

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eMethods. Nielsen Homescan Panel Study Description and Longitudinal 2-Part Model for Table Salt

Nielsen Homescan panel study description

Nielsen recruits households using Internet ads and email as well as direct mailings targeted at low-income and racial/ethnic minority groups. Respondents must complete two rounds of mailed questionnaires about sociodemographic characteristics, demonstrating a willingness and ability to comply with the demands of scanning all purchases, to be eligible for enrollment. Households are enrolled to match geographic and demographic targets at the county level. Households are prospectively followed and record their purchases continuously throughout the year. Households must record purchases for ≥ 10 months and then may exit the study at any time; new households are enrolled to rebalance sample sociodemographic characteristics and maintain national representativeness. The majority of households (69%) remained in the study for multiple years; mean follow-up time was 4.4 years (range: 1-15 y).

Purchases during annual quarters were deemed unreliable by study investigators if thresholds for expenditures and amount purchased ($< \$135$ for multimember households and $< \$45$ for single-member households in any 4-wk period; < 150 or > 5000 g/d per person) were not met. To ensure consistent reporting, household year-level observations including > 1 unreliable quarter or with extremely low or high purchases, defined by the bottom or upper 0.5th percentiles of purchases (< 293 or > 3423 kcal/d per capita), were excluded (4.9%).

Longitudinal 2-part model for table salt

Because of the high proportion of households that did not purchase any table salt or seasoning products during a given year ($> 20\%$) and the skewed distribution of sodium among households purchasing these items, longitudinal two-part models were used to estimate sodium purchased from table salt and seasoning products. The first part used a probit model for the proportion of households purchasing these products, and the second part used a log linear model for the amount purchased among consumers, estimated using an extension of generalized estimating equations for generalized linear models and an exchangeable correlation structure.

eTable 1. Food Grouping System for Packaged Foods and Beverages Purchased From Retail Stores^a

Food Group	Foods or beverages included
Cheese	Cheddar, Swiss, mozzarella, Parmesan, Romano, feta, ricotta, blue cheese, cottage cheese, American cheese, cream cheese, processed cheese spreads, spray cheese, non-dairy/imitation cheese, fried cheese sticks, cheese soufflé
Yogurt	Yogurt (plain or sweetened/flavored); yogurt drinks, shakes, or smoothies; kefir
Dairy products	Sour cream, cream, half-and-half, whipping cream, creamer (liquid or powdered), whipped cream, whipped topping, evaporated milk, sweetened condensed milk
Dairy-based desserts	Ice cream; sherbet; frozen yogurt; ice cream bars, cones, sandwiches; pudding; cheesecake; tiramisu; mousse
Meat	Fresh/refrigerated plain, seasoned, or marinated raw or pre-cooked chicken, turkey, steak, pot roasts, ground meat, fish, shrimp, crab, other seafood, pork roasts or tenderloin; refrigerated sliced or shaved lunch meat (not cured or smoked and not containing fillers); frozen plain, seasoned, or marinated raw or pre-cooked chicken, turkey, steak, pot roast meat, ground meat, burger patties, fish, shrimp, crab, other seafood, pork chops; canned or shelf-stable (envelope, cup, jar) tuna, salmon, chicken, crab meat, sardines, clams, anchovies, or other seafood
Meat, breaded	Chicken nuggets, tenders, or patties; fried chicken; fish sticks; breaded shrimp or clam strips; breaded fish fillets; country fried steak patties; breaded fried pork patties; breaded veal patties
Processed meat	Refrigerated/frozen bacon, sausage, bratwurst, hot dogs, ham (whole, steaks, diced, ground), Canadian bacon, dry sausage links or sticks, smoked meat (including smoked salmon, trout, pork chops, turkey, chicken), salted fish; refrigerated soft salami, liverwurst, or bologna in chubs or chunks; refrigerated smoked, cured, or chopped/formed lunch meat such as turkey, ham, roast beef, pastrami, corned beef, bologna, salami, pepperoni, luncheon loaf; canned or shelf-stable Spam, luncheon loaf, Vienna sausage, summer sausage, dried salami, pepperoni, canned ham, beef jerky or meat jerky, smoked seafood (including smoked salmon, tuna, mussels, herring, sardines, trout), real bacon bits or pieces, corned beef, deviled ham or ham spread
Eggs	Fresh eggs, liquid egg whites, hard-boiled eggs, egg substitutes
Legumes	Dried beans, peas, and mixtures of several bean types; canned cooked beans, peas, or bean mixtures; jarred three-bean salad; fresh/refrigerated tofu and tempeh (plain, seasoned, or marinated); frozen beans, peas, and mixtures of legumes and vegetables

