Supplementary Methods: Statistical implementation

Pearson chi-square tests were used when all expected counts were at least five. Sparse multicategory tables used conditional Monte Carlo Pearson chi-square tests with 1,000,000 simulated tables, fixed margins, seed 4651085, and the correction (extreme simulations + 1)/(simulations + 1). Mann–Whitney U tests used asymptotic, tie-corrected, continuity-corrected two-sided inference. Complete-observation sample size was determined separately for each outcome.

Full models estimated 10 parameters, including the intercept, except the energy-intake model, which estimated nine because energy intake was omitted as a covariate. Reduced models estimated seven parameters. HC3 covariance estimation used squared residuals divided by $(1 - \text{leverage})^2$. Joint categorical tests used three numerator degrees of freedom and n minus model rank denominator degrees of freedom. The same residual degrees of freedom were used for Student t confidence intervals.

Residual Shapiro–Wilk tests were calculated for all 39 full models. Residual-versus-fitted and normal Q–Q plots were examined for BMI, HOMA-IR, total sugars intake, and dietary fiber intake. Leverage and Cook's distance were calculated for every full model. Cook's distance >4/n was used as a screening criterion; flagged observations were retained.

Sensitivity analyses were added during revision. Reduced models adjusted for age, sex, and education. Leave-one-out analyses refitted all 39 full models after omitting each participant in turn. Each resulting set of 39 overall p values received a separate Benjamini–Hochberg adjustment. The reduced-model family of 39 tests was adjusted separately. To assess sensitivity beyond statistical significance, category-specific coefficients were also examined after omitting each complete observation in turn. For the 33 contrasts displayed in Table 6, minimum and maximum estimates and any reversals in direction were recorded. Log-scale coefficients were converted to relative percentage differences using $100 \times [\exp(\beta) - 1]$; other contrasts retained their original effect scales. These ranges summarize sensitivity to individual observations and are not confidence intervals.

Supplementary Results: Model diagnostics and sensitivity analyses

Model-specific sample sizes, residual Shapiro–Wilk test results, maximum leverage, and Cook's distance diagnostics for all 39 full models are presented in Table S4. Some residual distributions, particularly for total sugars intake, showed departures from normality despite transformation. Observations exceeding the Cook's distance screening criterion were retained in the full-sample analyses.

Across the 33 category-specific contrasts displayed in Table 6, no estimated contrast changed direction in leave-one-out analyses (Table S5). Effect magnitudes nevertheless varied. For example, the once-monthly BMI contrast ranged from 2.14 to 3.84 kg/m², compared with 2.83 kg/m² in the full sample, while the corresponding total sugars contrast ranged from 112.2% to 238.4%, compared with 146.7%. These ranges summarize sensitivity to individual observations and are not confidence intervals. The stability of direction does not establish precise estimation or remove residual confounding.

Supplementary Table S1. Overall adjusted associations across food-ordering application use frequency categories for all 39 outcomes.

Outcome	Adjusted overall *p*	FDR *q*
Height (cm)	0.055	0.102
Weight (kg)	<0.001	<0.001
BMI (kg/m²)	<0.001	<0.001
Waist circumference (cm)	<0.001	<0.001
Hip circumference (cm)	<0.001	<0.001
Waist-to-hip ratio	0.044	0.086
Systolic BP (mmHg)	0.693	0.802
Diastolic BP (mmHg)	0.433	0.649
Heart rate (bpm)	0.018	0.039
Skeletal muscle mass (kg)	0.095	0.168
Body fat mass (kg)	<0.001	<0.001
Body fat (%)	<0.001	<0.001
Visceral fat area (cm²)	<0.001	<0.001
Subcutaneous fat area (cm²)	<0.001	<0.001
Visceral-to-subcutaneous fat ratio	0.030	0.061
Abdominal fat ratio	<0.001	<0.001
Waist-to-height ratio	<0.001	0.002
Muscle mass (kg)	0.005	0.010
Body cell mass (kg)	0.003	0.008
Total body water (L)	0.004	0.009
Fasting blood glucose (mg/dL)	0.316	0.493
Total cholesterol (mg/dL)	0.569	0.761
Triglycerides (mg/dL)	0.193	0.313
HDL cholesterol (mg/dL)	0.182	0.309
LDL cholesterol (mg/dL)	0.797	0.883
Fasting insulin (μIU/mL)	<0.001	<0.001
HOMA-IR	<0.001	<0.001
Energy (kcal/day)	0.828	0.883
Carbohydrate (% energy)	0.532	0.750
Protein (% energy)	0.538	0.750
Fat (% energy)	0.668	0.802
Carbohydrate (g/day)	0.699	0.802
Total sugars intake (g/day)	<0.001	<0.001
Protein (g/day)	0.604	0.761
Fat (g/day)	0.852	0.883
Saturated fat (g/day)	0.860	0.883
Cholesterol (mg/day)	0.605	0.761
Sodium (mg/day)	0.970	0.970
Dietary fiber intake (g/day)	0.003	0.007

Overall *p* values are from joint Wald F tests with HC3 robust standard errors comparing the four ordering-frequency categories. Models adjusted for age, sex, education, ln(1 + total physical activity), household income, and total energy intake. Energy intake was omitted as a covariate when it was the outcome. Education was coded as bachelor's degree or higher versus lower education, and income as >30,000 versus ≤30,000 THB/month. Benjamini–Hochberg adjustment was applied across all 39 overall *p* values. Analyses used complete observations without imputation. Waist

circumference, hip circumference, waist-to-hip ratio, and waist-to-height ratio analyses included 93 participants; all other outcome analyses included 94 participants. These tests assess overall differences across categories.

