Supplementary Note 1. Detailed information about how to derive vegetarian subgroups and plant-based diet indices.

Definition of vegetarian subgroups
A categorical variable for vegetarian subgroups is derived using the definition provided by Jaacks et al.[1] and Yisahak et al.[2] (except for "semi-vegetarians"). Based on the intake frequency (i.e., times/week) of four food groups – meat (including poultry), fish (including seafood), eggs, and dairy, different subgroups of vegetarians are defined as follows:

- **Vegans**: meat, fish, egg, and dairy intakes together less than once per month (i.e., 0.25 time/week)
- **Lacto-ovo-vegetarians**: meat and fish intakes together less than once per month, and egg and dairy intakes together more than or equal to once per month
- **Pesco-vegetarians**: meat intake less than once per month, and fish intake more than or equal to once per month
- **Non-vegetarians**: no restriction on any food intakes

In this study, vegans and lacto-ovo-vegetarians are combined as "**full vegetarians**". Please note that we do NOT define "semi-vegetarians" as a vegetarian subgroup because we have found evidence from other cohorts that this group is not stable throughout pregnancy and their dietary pattern should not be considered different from non-vegetarians.

Calculation of plant-based diet indices
The plant-based diet indices (PDIs) were developed by Satija et al.[3], including three versions: the overall **PDI**, the healthful PDI (**hPDI**), and the unhealthful PDI (**uPDI**). First, all food items are classified into 18 food groups (including 7 healthy plant food groups, 5 less healthy plant food groups, and 6 animal food groups). Healthy plant food groups include whole grains, fruits, vegetables, nuts, legumes, vegetable oils, and tea/coffee, whereas less healthy plant food groups include fruit juices, sugar-sweetened beverages, refined grains, potatoes, and sweets/desserts; animal food groups include animal fats, dairy, eggs, fish/seafood, meat (poultry and red meat), and miscellaneous animal-based foods (see detailed information about each food group in **Supplementary Table 1**). The intake of food items belonging to each of the 18 food groups is added up, and each food group is divided into quintiles of intake, with each quintile assigned a score between 1 and 5. In the calculation of overall PDI, for each (including healthy and less healthy) plant food group, those with intakes above the highest quintile receive a score of 5, and those with intakes above the second highest quintile but below the highest quintile receive a score of 4, and so on, with a score of 1 for intakes below the lowest quintile (i.e. positive scores). On the other hand, for each animal food group, those with intakes above the highest quintile receive a score of 1, and those with intakes above the second highest quintile but below the highest quintile receive a score of 2, and so on, with a score of 5 for intakes below the lowest quintile (i.e., reverse scores). For hPDI, positive scores are given to healthy plant food groups, and reverse scores to less healthy plant food groups and animal food groups. For uPDI, positive scores are given to less healthy plant food groups, and reverse scores to healthy plant food groups and animal food groups. The 18 food group scores for an individual are summed to obtain the indices, with a range from 18 (the lowest possible score) to 90 (the highest possible score). For example, a higher score of overall PDI indicated greater adherence to a plant-based diet (i.e., higher plant-based and lower animal-based food intakes).

Variable derivation for vegetarian subgroups and plant-based diet indices – using ALSPAC as an example

In ALSPAC, a non-quantitative FFQ[4] was sent to the women at approximately 32 weeks of gestation, which contained questions asking about the intake frequency (e.g., how many times per week) of 43 food items and some additional questions collecting information on bread, oil, milk, tea, and coffee intakes (see **Supplementary Table 2** for more details about this FFQ). Portion sizes were assumed based on national nutrition survey data[4]. The pregnant women were classified into different vegetarian subgroups according to the definitions above.

As for the calculation of PDIs, ALSPAC data did not have enough granularity to divide the participants into quintiles for some food groups (see **Supplementary Table 3** for the distribution of each food group). Therefore, in this study, we slightly modified the scoring criteria and used tertiles instead of quintiles for the calculation. Positive scores (1-3) or negative scores (3-1) were assigned to each tertile from the lowest to the highest, and the final PDIs ranged from 18 to 54. Where the intake of some food groups had a very skewed distribution, and >33% of participants had zero intakes (e.g., nuts, vegetable oil, sugar-sweetened beverages, and miscellaneous animal-based foods; see **Supplementary Table 3**), we set the first tertile to zero and used the median from the rest of the participants to divide the second and third tertiles. For consistency across studies in this EWAS, we suggest all studies calculate PDIs in a similar way (functions are provided in the R script). Tertile cutoffs for each food group are shown in **Supplementary Table 4**.

Among the 687 complete cases included in the ALSPAC EWAS, there were 19 (2.8%) full vegetarians and 20 (2.9%) pesco-vegetarians (**Supplementary Table 5**). The mean (standard deviation) of PDI, hPDI, and uPDI was 34.59 (3.29), 35.49 (3.39), and 35.44 (3.99), respectively (**Supplementary Table 5**). The distribution of each index did not differ much from a normal distribution (**Supplementary Figure 1**). **Supplementary Table 6** and **Supplementary Figure 2** show the intake of different food groups by vegetarian subgroups and by PDI scores, respectively, and the patterns observed are generally as expected.

References
1. Jaacks LM, Kapoor D, Singh K, et al. Vegetarianism and cardiometabolic disease risk factors: Differences between South Asian and US adults. *Nutrition* 2016;32(9):975-84. doi: 10.1016/j.nut.2016.02.011 [published Online First: 20160304]
2. Yisahak SF, Hinkle SN, Mumford SL, et al. Vegetarian diets during pregnancy, and maternal and neonatal outcomes. International Journal of Epidemiology: Oxford Academic, 2021:165-78.
3. Satija A, Bhupathiraju SN, Rimm EB, et al. Plant-Based Dietary Patterns and Incidence of Type 2 Diabetes in US Men and Women: Results from Three Prospective Cohort Studies. PLoS Med: Public Library of Science, 2016:e1002039.
4. Rogers I, Emmett P. Diet during pregnancy in a population of pregnant women in South West England. European Journal of Clinical Nutrition 1998 52:4: Nature Publishing Group, 1998:246-50.