Food Group	Foods or beverages included
Nuts and nut products	Raw, blanched, dry-roasted, or oil-roasted nuts or seeds (plain, salted, flavored, frosted, or honey-roasted), including nut mixtures; nut butters (including peanut butter, almond butter, soy nut butter, sunflower butter); nut-based trail mix (mixtures of nuts with seeds, dried fruit, chocolate, and/or candy pieces); nut-based bars made from nuts or seeds but no grains (including Larabars, Bumble Bars, Clif nectar bars); nut clusters or crunch snacks; nut-based dessert toppings; peanut butter with jelly; almond or nut-based pastry filling
Breads	Fresh sliced bread; fresh bread products (including rolls, sandwich rolls, hot dog/hamburger buns, pita bread, bagels, English muffins, bread sticks, pizza crusts); refrigerated ready-to-bake bread dough or bread products (including rolls, bread sticks, garlic bread, pizza crusts); frozen dough, bread, or bread products (including rolls, hot dog/hamburger buns, bagels, English muffins, bread sticks, garlic bread, pizza crusts); bread crumbs; canned brown bread; croutons; grain-based imitation bacon bits; mixes for bread, rolls, or pizza crust; breading/batter mixes
Tortillas, taco shells, and wraps	Tortillas, taco shells, sandwich wraps, won ton or egg roll wrappers
Quick breads	Frozen RTH pancakes, waffles, French toast; frozen or refrigerated ready-to-bake biscuits, corn bread, phyllo dough; baking mixes for pancakes, biscuits, corn bread, fruit breads, hush puppies, matzo balls; fresh banana bread or fruit bread
Grain-based desserts	Shelf-stable RTE cookies, brownies, snack cakes (including Ding Dongs, Twinkies), cupcakes, oatmeal crème pies, single-serve fruit snack pies, graham crackers, animal crackers, doughnuts, coffee cake, sweet rolls, toaster pastries, scones, muffins, cake, turnovers, éclairs, tarts, croissants, puff pastry, prepared pie crusts, pastry shells, ice cream cones or bowls; refrigerated ready-to-bake cookies, brownies, sweet rolls, pie crusts; frozen cake, pie, cobbler, turnovers, coffee cake, honey buns, toaster pastries, brownies, cookies, doughnuts, cream puffs, éclairs, tarts, muffins, pastry shells, pie crusts; baking mixes for cake or cupcakes, brownies, cookies, muffins, coffee cake, cobbler/crisps, pie crust, scones
Grain-based bars	Granola bars, cereal bars, snack bars, crispy rice bars, meal replacement bars
Pasta, rice, and grains	Fresh or dried, whole-grain or refined grain pasta or noodles; flavored pasta (including spinach pasta); egg noodles; gnocchi; couscous; regular, parboiled, or pre-cooked/quick-cooking dried white rice, brown rice, wild rice, quinoa, bulgur wheat, barley, grain mixtures; flavored rice; prepared RTH rice

