

Supplementary Table 1. Food group components used to derive each cluster

Category used in cluster analysis	Items from Nutrition Data System for Research (NDSR) included in category
Fruits	Citrus fruit, avocado and similar, fruit excluding citrus fruit
Vegetables	Dark-green vegetables, deep-yellow vegetables, tomato, vegetable juice, other vegetables
Starchy vegetables	White potatoes, other starchy vegetables
Legumes	Legumes
Whole grains	Whole grain varieties of grains, flour and dry mixed; loaf-type bread and plain rolls; other breads (quick breads, corn muffins, tortillas); pasta, ready-to-eat cereal (not presweetened and presweetened); baby food grain mixtures
Meat/dairy alternatives	Milk-nondairy, meat alternatives, cheese-nondairy, yogurt-nondairy, nondairy-based (sweetened, artificially sweetened, or unsweetened) meal replacement/supplement
Cheese/yogurt	Cheese (whole, reduced fat, low fat and fat free), yogurt (sweetened or artificially sweetened whole, low fat, and fat free)
Milk	Milk (whole, reduced fat, and low fat and fat free)
Eggs	Eggs, egg substitute
Nuts	Nuts and seeds, nuts and seed butters
Seafood	Fish-fresh and smoked, lean fish-fresh and smoked, shellfish
Poultry	Poultry, lean poultry
Beef/pork	Beef (full fat and lean), veal (full fat and lean), lamb (full fat and lean), fresh pork (full fat and lean), game
Cold cuts	Cold cuts and sausage (full fat and lean), cured pork (full fat and lean), organ meats, baby food meat mixtures
Artificially and unsweetened beverages	Artificially and unsweetened coffee, coffee substitutes, soft drinks, and tea; artificially sweetened fruit drinks, water, and milk beverage powder without non-fat dry milk
Fried produce	Fried fruit, fried potatoes, fried vegetables
Fried meat	Fried chicken (commercial entrée and fast food), fried fish (commercial entrée and fast food), fried shellfish (commercial entrée and fast food)
Snacks	Fruit-based, vegetable-based, and meat-based savory snack; crackers, snack chips, and snack bars (whole grain, some whole grain, refined grain); popcorn (non-flavored and flavored)
Refined grains	Some whole grain and refined grain varieties of grains, flour and dry mixed; loaf-type bread and plain rolls; other breads (quick breads, corn muffins, tortillas); pasta, ready-to-eat cereal (not presweetened and presweetened); baby food grain mixtures + non-grain flour and similar
Desserts	Cakes, cookies, pies, pastries, Danish, doughnuts, and cobblers (whole grain, some whole grain, refined grain); frozen desserts (dairy and non-dairy); pudding and other dairy dessert (sugar and artificially sweetened); candy (non-chocolate and chocolate); frosting or glaze; sweet sauces (regular and reduce fat/reduced calorie/fat free); miscellaneous dessert; baby food dessert

Category used in cluster analysis	Items from Nutrition Data System for Research (NDSR) included in category
Miscellaneous	Margarine (regular and reduced fat); oil, shortening; butter and other animal fats (regular and reduced fat); sugar; syrup, honey, jam, jelly, preserves; sugar substitute; cream (full, reduced fat, low fat and fat free, non-dairy); salad dressing (regular and reduced fat/reduced calorie/fat free); gravy (regular and reduced fat/fat free); sauces and condiments (regular and reduced fat); pickled foods; soup broth
Sugar-sweetened beverages	Sweetened coffee, coffee substitutes, fruit drinks soft drinks, tea, water, and flavored milk beverage powder without non-fat dry milk
Fruit juice	Citrus juice, fruit juice excluding citrus juice
Sweetened milk	Ready-to drink flavored milk (whole, reduced fat, low fat and fat free), sweetened (sugar or artificially) flavored milk beverage powder with non-fat dry milk

Supplementary Table 2. Odds ratios (95% CIs) predicting membership in the Unhealthy compared to Healthy cluster[†]

