Appendix

Table A1. Associations between **maternal** diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT1-MBRN cohort** (only first and single births included, complete cases\*)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=2905 | | Length  n=2850 | | Ponderal Index  n=2841 | | Head circumference  n=2881 | | Placenta weight  n=2766 | | Gestational length  n=2882 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | -0.015 | 0.4 | -0.030 | 0.1 | 0.017 | 0.4 | -0.011 | 0.6 | 0.024 | 0.2 | -0.021 | 0.3 |
| Model 2 | -0.015 | 0.4 | -0.028 | 0.1 | 0.013 | 0.5 | -0.006 | 0.8 | 0.023 | 0.2 | -0.025 | 0.2 |
| Model 3 | -0.010 | 0.6 | -0.024 | 0.2 | 0.017 | 0.4 | -0.003 | 0.9 | 0.029 | 0.2 | -0.017 | 0.4 |
| Crisps  (per extra serving/week) | Model 1 | **-0.044** | **0.017** | **-0.043** | **0.022** | -0.010 | 0.6 | -0.027 | 0.1 | -0.029 | 0.1 | -0.035 | 0.06 |
| Model 2 | **-0.036** | **0.05** | **-0.038** | **0.046** | -0.005 | 0.8 | -0.022 | 0.3 | -0.024 | 0.2 | -0.033 | 0.08 |
| Model 3 | **-0.044** | **0.037** | **-0.043** | **0.041** | -0.010 | 0.7 | -0.033 | 0.1 | **-0.044** | **0.04** | -0.031 | 0.1 |
| Sweets  (per extra serving/week) | Model 1 | 0.000 | 1.0 | 0.005 | 0.8 | -0.007 | 0.7 | 0.012 | 0.5 | 0.014 | 0.5 | -0.012 | 0.5 |
| Model 2 | 0.009 | 0.6 | 0.011 | 0.6 | -0.004 | 0.8 | 0.019 | 0.3 | 0.021 | 0.3 | -0.009 | 0.6 |
| Model 3 | 0.029 | 0.2 | 0.035 | 0.1 | -0.005 | 0.8 | 0.033 | 0.1 | 0.028 | 0.2 | 0.007 | 0.7 |
| Fruit  (per extra serving/week) | Model 1 | -0.010 | 0.6 | -0.007 | 0.7 | -0.001 | 1.0 | 0.004 | 0.8 | 0.016 | 0.4 | -0.003 | 0.9 |
| Model 2 | -0.010 | 0.6 | -0.010 | 0.6 | 0.004 | 0.8 | -0.001 | 1.0 | 0.016 | 0.4 | 0.000 | 1.0 |
| Model 3 | 0.006 | 0.8 | 0.011 | 0.6 | 0.006 | 0.8 | 0.006 | 0.8 | 0.031 | 0.2 | 0.031 | 0.2 |
| Vegetables  (per extra serving/week) | Model 1 | -0.021 | 0.3 | -0.023 | 0.2 | -0.003 | 0.9 | -0.005 | 0.8 | -0.005 | 0.8 | -0.031 | 0.1 |
| Model 2 | -0.020 | 0.3 | -0.026 | 0.2 | 0.001 | 0.9 | -0.007 | 0.7 | -0.003 | 0.9 | -0.029 | 0.1 |
| Model 3 | -0.025 | 0.3 | -1.450 | 0.1 | 0.001 | 1.0 | -0.016 | 0.5 | -0.022 | 0.4 | **-0.054** | **0.028** |
| Whole grain bread  (per extra serving/week) | Model 1 | 0.004 | 0.8 | 0.012 | 0.5 | -0.017 | 0.4 | 0.032 | 0.09 | 0.001 | 1.0 | 0.012 | 0.5 |
| Model 2 | 0.005 | 0.8 | 0.011 | 0.6 | -0.014 | 0.5 | 0.028 | 0.1 | 0.006 | 0.8 | 0.017 | 0.4 |
| Model 3 | 0.007 | 0.7 | 0.012 | 0.5 | -0.014 | 0.5 | 0.029 | 0.1 | 0.007 | 0.7 | 0.020 | 0.3 |
| Breakfast (daily versus not daily) | Model 1 | -0.010 | 0.6 | 0.009 | 0.6 | -0.025 | 0.2 | 0.019 | 0.3 | 0.023 | 0.2 | 0.000 | 1.0 |
| Model 2 | 0.000 | 1.0 | 0.012 | 0.5 | -0.014 | 0.5 | 0.020 | 0.3 | **0.038** | **0.05** | 0.010 | 0.6 |
| Model 3 | 0.010 | 0.6 | 0.015 | 0.5 | -0.005 | 0.8 | 0.024 | 0.2 | **0.049** | **0.020** | 0.022 | 0.3 |
| Lunch (daily versus not daily) | Model 1 | -0.027 | 0.1 | -0.003 | 0.9 | -0.036 | 0.06 | 0.003 | 0.9 | -0.028 | 0.1 | -0.019 | 0.3 |
| Model 2 | -0.019 | 0.3 | 0.000 | 1.0 | -0.029 | 0.1 | 0.004 | 0.8 | -0.017 | 0.4 | -0.013 | 0.5 |
| Model 3 | -0.020 | 0.3 | -0.003 | 0.9 | -0.028 | 0.2 | 0.001 | 1.0 | -0.036 | 0.09 | -0.010 | 0.6 |
| Dinner (daily versus not daily) | Model 1 | -0.024 | 0.2 | -0.007 | 0.7 | -0.015 | 0.4 | -0.017 | 0.4 | 0.000 | 1.0 | **-0.047** | **0.011** |
| Model 2 | -0.016 | 0.4 | -0.006 | 0.8 | -0.006 | 0.8 | -0.017 | 0.4 | 0.008 | 0.7 | **-0.043** | **0.024** |
| Model 3 | -0.013 | 0.5 | -0.008 | 0.7 | 0.001 | 1.0 | -0.022 | 0.3 | 0.007 | 0.7 | **-0.044** | **0.023** |

