| Glycemic index (SDS) | Differences in systolic blood pressure in mmHg (CI 95%) | Differences in diastolic blood pressure in mmHg (CI 95%) |
|----------------------|--------------------------------------------------------|--------------------------------------------------------|
|                      | Early-pregnancy (n=623)          | Mid-pregnancy (n=728)          | Late-pregnancy (n=741)          |
| Basic models$^b$     | -0.22 (-1.23, 0.80)              | -0.16 (-1.09, 0.76)              | 0.23 (-0.69, 1.16)              |
| Socio-demographic models$^c$ | -0.39 (-1.36, 0.68)              | -0.46 (-1.39, 0.47)              | -0.08 (-1.01, 0.86)              |
| Lifestyle models$^d$  | -0.32 (-1.32, 0.68)              | -0.45 (-1.36, 0.46)              | -0.18 (-1.09, 0.74)              |

| Glycemic load (SDS) | Differences in systolic blood pressure in mmHg (CI 95%) | Differences in diastolic blood pressure in mmHg (CI 95%) |
|---------------------|--------------------------------------------------------|--------------------------------------------------------|
|                      | Early-pregnancy (n=623)          | Mid-pregnancy (n=728)          | Late-pregnancy (n=741)          |
| Basic models$^b$     | 1.11 (0.13, 2.08)$^*$            | 0.25 (-0.66, 1.15)              | 0.79 (-0.06, 1.64)              |
| Socio-demographic models$^c$ | 0.98*(0.005, 1.96)$^*$            | 0.07 (-0.82, 0.96)              | 0.64 (-0.19, 1.47)              |
| Lifestyle models$^e$  | -0.10(-2.04, 1.84)              | -1.29 (-3.00, 0.42)              | -0.90 (-2.53, 0.74)              |

SDS, standard deviation score. CI, Confidence Interval. $^*$Values are regression coefficients (95% confidence interval) from multiple linear regression models and reflect the differences in mmHg blood pressure per one increase in standard deviation score of maternal glycemic index and glycemic load. Estimates are from multiple imputed data. $^b$Basic models are adjusted for gestational age at time of intake. $^c$Socio-demographic models are adjusted for maternal age, educational level, parity and gestational age at time of measurements. $^d$Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. $^*$P-value <0.05.
**Supplementary table 7b.** Sensitivity analysis: Associations of dietary glycemic index and load with umbilical artery pulsatility index, uterine artery resistance index and bilateral notching in population with BMI≥25 (n=766).

| Glycemic index (SDS) | Differences in UmPI (95% CI) | Differences in UtRI (95% CI) | Bilateral notching (95% CI) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
|                     | Mid-pregnancy n=547         | Late-pregnancy n=609        | Mid-pregnancy n=380         | Late-pregnancy n=459         | Late-pregnancy n=459         |
| Basic model^c        | -0.010 (-0.027, 0.007)      | 0.019 (0.005, 0.033)*       | 0.003 (-0.007, 0.013)       | 0.005 (-0.003, 0.012)       | 0.92 (0.44, 1.90)           |
| Socio-demographic models^d | -0.009 (-0.025, 0.008) | 0.018 (0.004, 0.032)* | 0.004 (-0.007, 0.014) | 0.004 (-0.003, 0.012) | 0.94 (0.46, 1.91) |
| Lifestyle models^e   | -0.012 (-0.029, 0.005)      | 0.016 (0.002, 0.030)*       | 0.003 (-0.008, 0.013)       | 0.004 (-0.004, 0.012)       | 0.86 (0.43, 1.83)           |

| Glycemic load (SDS) | Differences in UmPI (95% CI) | Differences in UtRI (95% CI) | Bilateral notching (95% CI) |
|---------------------|-----------------------------|-----------------------------|-----------------------------|
|                     | Mid-pregnancy n=547         | Late-pregnancy n=609        | Mid-pregnancy n=380         | Late-pregnancy n=459         | Late-pregnancy n=459         |
| Basic model^c        | -0.010 (-0.026, 0.007)      | 0.011 (-0.003, 0.025)       | -0.001 (-0.011, 0.010)      | 0.005 (-0.002, 0.013)       | 0.81 (0.39, 1.66)           |
| Socio-demographic models^d | -0.007 (-0.022, 0.009) | 0.011 (-0.003, 0.025) | 0.001 (-0.010, 0.011) | 0.006 (-0.002, 0.014) | 0.80 (0.38, 1.68) |
| Lifestyle models^e   | -0.031 (-0.064, 0.002)      | 0.016 (-0.013, 0.044)       | 0.007 (-0.015, 0.029)       | 0.004 (-0.012, 0.020)       | 0.86 (0.17, 4.25)           |