Supplementary Table S2. Sensitivity of the highlighted associations

Outcome	Full-model *q*	Reduced-model *q*	Leave-one-out *q* range
BMI (kg/m²)	<0.001	<0.001	0.000011–0.000357
Body fat mass (kg)	<0.001	<0.001	0.000001–0.000263
Body fat (%)	<0.001	<0.001	0.000017–0.000575
Visceral fat area (cm²)	<0.001	<0.001	0.000001–0.000263
Subcutaneous fat area (cm²)	<0.001	<0.001	0.000004–0.000356
Visceral-to-subcutaneous fat ratio	0.061	0.023	0.015816–0.130866
Waist-to-height ratio	0.002	0.002	0.000186–0.003352
Fasting insulin (μIU/mL)	<0.001	0.005	0.000186–0.001687
HOMA-IR	<0.001	0.003	0.000062–0.000940
Total sugars intake (g/day)	<0.001	<0.001	0.000017–0.000263
Dietary fiber intake (g/day)	0.007	0.008	0.002929–0.020345

The reduced model adjusted for age, sex, and education. The full model additionally adjusted for ln(1 + total physical activity), household income, and total energy intake. Benjamini–Hochberg correction was applied across 39 outcomes separately for each model set and each leave-one-out sample. Sensitivity analyses were added during the revision. All 10 displayed outcomes with full-model $q < 0.05$ also had $q < 0.05$ in the reduced models and every leave-one-out analysis. The visceral-to-subcutaneous fat ratio crossed this threshold across model specifications and leave-one-out samples. The visceral-to-subcutaneous fat ratio varied across these analyses.

Supplementary Table S3. Covariate distributions across ordering frequency categories

Ordering frequency	n	Age (years), median (range)	Male, n	Female, n	Bachelor's degree or higher, n	Household income >30,000 THB/month, n
<1/month or no use	55	48.0 (30–59)	31	24	21	27
1/month	7	47.0 (32–55)	1	6	6	5
2–3/month	19	45.0 (31–52)	5	14	12	12
2–3/week	13	40.0 (31–57)	1	12	9	4

Values are counts unless otherwise indicated. Age is presented as median (range). Education and household income correspond to the categories used in the regression models. THB, Thai baht.

Supplementary Table S4. Sample sizes and regression diagnostics for all 39 full models

Outcome	n	Maximum leverage	Maximum Cook's D	D > 4/n count	Residual Shapiro–Wilk *p*
Height (cm)	94	0.292	0.101	4	0.601
Weight (kg)	94	0.292	0.132	8	0.392
BMI (kg/m²)	94	0.292	0.119	7	0.468
Waist circumference (cm)	93	0.292	0.099	8	0.595
Hip circumference (cm)	93	0.292	0.114	7	0.111
Waist-to-hip ratio	93	0.292	0.092	8	0.126
Systolic BP (mmHg)	94	0.292	0.112	7	0.242
Diastolic BP (mmHg)	94	0.292	0.126	6	0.051
Heart rate (bpm)	94	0.292	0.111	8	0.819
Skeletal muscle mass (kg)	94	0.292	0.164	2	<0.001
Body fat mass (kg)	94	0.292	0.176	5	0.026
Body fat (%)	94	0.292	0.150	6	0.005
Visceral fat area (cm²)	94	0.292	0.216	8	0.004
Subcutaneous fat area (cm²)	94	0.292	0.195	6	<0.001
Visceral-to-subcutaneous fat ratio	94	0.292	0.109	8	0.597
Abdominal fat ratio	94	0.292	0.100	6	0.035
Waist-to-height ratio	93	0.292	0.114	9	0.894
Muscle mass (kg)	94	0.292	0.066	9	0.429
Body cell mass (kg)	94	0.292	0.071	8	0.730
Total body water (L)	94	0.292	0.064	8	0.851
Fasting blood glucose (mg/dL)	94	0.292	0.398	4	<0.001
Total cholesterol (mg/dL)	94	0.292	0.118	5	<0.001
Triglycerides (mg/dL)	94	0.292	0.290	5	<0.001
HDL cholesterol (mg/dL)	94	0.292	0.072	6	0.134
LDL cholesterol (mg/dL)	94	0.292	0.077	7	0.631
Fasting insulin (μIU/mL)	94	0.292	0.093	6	0.907
HOMA-IR	94	0.292	0.162	8	0.136
Energy (kcal/day)	94	0.237	0.263	6	0.002
Carbohydrate (% energy)	94	0.292	0.151	7	0.224
Protein (% energy)	94	0.292	0.103	6	0.001
Fat (% energy)	94	0.292	0.130	7	0.973
Carbohydrate (g/day)	94	0.292	0.211	8	0.113
Total sugars intake (g/day)	94	0.292	0.164	4	<0.001
Protein (g/day)	94	0.292	0.067	7	<0.001
Fat (g/day)	94	0.292	0.207	7	0.982
Saturated fat (g/day)	94	0.292	0.078	9	<0.001
Cholesterol (mg/day)	94	0.292	0.190	6	0.004
Sodium (mg/day)	94	0.292	0.110	6	0.024
Dietary fiber intake (g/day)	94	0.292	0.083	3	0.239