\*Results in the table are for complete cases (n=2947)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Table A2. Associations between maternal diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT3-MBRN cohort** (only first and single births included; complete cases\*)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=843 | | Length  n=834 | | Ponderal Index  n=832 | | Head circumference  n=840 | | Placenta weight  n=843 | | Gestational length  n=844 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | -0.002 | 1.0 | -0.023 | 0.5 | 0.044 | 0.2 | -0.016 | 0.6 | -0.019 | 0.6 | 0.034 | 0.3 |
| Model 2 | 0.011 | 0.8 | -0.008 | 0.8 | 0.035 | 0.3 | 0.005 | 0.9 | -0.021 | 0.6 | 0.040 | 0.3 |
| Model 3 | 0.031 | 0.4 | 0.010 | 0.8 | 0.042 | 0.3 | 0.038 | 0.3 | 0.000 | 1.0 | 0.069 | 0.07 |
| Crisps  (per extra serving/week) | Model 1 | -0.021 | 0.5 | -0.033 | 0.3 | 0.015 | 0.7 | -0.050 | 0.2 | -0.032 | 0.3 | -0.007 | 0.8 |
| Model 2 | -0.004 | 0.9 | -0.012 | 0.7 | 0.006 | 0.9 | -0.029 | 0.4 | -0.033 | 0.4 | -0.001 | 1.0 |
| Model 3 | 0.018 | 0.7 | -0.008 | 0.9 | 0.031 | 0.5 | 0.000 | 1.0 | -0.017 | 0.7 | 0.038 | 0.4 |
| Sweets  (per extra serving/week) | Model 1 | -0.042 | 0.2 | -0.034 | 0.3 | -0.013 | 0.7 | **-0.068** | **0.05** | -0.033 | 0.3 | -0.049 | 0.2 |
| Model 2 | -0.024 | 0.5 | -0.008 | 0.8 | -0.026 | 0.5 | -0.049 | 0.2 | -0.035 | 0.3 | -0.044 | 0.2 |
| Model 3 | -0.040 | 0.4 | 0.000 | 1.0 | -0.057 | 0.2 | -0.053 | 0.2 | -0.019 | 0.7 | -0.082 | 0.07 |
| Fruit  (per extra serving/week) | Model 1 | 0.062 | 0.07 | 0.061 | 0.08 | 0.022 | 0.5 | 0.061 | 0.08 | 0.036 | 0.3 | 0.024 | 0.5 |
| Model 2 | 0.055 | 0.1 | 0.054 | 0.1 | 0.024 | 0.5 | 0.054 | 0.1 | 0.033 | 0.3 | 0.019 | 0.6 |
| Model 3 | 0.058 | 0.2 | 0.045 | 0.4 | 0.041 | 0.4 | 0.020 | 0.7 | -0.007 | 0.9 | 0.015 | 0.8 |
| Vegetables  (per extra serving/week) | Model 1 | 0.043 | 0.2 | 0.047 | 0.2 | 0.009 | 0.8 | 0.062 | 0.07 | 0.047 | 0.2 | 0.016 | 0.6 |
| Model 2 | 0.032 | 0.4 | 0.035 | 0.3 | 0.012 | 0.7 | 0.054 | 0.1 | 0.044 | 0.2 | 0.011 | 0.7 |
| Model 3 | -0.018 | 0.7 | -0.017 | 0.7 | 0.002 | 1.0 | 0.019 | 0.7 | 0.030 | 0.5 | -0.020 | 0.7 |
| Whole grain bread  (per extra serving/week) | Model 1 | 0.053 | 0.1 | **0.083** | **0.017** | -0.049 | 0.2 | **0.093** | **0.007** | 0.057 | 0.1 | **0.074** | **0.031** |
| Model 2 | 0.048 | 0.2 | **0.075** | **0.035** | -0.039 | 0.3 | **0.081** | **0.022** | 0.065 | 0.07 | **0.076** | **0.032** |
| Model 3 | 0.040 | 0.3 | 0.067 | 0.08 | -0.047 | 0.2 | 0.072 | 0.06 | 0.056 | 0.1 | **0.086** | **0.023** |
| Breakfast (daily versus not daily) | Model 1 | 0.038 | 0.3 | 0.043 | 0.2 | -0.008 | 0.8 | 0.027 | 0.4 | 0.014 | 0.7 | 0.043 | 0.2 |
| Model 2 | 0.032 | 0.4 | 0.035 | 0.3 | -0.001 | 1.0 | 0.020 | 0.6 | 0.012 | 0.7 | 0.042 | 0.2 |
| Model 3 | 0.023 | 0.5 | 0.021 | 0.6 | 0.011 | 0.8 | 0.003 | 1.0 | 0.012 | 0.7 | 0.011 | 0.8 |
| Lunch (daily versus not daily) | Model 1 | 0.035 | 0.3 | 0.066 | 0.06 | -0.050 | 0.2 | 0.042 | 0.2 | 0.004 | 0.9 | **0.079** | **0.022** |
| Model 2 | 0.024 | 0.5 | 0.054 | 0.1 | -0.046 | 0.2 | 0.037 | 0.3 | 0.001 | 1.0 | **0.076** | **0.033** |
| Model 3 | 0.007 | 0.9 | 0.053 | 0.2 | -0.068 | 0.09 | 0.026 | 0.5 | -0.006 | 0.9 | 0.061 | 0.1 |
| Dinner (daily versus not daily) | Model 1 | 0.037 | 0.3 | -0.002 | 1.0 | 0.043 | 0.2 | 0.033 | 0.3 | 0.018 | 0.6 | 0.059 | 0.09 |
| Model 2 | 0.034 | 0.3 | 0.000 | 1.0 | 0.033 | 0.4 | 0.039 | 0.3 | 0.009 | 0.8 | 0.053 | 0.1 |
| Model 3 | 0.026 | 0.5 | -0.022 | 0.6 | 0.053 | 0.2 | 0.030 | 0.4 | 0.008 | 0.8 | 0.031 | 0.4 |

