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| **Supplemental Table 1. Breakfast consumption and meal timing behaviors in relation to weight status measured by waist circumference with additional adjustment for BMIa** | | | | |
|  |  | Obese (≥88 cm in women, ≥102 cm in men) | | Continuousβ (95% CI)c |
|  |  | # of cases | OR (95% CI)b |
| Number of recalls reporting breakfast | |  |  |  |
|  | 6 | 158 | 1.00 (ref) | 0.00 (ref) |
|  | 5 | 69 | 0.77 (0.40 ,1.49) | -1.13 (-2.63 ,0.38) |
|  | 4 | 36 | 1.14 (0.42 ,3.07) | -0.65 (-2.74 ,1.43) |
|  | 0-3 | 18 | 0.18 (0.03 ,1.09) | -1.29 (-3.9 ,1.32) |
|  |  |  |  |  |
| Average time of first intaked |  | 281 | 0.94 (0.73 ,1.21) | 0.05 (-0.5 ,0.6) |
| Average length of intake windowd | | 281 | 0.92 (0.75 ,1.13) | -0.38 (-0.83 ,0.08) |
| Average time of midpoint of intake windowd | | 281 | 0.81 (0.59 ,1.13) | -0.34 (-1.02 ,0.33) |
|  |  |  |  |  |
| iSD in first intake timed |  | 281 | 0.79 (0.51 ,1.21) | -0.74 (-1.61 ,0.13) |
| iSD in length of intake windowd | | 281 | 1.03 (0.73 ,1.45) | -0.3 (-1.06 ,0.45) |
| iSD in midpoint of intake windowd | | 281 | 0.82 (0.46 ,1.48) | -0.74 (-1.92 ,0.44) |
| aAll models include adjustment for age, sex, total caloric intake, Healthy Eating Index-2015, BMI, sleep duration, physical activity, race, employment status, smoking status, and alcohol consumption. bOdds ratios and corresponding 95% confidence intervals from logistic regression are reported. cRegression coefficients and corresponding 95% confidence intervals from multiple linear regression are reported. dOdds ratios and regression coefficients are for a 1-hour increase in exposure (average time or iSD). | | | | |

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| **Supplementary Table 2. Breakfast consumption and meal timing behaviors in relation to weight status measured by BMI when excluding coffee and tea consumption as eating episodesa** | | | | | | |
|  |  | Overweight (25-29.9 kg/m2) | | Obese (≥30 kg/m2) | | Continuousβ (95% CI)c |
|  |  | # of cases | OR (95% CI)b | # of cases | OR (95% CI)b |
| Average time of first intaked | | 198 | 1.05 (0.88, 1.25) | 190 | 1.04 (0.86, 1.24) | 0.33 (-0.05, 0.70) |
| Average length of intake windowd | | 198 | 1.07 (0.92, 1.24) | 190 | 0.98 (0.83, 1.14) | -0.24 (-0.57, 0.08) |
| Average time of midpoint of intake windowd | | 198 | 1.16 (0.93, 1.44) | 190 | 1.03 (0.81, 1.30) | 0.27 (-0.21, 0.76) |
|  |  |  |  |  |  |  |
| iSD in first intake timed |  | 198 | 1.09 (0.83, 1.43) | 190 | 1.18 (0.89, 1.57) | 1.01 (0.44, 1.58) |
| iSD in length of intake windowd | | 198 | 1.05 (0.83, 1.33) | 190 | 1.05 (0.81, 1.34) | 0.56 (0.04, 1.08) |
| iSD in midpoint of intake windowd | | 198 | 1.19 (0.81, 1.74) | 190 | 1.14 (0.76, 1.72) | 0.98 (0.15, 1.81) |
| aAll models include adjustment for age, sex, total caloric intake, Healthy Eating Index-2015, sleep duration, physical activity, race, employment status, smoking status, and alcohol consumption. bOdds ratios and corresponding 95% confidence intervals from polytomous logistic regression are reported. cRegression coefficients and corresponding 95% confidence intervals from multiple linear regression are reported. dOdds ratios and regression coefficients are for a 1-hour increase in exposure (average time or iSD). | | | | | | |