Food Group	Foods or beverages included
Breakfast cereal	RTE cereal including corn flakes, frosted flakes, raisin bran, frosted shredded wheat, toasted oat cereal (including Cheerios), crispy rice (including Rice Krispies), chocolate flavored cereals (including Cocoa Puffs), bran flakes, fruit flavored cereals (including Froot Loops), puffed rice, shredded wheat, granola; hot cereals including oatmeal, grits, cream of wheat, cream of rice
Fruit	Fresh or refrigerated packaged fruit (including apples, oranges, lemons, cherries, figs, grapes, berries); refrigerated apple slices or fresh cut fruit (including melon, pineapple, or fruit mixtures), apple slices with caramel or peanut butter dip, packaged fruit with yogurt dip, packaged refrigerated sweetened cut fruit in juice/syrup (including peaches, pineapple, grapefruit, mandarin oranges, and fruit mixtures); frozen fruit (including strawberries, raspberries, blueberries, blackberries, peaches, pineapple, and fruit mixtures); dried fruit (including raisins, cranberries, dates, prunes, coconut, and mixtures of dried fruit); dried/baked apple chips; canned/shelf-stable fruit in heavy syrup, light syrup, juice, or water (including peaches, pears, pineapple, mandarin oranges, fruit cocktail, fruit mixtures, fruit salads); canned/shelf-stable apple sauce, cranberry sauce, or pickled fruit
Fruit dishes	Canned fruit topping or pie filling, baked/fried cinnamon apples, candied fruit (including citron, candied orange or lemon peel)
Vegetables	Fresh bagged lettuce/salad blends; fresh packaged vegetables (including baby carrots, carrot sticks, celery sticks, whole carrots, celery, heads of lettuce, tomatoes); refrigerated bagged vegetable mixtures, bagged shredded cabbage for cole slaw, pre-chopped vegetables in microwavable/steaming packages, vegetable trays with dip, celery or carrot sticks with dip; frozen vegetables (including broccoli, carrots, green beans, sugar snap peas, spinach, vegetable mixtures); dried vegetables (including tomatoes, sun-dried tomatoes, mushrooms, seaweed wraps); canned vegetables (including green beans, tomatoes, spinach, greens, carrots, mushrooms, tomato paste, tomato puree, vegetable mixtures); canned tomato sauce; jarred/shelf-stable olives, pickles, pickled vegetables, kim chee, sauerkraut, marinated/roasted antipasto vegetables or mixed vegetable salads; jarred roasted red peppers
Starchy vegetables	Fresh potatoes or sweet potatoes; fresh/refrigerated potatoes, green peas, or ears of corn in microwave steaming bags; refrigerated shredded hash brown potatoes or home fries, diced potatoes, roasted potatoes, stew mix with potatoes and vegetables; frozen potatoes, sweet potatoes/yams, corn, corn on the cob, green peas, potato wedges or roasted potatoes, shredded or diced hash brown potatoes; frozen mixtures of potatoes, corn, or green peas and vegetables (including corn with mixed vegetables, peas and carrots, corn with peppers, peas with mushrooms); dried corn, green peas, or potatoes (i.e., for making hash browns); canned potatoes, corn, green peas, hominy, mashed or pureed sweet potatoes/yams, starchy vegetable based mixtures (including peas and carrots, mixed vegetables, green beans with potatoes, corn with peppers, succotash, peas with mushrooms); shelf-stable potato flakes (i.e., for making mashed potatoes)