SDS, standard deviation score. CI, Confidence Interval. UmPI, umbilical artery pulsatility index. UtRI, uterine artery resistance index. *Values are regression coefficients (95% confidence interval) from multiple linear regression models and reflect the differences in umbilical artery pulsatility index and uterine artery resistance index per one increase in standard deviation score of maternal glycemic index and glycemic load. Estimates are from multiple imputed data. Values are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the difference in risks of bilateral notching per one increase in standard deviation score of maternal glycemic index and load. Estimates are from multiple imputed data. Basic models are adjusted for gestational age at time of intake. Socio-demographic models are adjusted for maternal age, educational level, parity and gestational age at time of measurements. *Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. *P-value <0.05.
**Supplementary table 7c.** Sensitivity analysis: Associations of dietary glycemic index and load with hypertensive disorder of pregnancy, gestational hypertension and preeclampsia in population with BMI≥25 (n=766).

| Glycemic index (SDS) | Gestational hypertensive disorders<sup>b</sup> | Gestational hypertension<sup>b</sup> | Preeclampsia<sup>b</sup> |
|---------------------|---------------------------------------------|----------------------------------|----------------------|
|                     | Odds ratio (95% CI) | Odds ratio (95% CI) | Odds ratio (95% CI) |
| Basic model<sup>c</sup> | n<sub>cases</sub>=89 | n<sub>cases</sub>=74 | n<sub>cases</sub>=15 |
| Glycemic index (SDS) | 0.81 (0.63, 1.03) | 0.71 (0.58, 0.98)<sup>*</sup> | 1.08 (0.60, 1.94) |
| Socio-demographic models<sup>d</sup> | 0.85 (0.66, 1.10) | 0.80 (0.61, 1.06) | 1.14 (0.61, 2.14) |
| Lifestyle models<sup>e</sup> | 0.84 (0.64, 1.10) | 0.80 (0.60, 1.07) | 1.07 (0.53, 2.16) |
| Glycemic load (SDS) | Odds ratio (95% CI) | Odds ratio (95% CI) | Odds ratio (95% CI) |
| Basic model<sup>c</sup> | n<sub>cases</sub>=89 | n<sub>cases</sub>=74 | n<sub>cases</sub>=15 |
| Glycemic load (SDS) | 1.00 (0.80, 1.26) | 0.95 (0.74, 1.22) | 1.27 (0.77, 2.10) |
| Socio-demographic models<sup>d</sup> | 1.04 (0.82, 1.32) | 0.98 (0.76, 1.27) | 1.34 (0.80, 2.24) |
| Lifestyle models<sup>e</sup> | 0.95 (0.57, 1.59) | 0.86 (0.50, 1.48) | 1.38 (0.38, 5.03) |

SDS, standard deviation score. CI, Confidence Interval. Values are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the difference in risks of gestational hypertensive disorders, gestational hypertension and preeclampsia per one increase in standard deviation score of maternal glycemic index and glycemic load. Estimates are from multiple imputed data. Basic models are adjusted for gestational age at time of intake. Socio-demographic models are adjusted for maternal age, educational level, parity and gestational age at time of intake. Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of intake. *P-value <0.05.
Supplementary table 8a. Sensitivity analysis: Associations of dietary glycemic index and load with systolic and diastolic blood pressure during pregnancy in population with study enrollment <14 weeks of gestation (n=1,867).