\*Results in the table are for complete cases (n=850)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT3;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Table A3. Associations between diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT1-MBRN cohort** (only first and single births included; complete cases\*)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=2905 | | Length  n=2850 | | Ponderal Index  n=2841 | | Head circumference  n=2881 | | Placenta weight  n=2766 | | Gestational length  n=2882 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | 0.007 | 0.8 | -0.006 | 0.8 | -0.005 | 0.8 | -0.009 | 0.7 | 0.024 | 0.3 | 0.017 | 0.4 |
| Model 2 | 0.008 | 0.7 | -0.004 | 0.9 | -0.009 | 0.7 | -0.001 | 1.0 | 0.031 | 0.2 | 0.014 | 0.5 |
| Model 3 | 0.024 | 0.3 | 0.007 | 0.8 | -0.014 | 0.6 | 0.016 | 0.5 | 0.020 | 0.4 | 0.025 | 0.3 |
| Crisps  (per extra serving/week) | Model 1 | -0.022 | 0.3 | -0.019 | 0.4 | 0.002 | 0.9 | -0.027 | 0.2 | 0.020 | 0.4 | -0.023 | 0.3 |
| Model 2 | -0.013 | 0.6 | -0.012 | 0.6 | 0.006 | 0.8 | -0.017 | 0.4 | 0.031 | 0.2 | -0.023 | 0.3 |
| Model 3 | -0.005 | 0.9 | -0.003 | 0.9 | 0.009 | 0.7 | -0.005 | 0.9 | 0.019 | 0.5 | -0.033 | 0.2 |
| Sweets  (per extra serving/week) | Model 1 | -0.037 | 0.09 | -0.029 | 0.2 | -0.008 | 0.7 | **-0.043** | **0.050** | 0.009 | 0.7 | -0.001 | 1.0 |
| Model 2 | -0.030 | 0.2 | -0.022 | 0.3 | -0.007 | 0.8 | -0.033 | 0.1 | 0.022 | 0.3 | -0.001 | 1.0 |
| Model 3 | -0.040 | 0.1 | -0.022 | 0.4 | -0.012 | 0.7 | -0.036 | 0.2 | 0.000 | 1.0 | 0.005 | 0.9 |
| Fruit  (per extra serving/week) | Model 1 | 0.008 | 0.7 | -0.011 | 0.6 | 0.032 | 0.1 | -0.009 | 0.7 | 0.030 | 0.2 | 0.003 | 0.9 |
| Model 2 | 0.013 | 0.6 | -0.008 | 0.7 | 0.038 | 0.09 | -0.009 | 0.7 | 0.038 | 0.09 | 0.006 | 0.8 |
| Model 3 | 0.050 | 0.1 | 0.051 | 0.09 | 0.033 | 0.3 | 0.021 | 0.5 | **0.067** | **0.026** | 0.033 | 0.3 |
| Vegetables  (per extra serving/week) | Model 1 | -0.021 | 0.3 | **-0.054** | **0.015** | 0.028 | 0.2 | -0.026 | 0.2 | -0.005 | 0.8 | -0.020 | 0.4 |
| Model 2 | -0.020 | 0.4 | **-0.055** | **0.014** | 0.033 | 0.1 | -0.030 | 0.2 | 0.000 | 1.0 | -0.019 | 0.4 |
| Model 3 | -0.047 | 0.1 | **-0.089** | **0.003** | 0.023 | 0.4 | -0.042 | 0.2 | -0.039 | 0.2 | -0.042 | 0.2 |
| Whole grain bread  (per extra serving/week) | Model 1 | -0.018 | 0.4 | 0.002 | 0.9 | **-0.051** | **0.022** | 0.006 | 0.8 | -0.033 | 0.1 | 0.010 | 0.6 |
| Model 2 | -0.016 | 0.5 | 0.001 | 1.0 | **-0.045** | **0.043** | 0.002 | 1.0 | -0.030 | 0.2 | 0.013 | 0.5 |
| Model 3 | -0.014 | 0.5 | 0.010 | 0.7 | **-0.056** | **0.014** | 0.007 | 0.8 | -0.031 | 0.2 | 0.017 | 0.5 |
| Breakfast (daily versus not daily) | Model 1 | 0.012 | 0.6 | 0.027 | 0.2 | -0.015 | 0.5 | 0.027 | 0.2 | -0.019 | 0.4 | 0.017 | 0.4 |
| Model 2 | 0.018 | 0.4 | 0.029 | 0.2 | -0.009 | 0.7 | 0.024 | 0.3 | -0.017 | 0.4 | 0.023 | 0.3 |
| Model 3 | 0.018 | 0.5 | 0.036 | 0.1 | -0.019 | 0.4 | 0.012 | 0.6 | -0.015 | 0.5 | 0.029 | 0.2 |
| Lunch (daily versus not daily) | Model 1 | 0.012 | 0.6 | 0.001 | 0.9 | 0.014 | 0.5 | **0.048** | **0.028** | -0.011 | 0.6 | -0.004 | 0.8 |
| Model 2 | 0.017 | 0.4 | 0.003 | 0.9 | 0.022 | 0.3 | **0.046** | **0.037** | -0.008 | 0.7 | 0.000 | 1.0 |
| Model 3 | 0.020 | 0.4 | 0.001 | 1.0 | 0.025 | 0.3 | **0.047** | **0.049** | -0.001 | 1.0 | -0.002 | 0.9 |
| Dinner (daily versus not daily) | Model 1 | -0.028 | 0.2 | -0.033 | 0.1 | 0.009 | 0.7 | -0.003 | 0.9 | -0.015 | 0.5 | -0.029 | 0.2 |
| Model 2 | -0.025 | 0.3 | -0.033 | 0.1 | 0.015 | 0.5 | -0.006 | 0.8 | -0.013 | 0.6 | -0.026 | 0.2 |
| Model 3 | -0.033 | 0.2 | -0.040 | 0.08 | 0.013 | 0.6 | -0.019 | 0.4 | -0.010 | 0.7 | -0.031 | 0.2 |

\*Results in the table are for complete cases (n=2140)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Table A4. Associations between **paternal** diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT3-MBRN cohort** (only first and single births included; complete cases\*)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=387 | | Length  n=382 | | Ponderal Index  n=381 | | Head circumference  n=384 | | Placenta weight  n=387 | | Gestational length  n=387 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | -0.009 | 0.9 | -0.009 | 0.9 | 0.023 | 0.7 | 0.022 | 0.7 | 0.055 | 0.3 | 0.029 | 0.6 |
| Model 2 | -0.017 | 0.7 | -0.013 | 0.8 | 0.021 | 0.7 | 0.028 | 0.6 | 0.046 | 0.4 | 0.038 | 0.5 |
| Model 3 | 0.015 | 0.8 | 0.027 | 0.7 | 0.013 | 0.8 | 0.077 | 0.2 | 0.036 | 0.5 | 0.063 | 0.3 |
| Crisps  (per extra serving/week) | Model 1 | -0.057 | 0.3 | -0.001 | 1.0 | -0.046 | 0.4 | -0.051 | 0.3 | -0.024 | 0.6 | 0.001 | 1.0 |
| Model 2 | -0.035 | 0.5 | 0.014 | 0.8 | -0.030 | 0.6 | -0.037 | 0.5 | -0.019 | 0.7 | 0.015 | 0.8 |
| Model 3 | -0.052 | 0.4 | 0.047 | 0.5 | -0.071 | 0.3 | -0.032 | 0.6 | -0.061 | 0.4 | 0.017 | 0.8 |
| Sweets  (per extra serving/week) | Model 1 | -0.019 | 0.7 | -0.040 | 0.4 | 0.009 | 0.9 | -0.047 | 0.4 | 0.016 | 0.8 | -0.012 | 0.8 |
| Model 2 | -0.001 | 1.0 | -0.028 | 0.6 | 0.025 | 0.6 | -0.028 | 0.6 | 0.022 | 0.7 | 0.000 | 1.0 |
| Model 3 | 0.023 | 0.7 | -0.066 | 0.3 | 0.062 | 0.4 | -0.039 | 0.6 | 0.045 | 0.5 | -0.029 | 0.7 |
| Fruit  (per extra serving/week) | Model 1 | 0.067 | 0.2 | 0.076 | 0.1 | -0.012 | 0.8 | 0.058 | 0.3 | 0.003 | 1.0 | 0.017 | 0.7 |
| Model 2 | 0.082 | 0.1 | 0.078 | 0.1 | 0.001 | 1.0 | 0.065 | 0.2 | 0.008 | 0.9 | 0.021 | 0.7 |
| Model 3 | 0.057 | 0.4 | 0.025 | 0.7 | 0.051 | 0.5 | 0.085 | 0.2 | 0.050 | 0.5 | -0.021 | 0.8 |
| Vegetables  (per extra serving/week) | Model 1 | 0.061 | 0.2 | 0.094 | 0.07 | -0.048 | 0.4 | 0.028 | 0.6 | -0.027 | 0.6 | 0.050 | 0.3 |
| Model 2 | 0.072 | 0.2 | 0.096 | 0.07 | -0.040 | 0.4 | 0.028 | 0.6 | -0.022 | 0.7 | 0.051 | 0.3 |
| Model 3 | 0.029 | 0.7 | 0.075 | 0.3 | -0.068 | 0.3 | -0.032 | 0.6 | -0.030 | 0.7 | 0.067 | 0.3 |
| Whole grain bread  (per extra serving/week) | Model 1 | 0.064 | 0.2 | 0.072 | 0.2 | -0.010 | 0.9 | **0.099** | **0.05** | -0.060 | 0.2 | 0.050 | 0.3 |
| Model 2 | 0.057 | 0.3 | 0.055 | 0.3 | -0.011 | 0.8 | 0.077 | 0.1 | -0.072 | 0.2 | 0.040 | 0.5 |
| Model 3 | 0.036 | 0.5 | 0.039 | 0.5 | -0.007 | 0.9 | 0.080 | 0.2 | -0.071 | 0.2 | 0.042 | 0.5 |
| Breakfast (daily versus not daily) | Model 1 | -0.002 | 1.0 | 0.033 | 0.5 | -0.069 | 0.2 | 0.034 | 0.5 | -0.035 | 0.5 | -0.011 | 0.8 |
| Model 2 | 0.004 | 0.9 | 0.034 | 0.5 | -0.066 | 0.2 | 0.027 | 0.6 | -0.027 | 0.6 | -0.010 | 0.9 |
| Model 3 | -0.025 | 0.7 | -0.021 | 0.7 | -0.034 | 0.6 | 0.033 | 0.6 | -0.026 | 0.7 | 0.014 | 0.8 |
| Lunch (daily versus not daily) | Model 1 | 0.033 | 0.5 | 0.084 | 0.1 | -0.079 | 0.1 | -0.001 | 1.0 | -0.040 | 0.4 | -0.045 | 0.4 |
| Model 2 | 0.028 | 0.6 | 0.076 | 0.1 | -0.084 | 0.1 | -0.018 | 0.7 | -0.040 | 0.5 | -0.052 | 0.3 |
| Model 3 | 0.009 | 0.9 | 0.043 | 0.5 | -0.065 | 0.3 | -0.053 | 0.4 | -0.053 | 0.4 | -0.061 | 0.3 |
| Dinner (daily versus not daily) | Model 1 | 0.073 | 0.2 | **0.126** | **0.013** | -0.052 | 0.3 | 0.051 | 0.3 | 0.041 | 0.4 | -0.013 | 0.8 |
| Model 2 | 0.090 | 0.08 | **0.140** | **0.007** | -0.045 | 0.4 | 0.058 | 0.3 | 0.058 | 0.3 | -0.006 | 0.9 |
| Model 3 | 0.094 | 0.09 | **0.132** | **0.018** | -0.015 | 0.8 | 0.066 | 0.2 | 0.081 | 0.1 | 0.010 | 0.9 |