Food Group	Foods or beverages included
Fried potatoes	Frozen French fries, sweet potato fries, hash browns, hash brown patties, tater tots, potato pancakes, home fries
Fats and oils	Oil (including olive, vegetable, canola, corn, peanut, soybean, sunflower), cooking spray, flavored oil, butter (salted and unsalted, sticks or spreads), margarine (sticks or spreads), butter and margarine blends, shortening, lard
Sugars, sweeteners, syrups, and toppings	Granulated sugar, brown sugar, powdered sugar, honey, molasses, sorghum, corn syrup, artificial sweeteners, stevia, agave nectar, jam, preserves, marmalade, fruit or pumpkin butter, jelly, lemon curd, pancake syrup, pure maple syrup, flavored syrups for coffee drinks or Italian soda, fruit syrups, chocolate or fruit-flavored dessert or milk syrup, icing, dessert topping (including caramel, butterscotch, hot fudge, strawberry topping, marshmallow cream), hazelnut spread (Nutella), cake decorations, pastry filling, marzipan
Candy and sweet snacks	Candy, chocolate, candy bars, marshmallows, fudge, toffee, baking chocolate, morsels, sprinkles, gum, mints, candy-making kits, fruit snacks, fruit leather, fruit bars, maraschino cherries, caramel apples, candied apples, popsicles, sorbet, ices, gelatin, fruit salads with gelatin, ambrosia, fried apple or banana chips, chocolate- or yogurt-covered fruit, chocolate- or yogurt-covered nuts or seeds, candy-coated nuts or seeds
Baking products	Flour (whole-grain and refined grain), masa, corn meal, semolina, baking powder, yeast, corn starch, cocoa powder, flavor extracts, pectin, fruit protectors, cream of tartar, canning/pickling chemicals (citric acid, lime, alum), food coloring, egg replacers, dried egg whites, capers
Seasonings	Herbs, spices, and blends with no added salt, sweetener, or oil (including fresh herbs, pepper, basil, thyme, rosemary, sage, cinnamon, nutmeg, cilantro, turmeric, garlic powder, paprika, oregano); mixtures of herbs and spices with added salt, sweeteners, or oil such as seasoning products (including seasoned salt, garlic salt, celery salt, lemon pepper seasoning, hamburger seasoning, steak seasoning, Cajun seasoning, creole seasoning, seafood rub, blackened seasoning, butter sprinkle, or spice pastes) and sauce/seasoning mixes (including for meatloaf, chili, sloppy joes, beef stew, tacos, spaghetti sauce, salad dressing, marinades, ranch dip, spinach dip, guacamole or other dishes/sauces/dips); MSG
Soup	Noodle- or rice-based soups (including chicken noodle, chicken and rice, ramen noodles); meat-based soups (including meat-based chili, beef stew, beef vegetable soup); vegetable-based soups (including vegetable soup, tomato soup, French onion soup, gazpacho); starchy-vegetable based soups (including potato soup, corn chowder, cream of potato); legume-based soups (including split pea, lentil, black bean, bean-based chili); dairy-based soups (including cheddar cheese soup, broccoli cheese, clam chowder, cream of mushroom); broth, stock, bouillon

Food Group	Foods or beverages included
Salty snacks	Potato chips, potato crisps, sweet potato chips, corn nuts, crispy green peas, crackers, snack crackers, corn chips, pretzels, tortilla chips, cheese-flavored tortilla chips, cheese puffs, pita chips, popcorn (unpopped kernels, microwaveable, or pre-popped), sandwich crackers, rice cakes, snack mixes with crackers, soy nuts, pork rinds
Condiments, sauces, and dips	Ketchup, barbecue sauce, soy sauce, oyster sauce, fish sauce, mustard, tartar sauce, cocktail sauce, hot sauce, tabasco sauce, vinegar, Worcestershire sauce, taco sauce, sweet and sour sauce, steak sauce, horseradish, pickle relish, other vegetable relishes, fruit relish or chutney, vegetable-based spreads and tapenades, yeast extract, mayonnaise, “Miracle Whip” type salad dressing, sandwich spreads, salad dressing (shelf-stable and refrigerated), cole slaw dressing, RTH shelf-stable or refrigerated tomato-based pasta sauces or spaghetti sauces, Alfredo sauce, cheese sauce, prepared gravy, pizza sauce, sloppy joe sauce, enchilada sauce, curry sauce, simmer sauce, clam sauce, pesto sauce, cooking wine, teriyaki sauce, marinades, glazes, stir fry sauce, dry mixes for gravy, salsa, guacamole, RTH cheese dip or salsa con queso, dairy-based chip or vegetable dip (including French onion, ranch, dill), black bean dip, hummus, spinach dip, crab dip, smoked salmon dip, caramel dip, chocolate dipping sauce or fondue
Baby food	Baby food, toddler food, baby cereals and biscuits, baby juice
Mixed dishes	Frozen dinners (including Salisbury steak, turkey and gravy, meat loaf, enchilada dinners, pancake/biscuit breakfast meals, spaghetti with meatballs); frozen pizza; frozen RTH burritos, tacos, enchiladas; frozen RTH sandwiches (including paninis, breakfast sandwiches, sandwich pockets); other frozen RTH mixed dishes (lasagna, ravioli, manicotti, fried rice, corn dogs, pot pies, egg rolls, meat loaf, crab cakes, quiche, omelets, mashed potatoes, stuffed baked potatoes, potato skins, onion rings, green bean casserole, creamed spinach, vegetables with sauce, creamed corn); refrigerated RTE seafood, chicken, tuna, ham, or egg salad; RTE macaroni salad or pasta salad; RTE coleslaw; RTE potato salad; pre-made salad bowls; refrigerated prepared sandwiches (including tuna salad sandwiches, breakfast sandwiches); Lunchables; refrigerated ready-to-bake pizza; refrigerated prepared RTH mixed dishes (including BBQ, macaroni and cheese, baked beans, mashed potatoes); refrigerated or frozen vegetarian burgers or “meat”; refrigerated uncooked meat-based dishes (including salmon pinwheels, meatloaf mix); uncooked ravioli or tortellini; canned RTH mixed dishes (including ravioli, spaghetti with sauce, corned beef hash, greens with meat, creamed corn, candied yams); canned RTH baked beans, beans with pork or hot dogs, refried beans; olives stuffed with cheese or meat; pasta dish meal kits (including boxed macaroni-and-cheese, Asian noodle bowls); instant/microwaveable rice dish mixes; stuffing mix; instant potato mixes for mashed potatoes, potatoes au gratin, or scalloped potatoes; helper-type dinner kits
Water	Plain bottled water; carbonated water (including seltzer, club soda, mineral water, sparkling water); ice