Models and outcome transformations are described in Section 2.5 and the Supplementary Methods. Full models included 10 parameters, including the intercept, except the energy-intake model, which included nine. Cook's distance >4/n, where n is the outcome-specific sample size, was used as a screening criterion; flagged observations were retained. Shapiro–Wilk tests assessed model residuals. These diagnostic p values were not adjusted for multiple comparisons and were not used to select models or exclude observations. BMI, body mass index; BP, blood pressure; HDL, high-density lipoprotein; LDL, low-density lipoprotein; HOMA-IR, homeostatic model assessment of insulin resistance.

Supplementary Table S5. Full-sample adjusted contrasts and leave-one-out ranges for the outcomes displayed in Table 6

Outcome and effect scale	Ordering category	Full sample	LOO minimum	LOO maximum
BMI (kg/m²)	1/month	+2.83	+2.14	+3.84
BMI (kg/m²)	2–3/month	+5.39	+4.88	+5.69
BMI (kg/m²)	2–3/week	+6.38	+5.82	+7.49
Body fat mass (kg)	1/month	+30.6%	+24.5%	+39.4%
Body fat mass (kg)	2–3/month	+53.1%	+49.0%	+56.9%
Body fat mass (kg)	2–3/week	+51.7%	+46.9%	+67.7%
Body fat (percentage points)	1/month	+3.50	+2.60	+4.45
Body fat (percentage points)	2–3/month	+7.23	+6.67	+7.73
Body fat (percentage points)	2–3/week	+6.38	+5.79	+7.98
Visceral fat area (cm²)	1/month	+27.8%	+22.5%	+34.9%
Visceral fat area (cm²)	2–3/month	+48.6%	+44.7%	+51.6%
Visceral fat area (cm²)	2–3/week	+53.3%	+48.4%	+69.6%
Subcutaneous fat area (cm²)	1/month	+39.6%	+31.8%	+53.3%
Subcutaneous fat area (cm²)	2–3/month	+64.9%	+58.4%	+69.1%
Subcutaneous fat area (cm²)	2–3/week	+57.7%	+51.1%	+78.7%
Visceral-to-subcutaneous fat ratio	1/month	-8.5%	-12.0%	-5.9%
Visceral-to-subcutaneous fat ratio	2–3/month	-9.9%	-10.9%	-8.1%
Visceral-to-subcutaneous fat ratio	2–3/week	-2.7%	-5.1%	-1.3%
Waist-to-height ratio	1/month	+0.040	+0.027	+0.054
Waist-to-height ratio	2–3/month	+0.068	+0.062	+0.074
Waist-to-height ratio	2–3/week	+0.084	+0.075	+0.100
Fasting insulin (μIU/mL)	1/month	+59.6%	+29.5%	+77.7%
Fasting insulin (μIU/mL)	2–3/month	+129.0%	+112.8%	+147.4%
Fasting insulin (μIU/mL)	2–3/week	+139.1%	+112.6%	+166.3%
HOMA-IR	1/month	+58.2%	+27.2%	+80.4%
HOMA-IR	2–3/month	+147.6%	+132.9%	+166.9%
HOMA-IR	2–3/week	+167.9%	+130.4%	+198.8%
Total sugars intake (g/day)	1/month	+146.7%	+112.2%	+238.4%
Total sugars intake (g/day)	2–3/month	+242.8%	+223.0%	+263.1%
Total sugars intake (g/day)	2–3/week	+139.6%	+111.9%	+168.3%
Dietary fiber intake (g/day)	1/month	-47.0%	-50.9%	-41.5%
Dietary fiber intake (g/day)	2–3/month	-12.2%	-16.4%	-7.8%
Dietary fiber intake (g/day)	2–3/week	-47.3%	-51.3%	-43.1%

Values are full-sample adjusted contrasts and minimum–maximum estimates from leave-one-out analyses, relative to the <1/month or no-use category. Models used the covariates and transformations specified in Table 6. BMI contrasts are absolute differences in kg/m², waist-to-height ratio contrasts are absolute differences in the ratio, and body fat contrasts are percentage-point differences. All other contrasts are relative percentage differences in modeled geometric means, calculated as $100 \times [\exp(\beta) - 1]$. Leave-one-out ranges summarize changes after omitting each complete observation in turn and are not confidence intervals. No direction reversals occurred across the 33 displayed contrasts. Individual contrasts were not adjusted for multiple comparisons and remain exploratory. LOO, leave-one-out; BMI, body mass index; HOMA-IR, homeostatic model assessment of insulin resistance.