\*Results in the table are for complete cases (n=391)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT3;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Appendix A5. Associations between **maternal** diet exposures and child neonatal outcomes (**outliers >4SD excluded**) in the Young-HUNT1-MBRN cohort (only first and single births included; complete cases\*)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=2927 | | Length  n=2862 | | Ponderal Index  n=2861 | | Head circumference  n=2889 | | Placenta weight  n=2774 | | Gestational length  n=2898 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | -0.007 | 0.7 | -0.021 | 0.3 | 0.022 | 0.2 | -0.005 | 0.8 | 0.027 | 0.2 | -0.021 | 0.3 |
| Model 2 | -0.009 | 0.6 | -0.019 | 0.3 | 0.017 | 0.4 | -0.001 | 1.0 | 0.027 | 0.2 | -0.024 | 0.2 |
| Model 3 | -0.006 | 0.8 | -0.016 | 0.5 | 0.019 | 0.4 | 0.003 | 0.9 | 0.032 | 0.1 | -0.019 | 0.3 |
| Crisps  (per extra serving/week) | Model 1 | **-0.036** | **0.05** | **-0.040** | **0.031** | -0.004 | 0.8 | -0.027 | 0.2 | -0.023 | 0.2 | -0.027 | 0.1 |
| Model 2 | -0.030 | 0.1 | **-0.036** | **0.05** | -0.001 | 1.0 | -0.022 | 0.2 | -0.018 | 0.3 | -0.027 | 0.2 |
| Model 3 | **-0.041** | **0.05** | **-0.046** | **0.030** | -0.007 | 0.7 | -0.036 | 0.09 | -0.039 | 0.06 | -0.026 | 0.2 |
| Sweets  (per extra serving/week) | Model 1 | 0.009 | 0.6 | 0.011 | 0.6 | 0.000 | 1.0 | 0.016 | 0.4 | 0.017 | 0.4 | -0.003 | 0.9 |
| Model 2 | 0.015 | 0.4 | 0.016 | 0.4 | 0.002 | 0.9 | 0.022 | 0.2 | 0.024 | 0.2 | -0.002 | 0.9 |
| Model 3 | 0.033 | 0.1 | 0.038 | 0.07 | -0.002 | 0.9 | 0.035 | 0.09 | 0.028 | 0.2 | 0.014 | 0.5 |
| Fruit  (per extra serving/week) | Model 1 | -0.005 | 0.8 | -0.009 | 0.6 | -0.001 | 0.9 | 0.005 | 0.8 | 0.012 | 0.5 | 0.012 | 0.5 |
| Model 2 | -0.004 | 0.8 | -0.012 | 0.5 | 0.003 | 0.9 | 0.001 | 1.0 | 0.012 | 0.5 | 0.014 | 0.5 |
| Model 3 | 0.015 | 0.5 | 0.008 | 0.8 | 0.007 | 0.8 | 0.004 | 0.9 | 0.025 | 0.3 | 0.039 | 0.1 |
| Vegetables  (per extra serving/week) | Model 1 | -0.021 | 0.3 | -0.024 | 0.2 | -0.005 | 0.8 | -0.001 | 0.9 | -0.006 | 0.7 | -0.016 | 0.4 |
| Model 2 | -0.019 | 0.3 | -0.025 | 0.2 | -0.001 | 1.0 | -0.003 | 0.9 | -0.005 | 0.8 | -0.015 | 0.4 |
| Model 3 | -0.029 | 0.2 | -0.033 | 0.2 | -0.001 | 1.0 | -0.010 | 0.7 | -0.021 | 0.4 | -0.044 | 0.08 |
| Whole grain bread  (per extra serving/week) | Model 1 | 0.000 | 1.0 | 0.013 | 0.5 | -0.019 | 0.3 | 0.030 | 0.1 | 0.004 | 0.8 | 0.014 | 0.5 |
| Model 2 | 0.001 | 0.9 | 0.012 | 0.5 | -0.016 | 0.4 | 0.026 | 0.2 | 0.009 | 0.6 | 0.018 | 0.3 |
| Model 3 | 0.003 | 0.9 | 0.015 | 0.4 | -0.016 | 0.4 | 0.027 | 0.2 | 0.011 | 0.6 | 0.017 | 0.4 |
| Breakfast (daily versus not daily) | Model 1 | -0.010 | 0.6 | 0.009 | 0.6 | -0.023 | 0.2 | 0.019 | 0.3 | 0.020 | 0.3 | 0.009 | 0.6 |
| Model 2 | 0.000 | 1.0 | 0.012 | 0.5 | -0.011 | 0.6 | 0.019 | 0.3 | 0.034 | 0.08 | 0.014 | 0.5 |
| Model 3 | 0.009 | 0.7 | 0.017 | 0.4 | -0.002 | 0.9 | 0.025 | 0.2 | **0.041** | **0.05** | 0.026 | 0.2 |
| Lunch (daily versus not daily) | Model 1 | -0.028 | 0.1 | -0.007 | 0.7 | -0.036 | 0.06 | -0.001 | 1.0 | -0.019 | 0.3 | -0.014 | 0.4 |
| Model 2 | -0.021 | 0.3 | -0.004 | 0.8 | -0.029 | 0.1 | 0.000 | 1.0 | -0.008 | 0.7 | -0.011 | 0.6 |
| Model 3 | -0.022 | 0.3 | -0.006 | 0.8 | -0.030 | 0.2 | -0.004 | 0.9 | -0.023 | 0.3 | -0.010 | 0.6 |
| Dinner (daily versus not daily) | Model 1 | -0.019 | 0.3 | -0.014 | 0.5 | -0.010 | 0.6 | -0.018 | 0.3 | -0.001 | 1.0 | **-0.043** | **0.021** |
| Model 2 | -0.012 | 0.5 | -0.013 | 0.5 | 0.000 | 1.0 | -0.018 | 0.3 | 0.007 | 0.7 | **-0.042** | **0.028** |
| Model 3 | -0.008 | 0.7 | -0.015 | 0.5 | 0.007 | 0.7 | -0.022 | 0.3 | 0.005 | 0.8 | **-0.044** | **0.023** |