Food Group	Foods or beverages included
Coffee and tea	Whole or ground coffee beans, pods or discs for single-cup brewers, coffee substitute (chicory, carob, barley), instant coffee, tea leaves or bags, herbal teas, ready-to-drink tea (plain or sweetened), instant tea mixes (plain or sweetened)
Sugar sweetened beverages	Regular and low-calorie/diet soft drinks, energy drinks (carbonated), fruit drinks ^b (fruit punch, lemonade, grape juice drink, juice cocktail), vegetable juice drinks, sports drinks, fruit-flavored drinks, flavored waters ^c
Fruit juice and vegetable juice	Fruit juice, including 100% or <100%, not from-concentrate or from-concentrate; sweetened juice (including fruit nectars); frozen fruit juice concentrate; sparkling fruit juice and cider; vegetable juice, including 100% or <100%, not from-concentrate or from-concentrate; vegetable and fruit juice blends
Milk	Fresh or shelf-stable plain milk; dry milk; fresh or shelf-stable chocolate, strawberry, or flavored milk; milk drinks (including Yoohoo or milk shake drinks)
Cocoa and coffee/tea with milk	Hot chocolate/cocoa mix; chocolate/strawberry powder for flavored milk (including Nesquik); instant breakfast; coffee beverages (coffee with milk or creamer, such as latte, mocha, or cappuccino, including ready-to-drink or instant mixes), tea drinks (tea with milk or creamer, such as chai tea latte, including ready-to-drink or instant mixes)
Milk substitutes and milk-based beverages	Milk substitutes (including plain or flavored soy, almond, rice, oat, or hemp milk); powdered mixes for atole, horchata, or malted milk; buttermilk, egg nog, coconut milk
Alcohol	Beer, ale, malt liquor, stout, porter, malt beverage; wine, sparkling wine, dessert wine, sake, sangria, vermouth, de-alcoholized wine; liquor including whiskey, bourbon, brandy, gin, liqueurs, bitters, rum, scotch, tequila, vodka; premade alcoholic cocktails and coolers

^a Each food or beverage was assigned to a single food group (32 food and 8 beverage groups). These mutually exclusive, nutritionally meaningful groups were based on nutrient composition, dietary behaviors, consumption patterns, perishability, and level of preparation. Beverages were classified into separate categories based on their differential effects on satiety. Food group assignment occurred at the Universal Product Code (barcode)-level. Perl-based “regular expressions” were used to search ingredient lists, package information, and product attributes for relevant details differentiating food groups. Program code was used to assign each barcode to a single food group. RTE, ready-to-eat; RTH, ready-to-heat.

