**Supplemental Table 1.** Sensitivity analysis of the association between number of fast food outlets in neighbourhood and diabetes-related outcomes for different definitions of neighbourhood.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **100m** | |  | **250m** | |  | **750m** | |  | **1000m** | |
| **Outcome** | **Adjusteda OR (95% CI)** |  |  | **Adjusteda OR (95% CI)** |  |  | **Adjusteda OR (95% CI)** |  |  | **Adjusteda OR (95% CI)** |  |
| Type 2 diabetes | 1.01 (0.86, 1.19) |  |  | 1.02 (0.98, 1.06) |  |  | 1.01 (1.00, 1.02) | \* |  | 1.01 (1.00, 1.02) | \* |
| Impaired glucose regulation | 1.07 (0.98, 1.18) |  |  | 1.02 (0.99, 1.05) |  |  | 1.00 (0.99, 1.01) |  |  | 1.00 (0.99, 1.00) |  |
| Obese | 1.10 (1.00, 1.20) | \* |  | 1.04 (1.01, 1.07) | \*\* |  | 1.01 (1.00, 1.02) | \* |  | 1.00 (1.00, 1.01) | \* |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Adjusteda beta**  **coefficient** **(95% CI)** |  |  | **Adjusteda beta**  **coefficient** **(95% CI)** |  |  | **Adjusteda beta**  **coefficient** **(95% CI)** |  |  | **Adjusteda beta**  **coefficient** **(95% CI)** |  |
| BMI, kg/m2 | 0.35 (0.08, 0.63) | \* |  | 0.14 (0.06, 0.23) | \*\* |  | 0.02 (-0.00, 0.04) |  |  | 0.01 (-0.01, 0.02) |  |
| Waist circumference, cm | 1.26 (0.56, 1.96) | \*\*\* |  | 0.37 (0.12, 0.63) | \*\* |  | 0.08 (0.02, 0.14) | \*\* |  | 0.03 (-0.01, 0.08) |  |
| Fasting glucose, mmol/l | 0.01 (-0.02, 0.05) |  |  | 0.01 (-0.00, 0.03) |  |  | 0.00 (0.00, 0.01) | \* |  | 0.002 (0.000, 0.004) | \* |
| 2 hour glucose, mmol/l | 0.02 (-0.09, 0.14) |  |  | 0.01 (-0.02, 0.05) |  |  | 0.00 (-0.01, 0.01) |  |  | 0.00 (-0.00, 0.01) |  |
| HbA1c, % | 0.02 (-0.01, 0.04) |  |  | 0.01 (-0.00, 0.01) |  |  | 0.00 (-0.00, 0.00) |  |  | 0.00 (-0.00, 0.00) |  |
| Total cholesterol | -0.03 (-0.08, 0.01) |  |  | -0.02 (-0.03, -0.00) | \*\* |  | -0.00 (-0.01, -0.00) |  |  | -0.003 (-0.005, -0.001) | \*\* |
| LDL cholesterol | -0.02 (-0.06, 0.02) |  |  | -0.02 (-0.03, -0.01) | \*\* |  | -0.00 (-0.01, -0.00) | \*\* |  | -0.003 (-0.005, -0.001) | \*\* |
| HDL cholesterol | 0.01 (-0.01, 0.03) |  |  | 0.00 (-0.00, 0.01) |  |  | -0.00 (-0.00, 0.00) |  |  | -0.00 (-0.00, 0.00) |  |
| Fasting insulinb | -0.59 (-1.28, 0.11) |  |  | 0.26 (-0.08, 0.59) |  |  | 0.09 (-0.13, 0.30) |  |  | 0.03 (-0.09, 0.15) |  |

Abbreviations: CI, Confidence Interval; OR, Odds Ratio.

\* P < 0.05; \*\* P < 0.01; \*\*\* P < 0.001

a Adjusted for social deprivation score, urban/rural indicator, ethnicity, age and sex.

b Only available for 1559 participants (905 from ADDITION-Leicester and 654 from Walking Away from Diabetes).

**Supplemental Table 2.** Sensitivity analysis showing the association between neighbourhooda density of fast food outlets (number per 200 residents) and diabetes-related outcomes.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Adjustedb | |  |
| Outcome | OR | 95% CI |  |
| Screen-detected type 2 diabetes | 13.84 | 1.60, 119.6 | \* |
| Impaired glucose regulation | 0.55 | 0.07, 4.28 |  |
| Obese | 9.11 | 0.94, 88.79 |  |
|  |  |  |  |
|  | b | 95% CI |  |
| Body mass index, kg/m2 | 5.11 | -0.58, 10.79 |  |
| Waist circumference, cm | 14.87 | -1.57, 31.31 |  |
| Fasting glucose, mmol/l | 0.90 | -0.34, 2.14 |  |
| 2 hour glucose, mmol/l | 1.30 | -1.64, 4.25 |  |
| HbA1c, % | 0.57 | -0.17, 1.30 |  |
| Total cholesterol, mmol/l | -0.87 | -1.73, -0.01 | \* |
| LDL cholesterol, mmol/l | -1.13 | -1.89, -0.37 | \*\* |
| HDL cholesterol, mmol/l | -0.09 | -0.35, 0.17 |  |
| Fasting insulinc | -1.16 | -17.98, 15.66 |  |

Abbreviations: b, Unstandardized regression coefficient; CI, Confidence Interval; OR, Odds Ratio.

\* P < 0.05; \*\* P < 0.01; \*\*\* P < 0.001

a Neighbourhood was based on a 500m radius from the participant’s home postcode.

b Adjusted for social deprivation score, urban/rural indicator, ethnicity, age and sex.

c Only available for 1559 participants (905 from ADDITION-Leicester and 654 from Walking Away from Diabetes).