\*Results in the table are for complete cases (n=2947)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Appendix A6. Associations between **paternal** diet exposures and child neonatal outcomes (**outliers >4SD excluded**) in the Young-HUNT1-MBRN cohort (only first and single births included; complete cases, n=2140)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=2130 | | Length  n=2081 | | Ponderal Index  n=2081 | | Head circumference  n=2103 | | Placenta weight  n=2077 | | Gestational length  n=2121 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | -0.001 | 1.0 | -0.001 | 1.0 | -0.013 | 0.6 | -0.011 | 0.6 | 0.019 | 0.4 | 0.028 | 0.2 |
| Model 2 | 0.002 | 0.9 | 0.002 | 1.0 | -0.016 | 0.5 | -0.003 | 0.8 | 0.024 | 0.3 | 0.028 | 0.2 |
| Model 3 | 0.009 | 0.7 | 0.015 | 0.5 | -0.024 | 0.4 | 0.015 | 0.6 | 0.013 | 0.6 | 0.040 | 0.1 |
| Crisps  (per extra serving/week) | Model 1 | -0.004 | 0.9 | -0.018 | 0.4 | 0.003 | 0.9 | -0.030 | 0.2 | 0.020 | 0.4 | -0.015 | 0.5 |
| Model 2 | 0.005 | 0.8 | -0.011 | 0. | 0.008 | 0.7 | -0.021 | 0.4 | 0.029 | 0.2 | -0.015 | 0.5 |
| Model 3 | 0.015 | 0.5 | -0.002 | 0.9 | 0.012 | 0.7 | -0.008 | 0.8 | 0.019 | 0.5 | -0.025 | 0.3 |
| Sweets  (per extra serving/week) | Model 1 | -0.028 | 0.2 | -0.030 | 0.2 | -0.007 | 0.8 | **-0.044** | **0.04** | 0.010 | 0.7 | -0.002 | 0.9 |
| Model 2 | -0.020 | 0.4 | -0.024 | 0.3 | -0.004 | 0.9 | -0.034 | 0.1 | 0.020 | 0.4 | -0.002 | 0.9 |
| Model 3 | -0.032 | 0.2 | -0.028 | 0.3 | -0.007 | 0.8 | -0.036 | 0.2 | 0.002 | 1.0 | -0.006 | 0.8 |
| Fruit  (per extra serving/week) | Model 1 | 0.009 | 0.7 | -0.004 | 0.9 | 0.035 | 0.1 | -0.002 | 0.9 | 0.031 | 0.2 | 0.000 | 1.0 |
| Model 2 | 0.013 | 0.6 | -0.001 | 1.0 | 0.042 | 0.06 | -0.001 | 1.0 | 0.039 | 0.09 | 0.005 | 0.8 |
| Model 3 | 0.047 | 0.1 | 0.057 | 0.06 | 0.043 | 0.2 | 0.026 | 0.4 | **0.064** | **0.034** | 0.016 | 0.6 |
| Vegetables  (per extra serving/week) | Model 1 | -0.020 | 0.4 | **-0.049** | **0.026** | 0.025 | 0.3 | -0.019 | 0.4 | -0.002 | 0.9 | -0.010 | 0.6 |
| Model 2 | -0.020 | 0.4 | **-0.051** | **0.024** | 0.030 | 0.2 | -0.023 | 0.3 | 0.004 | 0.9 | -0.006 | 0.8 |
| Model 3 | -0.047 | 0.1 | **-0.090** | **0.003** | 0.014 | 0.6 | -0.040 | 0.2 | -0.033 | 0.3 | -0.018 | 0.5 |
| Whole grain bread  (per extra serving/week) | Model 1 | -0.015 | 0.5 | 0.014 | 0.5 | **-0.051** | **0.021** | 0.013 | 0.6 | -0.033 | 0.1 | 0.011 | 0.6 |
| Model 2 | -0.014 | 0.5 | 0.012 | 0.6 | **-0.045** | **0.041** | 0.009 | 0.7 | -0.030 | 0.2 | 0.013 | 0.5 |
| Model 3 | -0.012 | 0.6 | 0.020 | 0.4 | **-0.056** | **0.013** | 0.012 | 0.6 | -0.032 | 0.2 | 0.016 | 0.5 |
| Breakfast (daily versus not daily) | Model 1 | 0.003 | 0.9 | 0.018 | 0.4 | -0.020 | 0.4 | 0.026 | 0.2 | -0.022 | 0.3 | -0.003 | 0.9 |
| Model 2 | 0.004 | 0.9 | 0.018 | 0.4 | -0.015 | 0.5 | 0.023 | 0.3 | -0.020 | 0.4 | 0.000 | 1.0 |
| Model 3 | 0.005 | 0.8 | 0.022 | 0.4 | -0.025 | 0.3 | 0.012 | 0.6 | -0.018 | 0.4 | 0.004 | 0.9 |
| Lunch (daily versus not daily) | Model 1 | 0.008 | 0.7 | 0.012 | 0.6 | 0.013 | 0.5 | **0.046** | **0.035** | -0.011 | 0.6 | -0.004 | 0.9 |
| Model 2 | 0.011 | 0.6 | 0.012 | 0.6 | 0.021 | 0.3 | **0.045** | **0.045** | -0.007 | 0.7 | -0.001 | 1.0 |
| Model 3 | 0.017 | 0.5 | 0.016 | 0.5 | 0.026 | 0.3 | 0.045 | 0.06 | 0.001 | 1.0 | 0.004 | 0.9 |
| Dinner (daily versus not daily) | Model 1 | -0.030 | 0.2 | -0.038 | 0.08 | 0.006 | 0.8 | -0.002 | 0.9 | -0.016 | 0.5 | -0.030 | 0.2 |
| Model 2 | -0.029 | 0.2 | -0.039 | 0.08 | 0.011 | 0.6 | -0.005 | 0.8 | -0.014 | 0.5 | -0.027 | 0.2 |
| Model 3 | -0.034 | 0.1 | **-0.047** | **0.041** | 0.010 | 0.7 | -0.017 | 0.5 | -0.011 | 0.7 | -0.029 | 0.2 |