^b Fruit drinks were defined as beverages primarily composed of sugar or sweetener (as 1st or 2nd ingredients) with fruit juice or fruit juice concentrate as a lesser ingredient.

^c Fruit-flavored drinks and flavored waters were defined as beverages that contain fruit flavors but no fruit juice or fruit juice concentrate.

eTable 2. Sociodemographic Characteristics of the Homescan Panel in Select Years^a

	2000		2005		2009		2014	
	n	%	n	%	n	%	n	%
Total households	33,706		48,195		57,344		58,138	
Household size, mean ± SD								
Total household size	2.4 ± 1.3		2.3 ± 1.3		2.3 ± 1.2		2.3 ± 1.2	
Children 2-18y, male	0.3 ± 0.6		0.2 ± 0.6		0.2 ± 0.6		0.2 ± 0.5	
Children 2-18y, female	0.2 ± 0.6		0.2 ± 0.6		0.2 ± 0.5		0.2 ± 0.5	
Adults, male	0.9 ± 0.6		0.9 ± 0.6		0.9 ± 0.6		0.9 ± 0.6	
Adults, female	1.0 ± 0.5		1.0 ± 0.5		1.0 ± 0.5		1.0 ± 0.5	
Household composition								
Single adults	8,522	25.3	12,888	26.7	14,603	25.5	14,471	24.9
Single adults, with children	929	2.8	1,248	2.6	1,231	2.2	1,076	1.9
Multiple adults, no children	15,686	46.5	23,054	47.8	29,077	50.7	30,650	52.7
Multiple adults, with children	8,569	25.4	11,005	22.8	12,433	21.7	11,941	20.5
Household education^b								
Less than high school	734	2.2	865	1.8	693	1.2	666	1.2
High school/some college	17,435	51.7	24,741	51.3	27,183	47.4	27,747	47.7
College degree or higher	15,537	46.1	22,589	46.9	29,468	51.4	29,725	51.1
Household income								
≤185% FPL	4,493	13.3	10,106	21.0	10,751	18.8	12,206	21.0
186-400% FPL	14,969	44.4	18,882	39.2	25,759	44.9	25,436	43.8
>400% FPL	14,244	42.3	19,207	39.9	20,834	36.3	20,496	35.3
Race/ethnicity^c								
Non-Hispanic white	28,459	84.4	39,451	81.9	47,166	82.3	46,627	80.2
Non-Hispanic black	2,678	8.0	4,122	8.6	4,876	8.5	5,585	9.6
Hispanic	1,776	5.3	2,800	5.8	2,867	5.0	3,099	5.3
Other races/ethnicities	793	2.4	1,822	3.8	2,435	4.3	2,827	4.9

^a Data are from the Nielsen Homescan panel; n=172,042 households (754,608 year-level observations). FPL, Federal Poverty Level.

^b Highest level of education reported by the male or female head of household.

^c Self-reported race/ethnicity of the head of household using categories for race (white, black, other) and ethnicity (Hispanic or non-Hispanic) in Nielsen questionnaires.

eTable 3. Weight, Energy, and Sodium From US Households' Packaged Food and Beverage Purchases, 2000-2014^a

	Adjusted mean ± SE ^b				Change (95% CI) ^c	P-trend ^d
	2000	2005	2009	2014		
Weight (g/day per capita)						
Total	1328 ± 3	1323 ± 2	1269 ± 2 ^e	1134 ± 2 ^e	-193 (-199, -188)	< 0.001
Foods	447 ± 1	458 ± 1 ^e	477 ± 1 ^e	438 ± 1 ^e	-9 (-10, -7)	< 0.001
Beverages	880 ± 2	864 ± 2 ^e	792 ± 2 ^e	696 ± 2 ^e	-184 (-188, -179)	< 0.001
Energy (kcal/day per capita)						
Total	1322 ± 2	1314 ± 2 ^e	1268 ± 2 ^e	1135 ± 2 ^e	-186 (-191, -182)	< 0.001
Foods	1092 ± 2	1109 ± 2 ^e	1091 ± 2	992 ± 2 ^e	-100 (-104, -96)	< 0.001
Beverages	230 ± 1	205 ± 0 ^e	177 ± 0 ^e	143 ± 0 ^e	-87 (-88, -86)	< 0.001
Sodium (mg/day per capita)						
Total	2363 ± 5	2353 ± 4	2264 ± 4 ^e	1967 ± 4 ^e	-396 (-407, -385)	< 0.001
Foods	1812 ± 3	1869 ± 3 ^e	1810 ± 3	1552 ± 3 ^e	-260 (-267, -253)	< 0.001
Beverages	144 ± 0	134 ± 0 ^e	122 ± 0 ^e	101 ± 0 ^e	-43 (-44, -42)	< 0.001
Table salt	399 ± 3	332 ± 2 ^e	309 ± 2 ^e	288 ± 2 ^e	-111 (-116, -105)	< 0.001