| Glycemic index (SDS) | Differences in systolic blood pressure in mmHg (CI 95%) |        |        |
|----------------------|----------------------------------------------------------|--------|--------|
|                      | Early-pregnancy                                         | Mid-pregnancy | Late-pregnancy |
|                      | (n=1,848)                                                | (n=1,833) | (n=1,821) |
| Basic models<sup>b</sup> | 0.12 (-0.43, 0.67)                                    | 0.34 (-0.21, 0.89) | 0.32 (-0.22, 0.85) |
| Socio-demographic models<sup>c</sup> | -0.06 (-0.61, 0.50)                                   | 0.10 (-0.45, 0.65) | 0.12 (-0.42, 0.65) |
| Lifestyle models<sup>d</sup> | -0.17 (-0.70, 0.36)                                    | -0.02 (-0.54, 0.51) | 0.06 (-0.46, 0.58) |

| Differences in diastolic blood pressure in mmHg (CI 95%) |
|----------------------------------------------------------|
| Early-pregnancy                                         | Mid-pregnancy | Late-pregnancy |
| (n=1,848)                                                | (n=1,832) | (n=1,820) |
| Basic models<sup>b</sup> | 0.32 (-0.11, 0.75)                                    | 0.51 (0.07, 0.95)* | 0.30 (-0.13, 0.72) |
| Socio-demographic models<sup>c</sup> | 0.29 (-0.14, 0.73)                                   | 0.41 (-0.02, 0.83) | 0.24 (-0.19, 0.67) |
| Lifestyle models<sup>d</sup> | 0.31 (-0.09, 0.72)                                    | 0.42 (0.001, 0.83) | 0.27 (-0.13, 0.67) |

| Glycemic load (SDS) | Differences in systolic blood pressure in mmHg (CI 95%) |        |        |
|---------------------|----------------------------------------------------------|--------|--------|
|                      | Early-pregnancy                                         | Mid-pregnancy | Late-pregnancy (n=1,820) |
|                      | (n=1,848)                                                | (n=1,833) | |
| Basic models<sup>b</sup> | 0.57 (0.03, 1.12)*                                      | 0.50 (-0.05, 1.04) | 0.36 (-0.16, 0.88) |
| Socio-demographic models<sup>c</sup> | 0.59 (0.05, 1.13)*                                      | 0.50 (-0.04, 1.03) | 0.36 (-0.16, 0.88) |
| Lifestyle models<sup>d</sup> | -0.11 (-1.14, 0.92)                                     | -0.09 (-1.11, 0.92) | -0.02 (-1.02, 0.97) |

| Differences in diastolic blood pressure in mmHg (CI 95%) |
|----------------------------------------------------------|
| Early-pregnancy                                         | Mid-pregnancy | Late-pregnancy (n=1,820) |
| (n=1,848)                                                | (n=1,832) | |
| Basic models<sup>b</sup> | 0.24 (-0.19, 0.66)                                     | 0.16 (-0.27, 0.59) | -0.02 (-0.45, 0.40) |
| Socio-demographic models<sup>c</sup> | 0.25 (-0.17, 0.67)                                     | 0.17 (-0.26, 0.60) | 0.01 (-0.41, 0.42) |
| Lifestyle models<sup>d</sup> | 0.96 (0.17, 1.75)*                                     | 0.87 (0.07, 1.67)* | 0.53 (-0.24, 1.31) |

SDS, standard deviation score. CI, Confidence Interval. *Values are regression coefficients (95% confidence interval) from multiple linear regression models and reflect the differences in mmHg blood pressure per one increase in standard deviation score of maternal glycemic index and glycemic load during early-pregnancy. Estimates are from multiple imputed data. *Basic models are adjusted for gestational age at time of intake. *Socio-demographic models are adjusted for maternal age, educational level, parity and gestational age at time of measurements. *Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. *P-value <0.05.
**Supplementary table 8b.** Sensitivity analysis: Associations of dietary glycemic index and load with uterine artery resistance index, umbilical artery pulsatility index and bilateral notching in population with study enrollment <14 weeks of gestation (n=1,867).