\*Results in the table are for complete cases (n=2140)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Appendix A7. Associations between **maternal** diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT1**-MBRN cohort (only first and single births included; **all cases including the ones with missing values\***)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=3398 | | Length  n=3331 | | Ponderal Index  n=3320 | | Head circumference  n=3371 | | Placenta weight  n=3207 | | Gestational length  n=3365 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | -0.014 | 0.4 | -0.028 | 0.1 | 0.020 | 0.3 | -0.013 | 0.5 | 0.019 | 0.3 | -0.027 | 0.1 |
| Model 2 | -0.015 | 0.4 | -0.028 | 0.1 | 0.013 | 0.5 | -0.006 | 0.8 | 0.023 | 0.2 | -0.025 | 0.2 |
| Model 3 | -0.010 | 0.6 | -0.024 | 0.2 | 0.017 | 0.4 | -0.003 | 0.9 | 0.029 | 0.2 | -0.017 | 0.4 |
| Crisps  (per extra serving/week) | Model 1 | **-0.039** | **0.025** | **-0.040** | **0.020** | -0.003 | 0.9 | -0.023 | 0.2 | -0.025 | 0.2 | -0.030 | 0.08 |
| Model 2 | **-0.036** | **0.05** | **-0.038** | **0.046** | -0.005 | 0.8 | -0.022 | 0.3 | -0.024 | 0.2 | -0.033 | 0.08 |
| Model 3 | **-0.044** | **0.037** | **-0.043** | **0.041** | -0.010 | 0.7 | -0.033 | 0.1 | **-0.044** | **0.038** | -0.031 | 0.1 |
| Sweets  (per extra serving/week) | Model 1 | -0.006 | 0.7 | -0.001 | 1.0 | -0.002 | 0.9 | 0.006 | 0.7 | 0.015 | 0.4 | -0.019 | 0.3 |
| Model 2 | 0.009 | 0.6 | 0.011 | 0.6 | -0.004 | 0.8 | 0.019 | 0.3 | 0.021 | 0.3 | -0.009 | 0.6 |
| Model 3 | 0.029 | 0.2 | 0.035 | 0.1 | -0.005 | 0.8 | 0.033 | 0.1 | 0.028 | 0.2 | 0.007 | 0.7 |
| Fruit  (per extra serving/week) | Model 1 | -0.006 | 0.7 | -0.008 | 0.7 | 0.005 | 0.8 | 0.009 | 0.6 | 0.023 | 0.2 | 0.004 | 0.8 |
| Model 2 | -0.010 | 0.6 | -0.010 | 0.6 | 0.004 | 0.8 | -0.001 | 1.0 | 0.016 | 0.4 | 0.000 | 1.0 |
| Model 3 | 0.006 | 0.8 | 0.011 | 0.6 | 0.006 | 0.8 | 0.006 | 0.8 | 0.031 | 0.2 | 0.031 | 0.2 |
| Vegetables  (per extra serving/week) | Model 1 | -0.023 | 0.2 | -0.028 | 0.1 | -0.001 | 1.0 | 0.002 | 0.9 | -0.005 | 0.8 | -0.022 | 0.2 |
| Model 2 | -0.020 | 0.3 | -0.026 | 0.2 | 0.001 | 0.9 | -0.007 | 0.7 | -0.003 | 0.9 | -0.029 | 0.1 |
| Model 3 | -0.025 | 0.3 | -0.036 | 0.1 | 0.001 | 1.0 | -0.016 | 0.5 | -0.022 | 0.4 | **-0.054** | **0.028** |
| Whole grain bread  (per extra serving/week) | Model 1 | 0.001 | 1.0 | 0.012 | 0.5 | -0.019 | 0.3 | 0.023 | 0.2 | 0.004 | 0.8 | 0.013 | 0.4 |
| Model 2 | 0.005 | 0.8 | 0.011 | 0.6 | -0.014 | 0.5 | 0.028 | 0.1 | 0.006 | 0.8 | 0.017 | 0.4 |
| Model 3 | 0.007 | 0.7 | 0.012 | 0.5 | -0.014 | 0.5 | 0.029 | 0.1 | 0.007 | 0.7 | 0.020 | 0.3 |
| Breakfast (daily versus not daily) | Model 1 | -0.012 | 0.5 | 0.012 | 0.5 | **-0.034** | **0.049** | 0.021 | 0.2 | 0.015 | 0.4 | -0.002 | 0.9 |
| Model 2 | 0.000 | 1.0 | 0.012 | 0.5 | -0.014 | 0.5 | 0.020 | 0.3 | **0.038** | **0.05** | 0.010 | 0.6 |
| Model 3 | 0.010 | 0.6 | 0.015 | 0.5 | -0.005 | 0.8 | 0.024 | 0.2 | **0.049** | **0.020** | 0.022 | 0.3 |
| Lunch (daily versus not daily) | Model 1 | -0.027 | 0.1 | 0.005 | 0.8 | **-0.042** | **0.017** | 0.004 | 0.9 | -0.027 | 0.1 | -0.022 | 0.2 |
| Model 2 | -0.019 | 0.3 | 0.000 | 1.0 | -0.029 | 0.1 | 0.004 | 0.8 | -0.017 | 0.4 | -0.013 | 0.5 |
| Model 3 | -0.020 | 0.3 | -0.003 | 0.9 | -0.028 | 0.2 | 0.001 | 1.0 | -0.036 | 0.09 | -0.010 | 0.6 |
| Dinner (daily versus not daily) | Model 1 | -0.019 | 0.3 | -0.005 | 0.8 | -0.012 | 0.5 | -0.012 | 0.5 | 0.011 | 0.6 | **-0.034** | **0.047** |
| Model 2 | -0.016 | 0.4 | -0.006 | 0.8 | -0.006 | 0.8 | -0.017 | 0.4 | 0.008 | 0.7 | **-0.043** | **0.024** |
| Model 3 | -0.013 | 0.5 | -0.008 | 0.7 | 0.001 | 1.0 | -0.022 | 0.3 | 0.007 | 0.7 | **-0.044** | **0.023** |