^a Data are from the Nielsen Homescan panel; n=172,042 households (754,608 year-level observations).

^b Values are adjusted mean ± SE daily per capita amount in households' purchases from retail food stores in a given year. Values for total, food, and beverage purchases were determined from multivariable longitudinal linear regression models regressing purchases on indicator variables for year; values for table salt were determined from a 2-part model including 1) a longitudinal probit model of the probability of purchasing and 2) a longitudinal log linear regression of the amount purchased among purchasers. All models were adjusted for household size and composition, race/ethnicity, income, education, and geographic market, and means were predicted at the distribution of race/ethnicity by income from US Census Bureau data.

^c Values are the change in mean household purchases between 2000 and 2014.

^d P-values for time trends were derived from multivariable regression models treating year as a continuous variable, including linear, quadratic, and cubic terms as appropriate.

^e Significantly different from 2000, Wald post-estimation test $P < 0.001$.

eTable 4. Changes in the Amount of Packaged Foods Purchased by US Households by Food Group, 2000-2014^a

Food Group	Adjusted weight, g/d per capita				Change (95% CI) ^c	P-trend ^d
	Mean ± SE ^b					
	2000	2005	2009	2014	2000 to 2014	
Condiments, sauces, and dips	31 ± 0.1	31 ± 0.1	31 ± 0.1	29 ± 0.1 ^e	-3 (-3, -2)	< 0.001
Mixed dishes	37 ± 0.1	42 ± 0.1 ^e	45 ± 0.1 ^e	41 ± 0.1 ^e	4 (4, 5)	< 0.001
Salty snacks	22 ± 0.1	22 ± 0.1	21 ± 0.1 ^e	20 ± 0.1 ^e	-1 (-2, -1)	< 0.001
Breads	33 ± 0.1	30 ± 0.1 ^e	29 ± 0.1 ^e	25 ± 0.1 ^e	-8 (-8, -8)	< 0.001
Processed meat	11 ± 0.1	13 ± 0.0 ^e	15 ± 0.0 ^e	15 ± 0.0 ^e	4 (3, 4)	< 0.001
Cheese	15 ± 0.1	15 ± 0.0 ^e	16 ± 0.0 ^e	15 ± 0.0 ^e	1 (1, 1)	< 0.001
Soup	28 ± 0.1	29 ± 0.1 ^e	30 ± 0.1 ^e	29 ± 0.1 ^e	1 (1, 2)	< 0.001
Grain-based desserts	22 ± 0.1	23 ± 0.1 ^e	21 ± 0.1 ^e	19 ± 0.1 ^e	-3 (-3, -2)	< 0.001
Vegetables	33 ± 0.1	34 ± 0.1 ^e	31 ± 0.1 ^e	30 ± 0.1 ^e	-3 (-3, -3)	< 0.001
Breakfast cereal	15 ± 0.1	16 ± 0.1 ^e	16 ± 0.0 ^e	13 ± 0.1 ^e	-2 (-2, -2)	< 0.001

^a Data are from the Nielsen Homescan panel; n=172,042 households (754,608 year-level observations).

