#### Table S1: Logistic regression of fetal exposure to fortified margarine and T2DM with different age cut-offs (N exposed = 101,178; N less-exposed = 92,625)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Adjusted Model | | |
|  |  | N T2DM cases | OR | 95%CI | p-value |
|  |  |  |  |  |  |
| **Age 36-48.5** | Less-exposed | 1,322 | 1.00 |  |  |
|  | Exposed | 1,273 | 0.88 | 0.81-0.95 | <0.05 |
|  |  |  |  |  |  |
| **Age 40-48.5** | Less-exposd | 1,086 | 1.00 |  |  |
|  | Exposed | 986 | 0.83 | 0.76-0.90 | <0.001 |
|  |  |  |  |  |  |
| **Age 44-48.5** | Less-exposed | 647 | 1.00 |  |  |
|  | Exposed | 590 | 0.83 | 0.75-0.93 | <0.001 |

Individuals were defined as T2DM cases if they were alive, at risk, and diabetes-free at age 36, 40, 44 or 48 and later, before age 48.75, had a diagnosis of diabetes corresponding to ICD 8 code 250 (distinguishes type I from type II diabetes from 1987) or ICD 10 code E11 (in use from 1994). In addition, individuals were also classified as having type 2 diabetes when one of the following criteria, combined with a diagnostic of ICD 10 code E11, where met: • Chiropody for diabetic patient • Date of 5th blood glucose measurement within a year • Second purchase of oral glucose-lowering drugs • Second purchase of insulin.

#### Table S2A: Logistic regression of fetal exposure to fortified margarine and T2DM (broader definition)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Adjusted Model | | |
|  |  | OR | 95%CI | p-value |
|  |  |  |  |  |
| **Exposure** | Less-exposed | 1.00 |  |  |
|  | Exposed | 0.89 | 0.82-0.95 | <0.05 |
|  |  |  |  |  |
| **Sex** | Male | 1.00 |  |  |
|  | Female | 0.69 | 0.64-0.74 | <0.001 |
|  |  |  |  |  |

Individuals were defined as type 2 diabetes cases if they were alive, at risk, and diabetes-free at age 36 years old and later, before age 48.75, had a diagnosis of diabetes corresponding to ICD 8 code 250 (distinguishes type I from type II diabetes from 1987) or ICD 10 code E11, E12, E13, E14 (in use from 1994). In addition, individuals were also classified as having type 2 diabetes when one of the following criteria, combined with a diagnostic of ICD 10 code E11, where met: •Chiropody for diabetic patient •Date of 5th blood glucose measurement within a year •Second purchase of oral glucose-lowering drugs •Second purchase of insulin.

#### Table S2B: Logistic regression of fetal exposure to fortified margarine and T2DM (narrower definition)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Adjusted Model | | |
|  |  | OR | 95%CI | p-value |
|  |  |  |  |  |
| **Exposure** | Less-exposed | 1.00 |  |  |
|  | Exposed | 0.92 | 0.82-1.02 | 0.125 |
|  |  |  |  |  |
| **Sex** | Male | 1.00 |  |  |
|  | Female | 0.63 | 0.57-0.71 | <0.001 |
|  |  |  |  |  |

Individuals were defined as type 2 diabetes cases if they were alive, at risk, and diabetes-free at age 36 years old and later, before age 48.75, had a diagnosis of diabetes corresponding to ICD 8 code 250 (distinguishes type I from type II diabetes from 1987) or ICD 10 code E11 (in use from 1994) from the NPR.

#### Table S3: Cox regression of fetal exposure to fortified margarine and T2DM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Adjusted Model | | |
|  |  | HR | 95%CI | p-value |
|  |  |  |  |  |
| **Exposure** | Less-exposed | 1.00 |  |  |
|  | Exposed | 0.88 | 0.82-0.95 | <0.05 |
|  |  |  |  |  |
| **Sex** | Male | 1.00 |  |  |
|  | Female | 0.69 | 0.64-0.75 | <0.001 |
|  |  |  |  |  |

Results from the Cox model, presented in the form of hazard ratios (HRs) and based on a sample of 193,803 individuals (Figure S1), were similar to results from the logistic regression. Individuals exposed to extra vitamin A fortified margarine during fetal life had a 12% lower risk of developing T2DM than less-exposed ones (HR=0.88, 95%CI 0.82-0.95, p<0.05).