\*Results in the table are for all cases (n=3445)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Appendix A8. Associations between **paternal** diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT1**-MBRN cohort (only first and single births included; **all cases including the ones with missing values\***)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=2577 | | Length  n=2530 | | Ponderal Index  n=2523 | | Head circumference  n=2564 | | Placenta weight  n=2520 | | Gestational length  n=2570 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Soft drinks  (per extra serving/week) | Model 1 | 0.011 | 0.6 | -0.009 | 0.7 | -0.001 | 0.9 | -0.018 | 0.4 | 0.026 | 0.2 | 0.021 | 0.3 |
| Model 2 | 0.008 | 0.7 | -0.004 | 0.9 | -0.009 | 0.7 | -0.001 | 1.0 | 0.031 | 0.2 | 0.014 | 0.5 |
| Model 3 | 0.024 | 0.3 | 0.007 | 0.8 | -0.014 | 0.6 | 0.016 | 0.5 | 0.020 | 0.4 | 0.025 | 0.3 |
| Crisps  (per extra serving/week) | Model 1 | 0.005 | 0.8 | -0.005 | 0.8 | 0.015 | 0.4 | -0.010 | 0.6 | 0.031 | 0.1 | -0.004 | 0.8 |
| Model 2 | -0.013 | 0.6 | -0.012 | 0.6 | 0.006 | 0.8 | -0.017 | 0.4 | 0.031 | 0.2 | -0.023 | 0.3 |
| Model 3 | -0.005 | 0.9 | -0.003 | 0.9 | 0.009 | 0.7 | -0.005 | 0.9 | 0.019 | 0.5 | -0.033 | 0.2 |
| Sweets  (per extra serving/week) | Model 1 | -0.018 | 0.4 | -0.018 | 0.4 | 0.003 | 0.9 | -0.032 | 0.1 | 0.013 | 0.5 | 0.015 | 0.4 |
| Model 2 | -0.030 | 0.2 | -0.022 | 0.3 | -0.007 | 0.8 | -0.033 | 0.1 | 0.022 | 0.3 | -0.001 | 1.0 |
| Model 3 | -0.040 | 0.1 | -0.022 | 0.4 | -0.012 | 0.7 | -0.036 | 0.2 | 0.000 | 1.0 | 0.005 | 0.9 |
| Fruit  (per extra serving/week) | Model 1 | 0.022 | 0.3 | 0.009 | 0.7 | 0.018 | 0.4 | 0.003 | 0.9 | **0.045** | **0.023** | 0.017 | 0.4 |
| Model 2 | 0.013 | 0.6 | -0.008 | 0.7 | 0.038 | 0.09 | -0.009 | 0.7 | 0.038 | 0.09 | 0.006 | 0.8 |
| Model 3 | 0.050 | 0.09 | 0.51 | 0.09 | 0.033 | 0.3 | 0.021 | 0.5 | **0.067** | **0.026** | 0.033 | 0.3 |
| Vegetables  (per extra serving/week) | Model 1 | -0.002 | 0.9 | -0.027 | 0.2 | 0.019 | 0.3 | -0.012 | 0.6 | 0.014 | 0.5 | -0.008 | 0.7 |
| Model 2 | -0.020 | 0.4 | **-0.055** | **0.014** | 0.033 | 0.1 | -0.030 | 0.2 | 0.000 | 1.0 | -0.019 | 0.4 |
| Model 3 | -0.047 | 0.1 | **-0.089** | **0.003** | 0.023 | 0.4 | -0.042 | 0.2 | -0.039 | 0.2 | -0.042 | 0.2 |
| Whole grain bread  (per extra serving/week) | Model 1 | -0.001 | 1.0 | 0.019 | 0.3 | **-0.045** | **0.023** | 0.022 | 0.3 | -0.027 | 0.2 | 0.013 | 0.5 |
| Model 2 | -0.016 | 0.5 | 0.001 | 1.0 | **-0.045** | **0.043** | 0.002 | 0.9 | -0.030 | 0.2 | 0.013 | 0.5 |
| Model 3 | -0.014 | 0.5 | 0.010 | 0.7 | **-0.056** | **0.014** | 0.007 | 0.8 | -0.031 | 0.2 | 0.017 | 0.5 |
| Breakfast (daily versus not daily) | Model 1 | 0.021 | 0.3 | 0.038 | 0.06 | -0.022 | 0.3 | 0.037 | 0.06 | -0.013 | 0.5 | 0.011 | 0.6 |
| Model 2 | 0.018 | 0.4 | 0.029 | 0.2 | -0.009 | 0.7 | 0.024 | 0.3 | -0.017 | 0.4 | 0.023 | 0.3 |
| Model 3 | 0.018 | 0.5 | 0.036 | 0.1 | -0.019 | 0.4 | 0.012 | 0.6 | -0.015 | 0.5 | 0.029 | 0.2 |
| Lunch (daily versus not daily) | Model 1 | 0.010 | 0.6 | 0.005 | 0.8 | -0.003 | 0.9 | **0.045** | **0.021** | -0.013 | 0.5 | -0.001 | 1.0 |
| Model 2 | 0.017 | 0.4 | 0.003 | 0.9 | 0.022 | 0.3 | **0.046** | **0.037** | -0.008 | 0.7 | 0.000 | 1.0 |
| Model 3 | 0.020 | 0.4 | 0.001 | 1.0 | 0.025 | 0.3 | **0.047** | **0.049** | -0.001 | 1.0 | -0.002 | 1.0 |
| Dinner (daily versus not daily) | Model 1 | -0.014 | 0.5 | -0.006 | 0.8 | -0.009 | 0.6 | 0.009 | 0.6 | 0.003 | 0.9 | -0.015 | 0.4 |
| Model 2 | -0.025 | 0.3 | -0.033 | 0.1 | 0.015 | 0.5 | -0.006 | 0.8 | -0.013 | 0.6 | -0.026 | 0.2 |
| Model 3 | -0.033 | 0.2 | -0.040 | 0.08 | 0.013 | 0.6 | -0.019 | 0.4 | -0.010 | 0.7 | -0.031 | 0.2 |

\*Results in the table are for all cases (n=2618)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: included the covariables adjusted for in model 2 plus additional adjustments for the other -non-indicator- diet items or meal items.

Appendix A9. Associations between **maternal** diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT1**-MBRN cohort (only first and single births included; complete cases\*)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=2927 | | Length  n=2862 | | Ponderal Index  n=2861 | | Head circumference  n=2889 | | Placenta weight  n=2774 | | Gestational length  n=2898 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Fruit & Vegetable Index | Model 1 | -0.017 | 0.4 | -0.016 | 0.4 | -0.002 | 0.9 | 0.000 | 1.0 | 0.007 | 0.7 | -0.018 | 0.3 |
| Model 2 | -0.016 | 0.4 | -0.019 | 0.3 | 0.003 | 0.9 | -0.004 | 0.8 | 0.008 | 0.7 | -0.015 | 0.4 |
| Model 3 | -0.030 | 0.4 | -0.045 | 0.3 | 0.031 | 0.4 | -0.056 | 0.1 | -0.001 | 1.0 | -0.050 | 0.2 |
| Fiber Index | Model 1 | -0.011 | 0.6 | -0.006 | 0.7 | -0.010 | 0.6 | 0.016 | 0.4 | 0.006 | 0.8 | -0.007 | 0.7 |
| Model 2 | -0.010 | 0.6 | -0.010 | 0.6 | -0.005 | 0.8 | 0.011 | 0.6 | 0.009 | 0.6 | -0.003 | 0.9 |
| Model 3 | 0.015 | 0.7 | 0.028 | 0.5 | -0.034 | 0.4 | 0.060 | 0.1 | 0.011 | 0.8 | 0.039 | 0.3 |
| Unhealthy foods Index | Model 1 | -0.024 | 0.2 | -0.029 | 0.1 | 0.003 | 0.9 | -0.010 | 0.6 | 0.009 | 0.7 | -0.029 | 0.1 |
| Model 2 | -0.018 | 0.3 | -0.024 | 0.2 | 0.004 | 0.8 | -0.003 | 0.9 | 0.013 | 0.5 | -0.030 | 0.1 |
| Model 3 | -0.018 | 0.3 | -0.024 | 0.2 | 0.009 | 0.6 | -0.001 | 1.0 | 0.014 | 0.5 | -0.029 | 0.1 |

\*Results in the table are for complete cases (n=2947)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: model 2 adjustments plus food indeces;