	Prevention studies	
	<i>NET-Works</i> (n=527)	<i>GROW</i> (n=604)
Child's sex		
Male	Ref.	Ref.
Female	0.98 (0.68, 1.41)	0.71 (0.44, 1.14)
Child's age, years	1.02 (0.77, 1.36)	0.83 (0.63, 1.09)
Child's BMI, kg/m²	0.92 (0.82, 1.03)	0.82 (0.59, 1.12)
Highest household education	**	
<High school	Ref.	Ref.
High school or GED	1.90 (1.14, 3.17)*	1.32 (0.73, 2.38)
≥Some higher education	2.48 (1.57, 3.91)**	1.30 (0.72, 2.31)
Primary parent/guardian employment		
Not working for pay	Ref.	Ref.
Part time	0.86 (0.54, 1.36)	0.83 (0.45, 1.53)
Full time	1.19 (0.74, 1.90)	1.81 (0.95, 3.42)
SNAP participant		
No	Ref.	Ref.
Yes	1.33 (0.87, 2.03)	1.28 (0.74, 2.20)
Primary parent/guardian marital status		
Married/Living as married	Ref.	Ref.
Single	2.04 (1.35, 3.08)**	1.34 (0.74, 2.44)
Primary parent/guardian weight status[‡]		
Underweight/Normal weight	Ref.	Ref.
Overweight	1.16 (0.69, 1.94)	0.86 (0.43, 1.72)
Obesity	1.38 (0.84, 2.24)	1.24 (0.63, 2.43)

CIs, confidence intervals; NET-Works, Now Everyone Together for Healthy and Amazing Kids; GROW, Growing Right Onto Wellness; GED, General Equivalency Diploma; SNAP, Supplemental Nutrition Assistance Program, BMI, body mass index

[†]Models adjusted for all variables listed in the table

[‡]Parent's weight status classified as follows: underweight/normal weight (BMI<25 kg/m²), overweight (BMI 25-29 kg/m²), obesity (BMI≥30 kg/m²)

*p<0.05, **p<0.01

Supplementary Table 3. Odds ratios (95% CIs) predicting cluster membership for the Dairy/SSB or Semi-Traditional compared to Healthy cluster in GROW or GOALS, respectively and the Sandwich compared to Mixed cluster in IMPACT[†]

	Prevention study	Treatment studies	
	GROW (n=604)	GOALS (n=240)	IMPACT (n=341)
	Dairy/SSB vs. Healthy	Semi-Traditional vs. Healthy	Sandwich vs. Mixed
Child's sex			
Male	Ref.	Ref.	Ref.
Female	0.65 (0.44, 0.97)*	0.95 (0.56, 1.64)	1.08 (0.69, 1.68)
Child's age, years	0.87 (0.70, 1.09)	1.07 (0.88, 1.30)	1.07 (0.72, 1.58)
Child's BMI, kg/m²	1.00 (0.77, 1.28)	0.97 (0.90, 1.05)	1.05 (1.00, 1.10)*
Highest household education			
<High school	Ref.	Ref.	Ref.
High school or GED	1.25 (0.78, 2.00)	1.22 (0.58, 2.57)	0.87 (0.45, 1.70)
≥Some higher education	0.81 (0.50, 1.33)	1.35 (0.66, 2.78)	1.12 (0.60, 2.10)
Primary parent/guardian employment			
Not working for pay	Ref.	Ref.	Ref.
Part time	0.79 (0.48, 1.29)	1.61 (0.79, 3.28)	1.25 (0.68, 2.30)
Full time	1.25 (0.71, 2.20)	1.40 (0.73, 2.67)	1.14 (0.66, 1.98)
SNAP participant			
No	Ref.	Ref.	Ref.
Yes	1.56 (1.00, 2.43)	1.05 (0.59, 1.87)	1.22 (0.71, 2.10)
Primary parent/guardian marital status			
Married/Living as married	Ref.	Ref.	Ref.
Single	0.70 (0.41, 1.21)	1.60 (0.68, 3.78)	0.92 (0.57, 1.49)
Primary parent/guardian weight status[‡]			
Under-/Normal weight	Ref.	Ref.	Ref.
Overweight	0.67 (0.39, 1.16)	1.58 (0.66, 3.80)	0.98 (0.41, 2.33)
Obesity	0.64 (0.37, 1.10)	1.40 (0.60, 3.26)	0.85 (0.40, 1.78)

CIs, confidence intervals; GROW, Growing Right Onto Wellness; IMPACT, Ideas Moving Parents and Adolescents to Change Together; GED, General Equivalency Diploma; SNAP, Supplemental Nutrition Assistance Program, BMI, body mass index; SSB, sugar-sweetened beverages

[†]Models adjusted for all covariates listed in the table

[‡]Parent's weight status classified as follows: underweight/normal weight (BMI<25 kg/m²), overweight (BMI 25-29 kg/m²), obesity (BMI≥30 kg/m²)

*p<0.05, **p<0.01