|                          | Differences in UmPI (95% CI)a | Differences in UtRI (95% CI)a | Bilateral notching (95% CI)b |
|--------------------------|-------------------------------|-------------------------------|-----------------------------|
| **Glycemic index (SDS)** |                               |                               |                             |
| Basic modelc             | 0.000 (-0.010, 0.009)         | 0.003 (-0.005, 0.011)         | 0.001 (-0.006, 0.003)       |
| Socio-demographic modelsd| -0.002 (-0.011, 0.008)        | 0.001 (-0.007, 0.009)         | 0.001 (-0.005, 0.004)       |
| Lifestyle models e        | -0.003 (-0.013, 0.006)        | 0.000 (-0.009, 0.008)         | 0.001 (-0.008, 0.003)       |
| **Glycemic load (SDS)**  |                               |                               |                             |
| Basic modelc             | -0.003 (-0.012, 0.007)        | -0.005 (-0.014, 0.003)        | 0.001 (-0.004, 0.005)       |
| Socio-demographic modelsd| -0.002 (-0.011, 0.007)        | -0.005 (-0.013, 0.003)        | 0.002 (-0.003, 0.008)       |
| Lifestyle models e        | -0.008 (-0.026, 0.010)        | -0.004 (-0.020, 0.012)        | -0.011 (-0.019, -0.002)*    |

SDS, standard deviation score. CI, Confidence Interval. UmPI, umbilical artery pulsatility index. UtRI, uterine artery resistance index. aValues are regression coefficients (95% confidence interval) from multiple linear regression models and reflect the differences in umbilical artery pulsatility index and uterine artery resistance index per one increase in standard deviation score of maternal glycemic index and glycemic load during early-pregnancy. Estimates are from multiple imputed data. bValues are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the difference in risks of bilateral notching per one increase in standard deviation score of maternal glycemic index and glycemic load during early-pregnancy. Estimates are from multiple imputed data. cBasic models are adjusted for gestational age at time of intake. dSocio-demographic models are adjusted for maternal age, educational level, parity and gestational age at time of measurements. eLifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. *P-value <0.05.
Supplementary table 8c. Sensitivity analysis: Associations of dietary glycemic index and load with hypertensive disorder of pregnancy, gestational hypertension and preeclampsia in population with study enrollment <14 weeks of gestation (n=1,867) a.

| Glycemic index (SDS) | Gestational hypertensive disorders b | Gestational hypertension b | Preeclampsia b |
|----------------------|-------------------------------------|--------------------------|-------------|
|                      | Odds ratio (95% CI) n cases=119     | Odds ratio (95% CI) n cases=91     | Odds ratio (95% CI) n cases=28 |
| Basic model c         | 1.01 (0.84, 1.23)                   | 1.06 (0.85, 1.31)           | 0.88 (0.60, 1.30) |
| Socio-demographic models d | 1.01 (0.83, 1.24)                   | 1.07 (0.85, 1.35)           | 0.84 (0.56, 1.27) |
| Lifestyle models c    | 1.01 (0.84, 1.22)                   | 1.06 (0.85, 1.32)           | 0.87 (0.60, 1.25) |
| Glycemic load (SDS)   | Odds ratio (95% CI) n cases=119     | Odds ratio (95% CI) n cases=91     | Odds ratio (95% CI) n cases=28 |
| Basic model c         | 1.04 (0.86, 1.25)                   | 1.04 (0.84, 1.28)           | 1.06 (0.73, 1.53) |
| Socio-demographic models d | 1.05 (0.87, 1.27)                   | 1.05 (0.85, 1.29)           | 1.10 (0.76, 1.59) |
| Lifestyle models c    | 1.04 (0.71, 1.55)                   | 1.25 (0.80, 1.94)           | 0.59 (0.26, 1.33) |

SDS, standard deviation score. CI, Confidence Interval. Values are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the difference in risks of gestational hypertensive disorders, gestational hypertension and preeclampsia per one increase in standard deviation score of maternal glycemic index and glycemic load during early-pregnancy. Estimates are from multiple imputed data. Basic models are adjusted for gestational age at time of intake. Socio-demographic models are adjusted for maternal age, educational level, parity and gestational age at time of measurements. Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of intake. *P-value <0.05.
**Supplementary Table S9a.** Sensitivity analysis: Associations of dietary glycemic index and glycemic load with systolic and diastolic blood pressure during pregnancy in complete cases.