Appendix A10. Associations between **paternal** diet exposures and child neonatal outcomes (outliers >3SD excluded) in the **Young-HUNT1**-MBRN cohort (only first and single births included; complete cases\*)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Weight  n=2110 | | Length  n=2073 | | Ponderal Index  n=2067 | | Head circumference  n=2099 | | Placenta weight  n=2070 | | Gestational length  n=2108 | |
|  |  | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value | β | p-value |
| Fruit & Vegetable Index | Model 1 | -0.006 | 0.8 | -0.034 | 0.1 | 0.033 | 0.1 | -0.019 | 0.4 | 0.014 | 0.5 | -0.009 | 0.7 |
| Model 2 | -0.003 | 0.9 | -0.034 | 0.1 | 0.039 | 0.08 | -0.021 | 0.3 | 0.022 | 0.3 | -0.007 | 0.7 |
| Model 3 | 0.025 | 0.6 | -0.045 | 0.3 | **0.132** | **0.003** | -0.028 | 0.5 | 0.074 | 0.09 | -0.032 | 0.5 |
| Fiber Index | Model 1 | -0.014 | 0.5 | -0.025 | 0.3 | -0.002 | 0.9 | -0.011 | 0.6 | -0.006 | 0.8 | -0.002 | 0.9 |
| Model 2 | -0.011 | 0.6 | -0.024 | 0.3 | 0.005 | 0.8 | -0.015 | 0.5 | 0.000 | 1.0 | 0.002 | 0.9 |
| Model 3 | -0.032 | 0.5 | 0.014 | 0.7 | **-0.106** | **0.014** | 0.010 | 0.8 | -0.063 | 0.1 | 0.030 | 0.5 |
| Unhealthy foods Index | Model 1 | -0.018 | 0.4 | -0.021 | 0.3 | -0.006 | 0.8 | -0.031 | 0.2 | 0.023 | 0.3 | 0.001 | 0.9 |
| Model 2 | -0.012 | 0.6 | -0.015 | 0.5 | -0.006 | 0.8 | -0.020 | 0.4 | 0.036 | 0.1 | 0.000 | 1.0 |
| Model 3 | -0.013 | 0.6 | -0.012 | 0.6 | -0.014 | 0.5 | -0.017 | 0.4 | 0.031 | 0.2 | 0.002 | 0.9 |

\*Results in the table are for complete cases (n=2140)

Abbrevation: β= standardised beta coefficient;

Model 1: the crude model;

Model 2: adjusted for age, BMI z-score, smoking (ever/never), alcohol use (ever/never), snuff (tobacco) use (ever/never), and education plans measured via Young-HUNT1;

Model 3: model 2 adjustments plus food indeces;

Appendix A11. Descriptive characteristics of the dietary items of the Young-HUNT1 mothers- by socioeconomic and behavior covariables (based on complete cases)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Young-HUNT1-MBRN  Mother-offspring dyads  (n=2947) | | | | | | | | | | | |
|  | Education plans | | | Smoking | | | Alcohol use | | | Snuff (tobacco) use | | |
| **Dietary items Young-HUNT** | No higher education | Higher  Education | p | Never | Ever | p | Never | Ever | p | Never | Ever | p |
| Soft drinks (servings per week) | 3.9±3.1 | 3.7±2.7 | 0.02 | 3.4±2.6 | 4.2±3.2 | <0.001 | 3.2±2.5 | 4.0±3.0 | <0.001 | 3.8±2.9 | 4.2±3.2 | 0.2 |
| Crisps (servings per week) | 2.4±2.0 | 2.1±1.6 | <0.001 | 2.2±1.8 | 2.4±2.0 | 0.09 | 2.3±1.9 | 2.3±1.9 | 0.8 | 2.3±1.9 | 2.6±2.3 | 0.05 |
| Sweets (servings per week) | 3.4±2.4 | 3.3±1.9 | 0.3 | 3.2±1.9 | 3.5±2.4 | <0.001 | 3.0±1.8 | 3.5±2.3 | <0.001 | 3.4±2.2 | 3.8±2.8 | 0.08 |
| Fruit (servings per week) | 6.3±4.4 | 6.8±4.3 | 0.003 | 6.8±4.3 | 6.3±4.4 | 0.001 | 6.9±4.4 | 6.4±4.3 | 0.02 | 6.5±4.4 | 6.2±4.4 | 0.4 |
| Vegetables (servings per week) | 5.1±3.9 | 5.3±3.7 | 0.08 | 5.3±3.8 | 5.1±3.8 | 0.2 | 5.6±4.2 | 5.1±3.7 | 0.01 | 5.2±3.8 | 5.2±4.2 | 0.9 |
| Whole grain bread (servings per week) | 8.7±4.9 | 9.5±4.7 | <0.001 | 9.6±4.8 | 8.5±4.8 | <0.001 | 9.4±5.0 | 8.9±4.8 | 0.03 | 9.0±4.9 | 8.6±5.0 | 0.4 |
| Daily breakfast | 63.7% | 65.0% | 0.5 | 75.5% | 56.0% | <0.001 | 79.7% | 61.2% | <0.001 | 65.2% | 43.6% | <0.001 |
| Daily lunch | 60.8% | 60.0% | 0.6 | 69.0% | 54.5% | <0.001 | 73.4% | 58.1% | <0.001 | 61.2% | 46.4% | 0.001 |
| Daily dinner | 72.2% | 69.8% | 0.2 | 78.4% | 66.4% | <0.001 | 82.3% | 69.3% | <0.001 | 72.1% | 55.7% | <0.001 |
|  |  | | |  | | |  | | |  | |  |

Appendix A12. Descriptive characteristics of the dietary items of the Young-HUNT1 fathers- by socioeconomic and behavior covariables (based on complete cases)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Young-HUNT1-MBRN  Father-offspring dyads  (n=2140\*) | | | | | | | | | | | |
|  | Education plans | | | Smoking | | | Alcohol use | | | Snuff (tobacco) use | | |
| **Dietary items Young-HUNT** | No higher education | Higher  Education | p | Never | Ever | p | Never | Ever | p | Never | Ever | p |
| Soft drinks (servings per week) | 5.0±3.7 | 4.9±3.5 | 0.4 | 4.4±3.3 | 5.5±3.8 | <0.001 | 3.7±0.1 | 5.2±3.7 | <0.001 | 4.5±3.3 | 6.2±4.1 | <0.001 |
| Crisps (servings per week) | 2.8±2.2 | 2.4±1.9 | 0.001 | 2.6±2.1 | 2.7±2.1 | 0.2 | 2.6±2.1 | 2.7±2.1 | 0.5 | 2.6±2.0 | 3.0±2.5 | <0.001 |
| Sweets (servings per week) | 3.7±2.6 | 3.5±2.3 | 0.02 | 3.4±2.3 | 3.9±2.7 | <0.001 | 3.2±2.1 | 3.8±2.6 | <0.001 | 3.4±2.3 | 4.3±3.1 | <0.001 |
| Fruit (servings per week) | 5.5±4.3 | 5.9±4.3 | 0.1 | 5.9±4.3 | 5.4±4.2 | 0.009 | 6.2±4.5 | 5.5±4.2 | 0.01 | 5.6±4.2 | 5.6±4.3 | 0.9 |
| Vegetables (servings per week) | 4.7±3.9 | 5.4±3.9 | <0.001 | 5.1±4.0 | 4.7±3.9 | 0.012 | 5.4±4.2 | 4.8±3.9 | 0.03 | 4.9±3.9 | 4.8±4.1 | 0.5 |
| Whole grain bread (servings per week) | 9.0±5.3 | 9.9±5.0 | <0.001 | 9.6±5.2 | 8.9±5.2 | 0.004 | 9.4±5.3 | 9.2±5.2 | 0.5 | 9.3±5.3 | 9.1±5.2 | 0.4 |
| Daily breakfast | 74.7% | 76.3% | 0.5 | 81.4% | 70.0% | <0.001 | 84.2% | 73.5% | <0.001 | 79.3% | 64.6% | <0.001 |
| Daily lunch | 69.9% | 71.7% | 0.5 | 76.6% | 65.3% | <0.001 | 82.0% | 68.3% | <0.001 | 73.9% | 61.2% | <0.001 |
| Daily dinner | 80.3% | 83.2% | 0.1 | 85.1% | 77.7% | <0.001 | 87.0% | 80.0% | 0.003 | 82.5% | 77.2% | 0.006 |
|  |  | | |  | | |  | | |  | |  |