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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Supplementary Table 3. Breakfast consumption and meal timing behaviors in relation to weight status measured by BMI (kg/m2) when using a weighted average of responses for weekdays and weekends to characterize all 7 days week a** | | | | | | | |  |  | Overweight (25-29.9) | | Obese (≥30) | | Continuousβ (95% CI)c | |  |  | # of cases | OR (95% CI)b | # of cases | OR (95% CI)b | | Average time of first intaked |  | 198 | 1.14 (0.99, 1.32) | 190 | 1.10 (0.94, 1.28) | 0.33 (0.01, 0.64) | | Average length of intake windowd | | 198 | 1.03 (0.92, 1.15) | 190 | 0.95 (0.85, 1.07) | -0.17 (-0.42, 0.07) | | Average time of midpoint of intake windowd | | 198 | 1.21 (1.03, 1.42) | 190 | 1.06 (0.89, 1.27) | 0.24 (-0.11, 0.60) | |  |  |  |  |  |  |  | | iSD in first intake timed |  | 198 | 1.21 (0.89, 1.63) | 190 | 1.17 (0.86, 1.61) | 1.11 (0.48, 1.74) | | iSD in length of intake windowd | | 198 | 1.10 (0.85, 1.42) | 190 | 1.06 (0.81, 1.38) | 0.70 (0.15, 1.25) | | iSD in midpoint of intake windowd | | 198 | 1.32 (0.89, 1.96) | 190 | 1.15 (0.74, 1.77) | 0.95 (0.08, 1.81) | | aAll models include adjustment for age, sex, total caloric intake, Healthy Eating Index-2015, sleep duration, physical activity, race, employment status, smoking status, and alcohol consumption. bOdds ratios and corresponding 95% confidence intervals from polytomous logistic regression are reported. cRegression coefficients and corresponding 95% confidence intervals from multiple linear regression are reported. dOdds ratios and regression coefficients are for a 1-hour increase in exposure (average time or iSD). | | | | | | |   **Supplemental Table 4. Breakfast consumption and meal timing behaviors in relation to weight status measured by BMI when excluding individuals who participated in a weight loss diet (nexcluded=44)a** | | | | | | |
|  |  | Overweight (25-29.9 kg/m2) | | Obese (≥30 kg/m2) | | Continuousβ (95% CI)c |
|  |  | # of cases | OR (95% CI)b | # of cases | OR (95% CI)b |
| Number of recalls reporting breakfast | |  |  |  |  |  |
|  | 6 | 102 | 1.00 (ref) | 94 | 1.00 (ref) | 0.00 (ref) |
|  | 5 | 53 | 2.50 (1.49, 4.21) | 44 | 1.90 (1.07, 3.38) | 1.35 (0.21, 2.49) |
|  | 4 | 22 | 1.56 (0.77, 3.16) | 19 | 1.14 (0.52, 2.47) | 1.39 (-0.20, 2.97) |
|  | 0-3 | 6 | 0.43 (0.15, 1.21) | 16 | 0.84 (0.35, 2.03) | 0.60 (-1.37, 2.57) |
|  |  |  |  |  |  |  |
| Average time of first intaked | | 183 | 1.21 (1.00, 1.47) | 173 | 1.10 (0.90, 1.35) | 0.45 (0.03, 0.86) |
| Average length of intake windowd | | 183 | 1.00 (0.85, 1.16) | 173 | 0.93 (0.79, 1.10) | -0.32 (-0.66, 0.03) |
| Average time of midpoint of intake windowd | | 183 | 1.32 (1.04, 1.66) | 173 | 1.05 (0.82, 1.36) | 0.34 (-0.18, 0.85) |
|  |  |  |  |  |  |  |
| iSD in first intake timed |  | 183 | 1.21 (0.91, 1.67) | 173 | 1.13 (0.82, 1.55) | 1.14 (0.49, 1.78) |
| iSD in length of intake windowd | | 183 | 1.11 (0.85, 1.44) | 173 | 1.06 (0.81, 1.39) | 0.76 (0.19, 1.33) |
| iSD in midpoint of intake windowd | | 183 | 1.38 (0.93, 2.06) | 173 | 1.09 (0.70, 1.72) | 1.02 (0.14, 1.91) |
| aAll models include adjustment for age, sex, total caloric intake, Healthy Eating Index-2015, sleep duration, physical activity, race, employment status, smoking status, and alcohol consumption. bOdds ratios and corresponding 95% confidence intervals from polytomous logistic regression are reported. cRegression coefficients and corresponding 95% confidence intervals from multiple linear regression are reported. dOdds ratios and regression coefficients are for a 1-hour increase in exposure (average time or iSD). | | | | | | |

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| **Supplemental Table 5. Association between intake timing behaviors with BMI, WC and GlycA when adjusting for first intakea** | | | | |
|  |  | β (95% CI)b | | |
|  |  | BMI | WC | GlycA |
| Average length of intake windowc | | -0.13 (-0.54, 0.28) | -0.81 (-1.82, 0.20) | **-**0.06 (-0.12, 0.00) |
| Average time of midpoint of intake windowc | | -0.26 (-1.08, 0.56) | -1.63 (-3.65, 0.39) | -0.12 (-0.24 ,0.01) |
|  |  |  |  |  |
| iSD in length of intake windowc | | 0.16 (-0.53, 0.86) | 0.47 (-1.26, 2.19) | -0.06 (-0.16, 0.05) |
| iSD in midpoint of intake windowc | | -0.15 (-1.33, 1.02) | -0.46 (-3.36, 2.44) | 0.05 (-0.13, 0.23) |
| aAll models include adjustment for age, sex, total caloric intake, Healthy Eating Index-2015, sleep duration, physical activity, race, employment status, smoking status, and alcohol consumption. Models of average exposures included additional adjustment for average time of first intake, and models of iSD exposures include additional adjustment for iSD in first intake. bRegression coefficients and corresponding 95% confidence intervals from multiple linear regression are reported. cOdds ratios and regression coefficients are for a 1-hour increase in exposure (average time or iSD). | | | | |

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| **Supplemental Table 6. Pearson correlation (p-value) between ratio of expected to observed energy intake with BMI and meal timing exposures** | |
|  | Ratio of expected energy needs to observed energy intake |
| BMI | -0.03 (0.45) |
| Average time of first intake | 0.05 (0.30) |
| Average length of intake window | -0.03 (0.57) |
| Average time of midpoint of intake window | 0.04 (0.35) |
| iSD in first intake time | 0.02 (0.69) |
| iSD in length of intake window | 0.04 (0.36) |
| iSD in midpoint of intake window | 0.06 (0.17) |