| Glycemic index (SDS) | Differences in systolic blood pressure in mmHg (CI 95%) | Differences in diastolic blood pressure in mmHg (CI 95%) |
|----------------------|--------------------------------------------------------|--------------------------------------------------------|
|                      | Early-pregnancy                                         | Mid-pregnancy                                          | Late-pregnancy                                        |
|                      | Basic models\(^b\)                                     | Basic models\(^b\)                                     | Basic models\(^b\)                                     |
|                      | 0.38 (-0.06, 0.82)                                     | 0.51 (0.11, 0.91)*                                     | 0.58 (0.19, 0.97)*                                     |
|                      | n=2,802                                                 | n=3,263                                                 | n=3,286                                                 |
|                      | Lifestyle models\(^c\)                                 | Lifestyle models\(^c\)                                 | Lifestyle models\(^c\)                                 |
|                      | -0.03 (-0.52, 0.46)                                    | -0.13 (-0.58, 0.32)                                    | 0.10 (-0.35, 0.54)                                    |
|                      | n=2,052                                                 | n=2,357                                                 | n=2,394                                                 |

| Glycemic load (SDS) | Differences in systolic blood pressure in mmHg (CI 95%) | Differences in diastolic blood pressure in mmHg (CI 95%) |
|---------------------|--------------------------------------------------------|--------------------------------------------------------|
|                     | Early-pregnancy                                         | Mid-pregnancy                                          | Late-pregnancy                                        |
|                     | Basic model\(^b\)                                      | Basic model\(^b\)                                      | Basic model\(^b\)                                      |
|                     | 0.81 (0.37, 1.25)*                                      | 0.40 (-0.01, 0.80)                                     | 0.47 (0.08, 0.86)*                                     |
|                     | n=2,802                                                 | n=3,263                                                 | n=3,286                                                 |
|                     | Lifestyle models\(^c\)                                 | Lifestyle models\(^c\)                                 | Lifestyle models\(^c\)                                 |
|                     | -0.13 (-1.10, 0.84)                                     | -0.46 (-1.34, 0.41)                                    | -0.08 (-0.94, 0.77)                                    |
|                     | n=2,052                                                 | n=2,357                                                 | n=2,394                                                 |

SDS, standard deviation score. CI, Confidence Interval. \(^*\) Values are regression coefficients (95\% confidence interval) from multiple linear regression models and reflect the differences in mmHg blood pressure per one increase in standard deviation score of maternal glycemic index and glycemic load. Estimates are from complete cases (non-imputed data). \(^b\)Basic models are adjusted for gestational age at time of intake. \(^c\)Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. \(^*\)P-value <0.05.
Supplementary Table S9b. Sensitivity analysis: Associations of dietary glycemic index and glycemic load with uterine artery resistance index, umbilical artery pulsatility index and bilateral uterine artery notching in complete cases.

| Glycemic index (SDS) | Differences in UmPI (95% CI)* | Differences in UtRI (95% CI)* | Bilateral uterine artery notching (95% CI)* |
|----------------------|-------------------------------|-------------------------------|-------------------------------------------|
|                      | Mid-pregnancy                 | Late-pregnancy                | Mid-pregnancy                             | Late-pregnancy                           | Late-pregnancy                           |
| Basic models         | n=2,505                       | n=2,751                       | n=1,884                                   | n=2,060                                   | n=48                                      |
|                      | -0.001 (-0.008, 0.007)        | 0.007 (0.000, 0.013)          | -0.004 (-0.008, 0.001)                    | -0.001 (-0.004, 0.003)                   | 1.12 (0.84, 1.49)                        |
| Lifestyle models     | n=1,798                       | n=2,016                       | n=1,348                                   | n=1,495                                   | n=34                                      |
|                      | -0.005 (-0.014, 0.003)        | 0.003 (-0.005, 0.010)        | -0.003 (-0.008, 0.002)                    | 0.000 (-0.004, 0.004)                    | 1.04 (0.73, 1.48)                        |
| Glycemic load (SDS)  |                              |                               |                                           |                                           |                                           |
| Basic models         | n=2,505                       | n=2,751                       | n=1,884                                   | n=2,060                                   |                                           |
|                      | -0.003 (-0.010, 0.004)        | 0.002 (-0.004, 0.008)        | -0.000 (-0.004, 0.005)                    | 0.000 (0.003, 0.004)                     | 0.99 (0.74, 1.33)                        |
| Lifestyle models     | n=1,798                       | n=2,016                       | n=1,348                                   | n=1,495                                   |                                           |
|                      | -0.009 (-0.026, 0.007)        | 0.005 (-0.009, 0.019)        | 0.001 (-0.009, 0.010)                     | -0.008 (-0.016, 0.000)                   | 0.95 (0.85, 1.07)                        |

UmPI, umbilical artery pulsatility index. UtRI, uterine artery pulsatility index. SDS, standard deviation score. CI, Confidence Interval. *Values are regression coefficients (95% confidence interval) from multiple linear regression models and reflect the differences in umbilical artery pulsatility index and uterine artery resistance index per one increase in standard deviation score of maternal glycemic index and glycemic load. Estimates are from complete cases (non-imputed data). †Values are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the difference in risks of bilateral uterine artery notching per one increase in standard deviation score of maternal glycemic index and load. Estimates are from complete data. ‡Basic models are adjusted for gestational age at time of intake. §Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of the measurements. *P-value <0.05.
Supplementary Table S9c. Sensitivity analysis: Associations of dietary glycemic index and glycemic load with hypertensive disorder of pregnancy, gestational hypertension and preeclampsia in complete cases\textsuperscript{a}.

| Glycemic index (SDS) | Gestational hypertensive disorders\textsuperscript{b} | Gestational hypertension\textsuperscript{b} | Preeclampsia\textsuperscript{b} |
|----------------------|------------------------------------------------------|---------------------------------------------|-------------------------------|
|                      | OR (95% CI)                                          | OR (95% CI)                                 | OR (95% CI)                   |
| Basic models\textsuperscript{c} | 1.00 (0.87, 1.14)                                  | 1.02 (0.87, 1.19)                          | 0.92 (0.71, 1.20)             |
|                       | \(n_{\text{cases}}=224\)                            | \(n_{\text{cases}}=166\)                  | \(n_{\text{cases}}=58\)      |
| Lifestyle models\textsuperscript{d} | 0.99 (0.94, 1.05)                                  | 0.97 (0.91, 1.04)                          | 0.87 (0.63, 1.19)             |
|                       | \(n_{\text{cases}}=154\)                            | \(n_{\text{cases}}=116\)                  | \(n_{\text{cases}}=42\)      |
| Glycemic load (SDS)  |                                                      |                                             |                              |
| Basic model\textsuperscript{c} | 1.04 (0.91, 1.19)                                  | 1.03 (0.88, 1.20)                          | 1.06 (0.83, 1.37)             |
|                       | \(n_{\text{cases}}=224\)                            | \(n_{\text{cases}}=166\)                  | \(n_{\text{cases}}=58\)      |
| Lifestyle models\textsuperscript{d} | 0.98 (0.69, 1.38)                                  | 1.06 (0.72, 1.57)                          | 0.78 (0.42, 1.46)             |
|                       | \(n_{\text{cases}}=514\)                            | \(n_{\text{cases}}=116\)                  | \(n_{\text{cases}}=42\)      |

SDS, standard deviation score; CI, Confidence Interval. \textsuperscript{a}Values are odds ratios (95% confidence interval) from multiple logistic regression models and reflect the difference in risks of gestational hypertensive disorders, gestational hypertension and preeclampsia per one increase in standard deviation score of maternal glycemic index and glycemic load. Estimates are from complete cases (non-imputed data). \textsuperscript{b}Basic models are adjusted for gestational age at time of intake. \textsuperscript{c}Lifestyle models are adjusted for maternal age, educational level, parity, prepregnancy BMI, kcal, smoking habits, alcohol use, folic acid use and gestational age at time of intake. \textsuperscript{*}P-value <0.05.