^b Values are adjusted mean ± SE weight of households' food group purchases from retail food stores in a given year, determined from multivariable longitudinal linear regression models regressing purchases on indicator variables for year. All models were adjusted for household size and composition, race/ethnicity, income, education, and geographic market, and means were predicted at the distribution of race/ethnicity by income from US Census Bureau data.

^c Values are the change in mean amount purchased between 2000 and 2014.

^d P-values for time trends were derived from multivariable regression models treating year as a continuous variable, including linear, quadratic, and cubic terms as appropriate.

^e Significantly different from 2000, Wald post-estimation test $P < 0.001$.

eTable 5. Changes in the Sodium Content of Packaged Foods and Beverages Purchased by US Households, 2000-2014^a

	Adjusted sodium content, mg/100g				Change (95% CI) ^c	P-trend ^d
	Mean ± SE ^b					
	2000	2005	2009	2014		
Total	192 ± 0.3	191 ± 0.3	190 ± 0.3 ^e	186 ± 0.3 ^e	-6 (-7, -5)	< 0.001
Foods including table salt	504 ± 0.7	492 ± 0.6 ^e	457 ± 0.6 ^e	432 ± 0.6 ^e	-71 (-73, -70)	< 0.001
Foods	411 ± 0.4	413 ± 0.3 ^e	386 ± 0.3 ^e	361 ± 0.3 ^e	-49 (-50, -48)	< 0.001
Beverages	18 ± 0.0	17 ± 0.0 ^e	17 ± 0.0 ^e	16 ± 0.0 ^e	-1 (-1, -1)	< 0.001

^a Data are from the Nielsen Homescan panel; n=172,042 households (754,608 year-level observations).

^b Values are adjusted mean ± SE sodium content of households' total, food, or beverage purchases from retail food stores in a given year, determined from multivariable longitudinal linear regression models regressing purchases on indicator variables for year. All models were adjusted for household size and composition, race/ethnicity, income, education, and geographic market, and means were predicted at the distribution of race/ethnicity by income from US Census Bureau data.

^c Values are the change in mean sodium content between 2000 and 2014.

^d P-values for time trends were derived from multivariable regression models treating year as a continuous variable, including linear, quadratic, and cubic terms as appropriate.

^e Significantly different from 2000, Wald post-estimation test $P < 0.001$.

eTable 6. Changes in the Sodium Density of Packaged Foods and Beverages Purchased by US Households, 2000-2014^a

	Adjusted sodium density, mg/1000 kcal ^b				Change (95% CI) ^c	P-trend ^d
	2000	2005	2009	2014		
Total						
Mean ± SE	1827 ± 2.7	1822 ± 2.3	1804 ± 2.1 ^e	1740 ± 2.1 ^e	-87 (-93, -81)	< 0.001
Median (p25-p75)	1712 (1433 - 2077)	1713 (1443 - 2065)	1701 (1438 - 2046)	1628 (1370 - 1975)	-84 (-91, -77)	
Range ^f	1098 - 2900	1119 - 2874	1118 - 2845	1055 - 2808		
Foods						
Mean ± SE	1697 ± 1.7	1718 ± 1.4 ^e	1687 ± 1.4 ^e	1590 ± 1.4 ^e	-107 (-110, -103)	< 0.001
Median (p25-p75)	1626 (1393 - 1885)	1655 (1427 - 1909)	1635 (1411 - 1888)	1546 (1329 - 1789)	-81 (-86, -75)	
Range	1071 - 2368	1111 - 2394	1094 - 2359	1023 - 2255		
Beverages						
Mean ± SE	713 ± 2.2	763 ± 1.9 ^e	821 ± 1.8 ^e	856 ± 1.8 ^e	143 (138, 148)	< 0.001
Median (p25-p75)	647 (475 - 869)	678 (490 - 925)	725 (516 - 992)	744 (525 - 1026)	97 (92, 103)	
Range	277 - 1471	273 - 1570	279 - 1727	272 - 1891		

^a Data are from the Nielsen Homescan panel; n=172,042 households (754,608 year-level observations).

^b Values are adjusted sodium density of households' total, food, or beverage purchases from retail food stores in a given year, determined from multivariable longitudinal linear or quantile regression models regressing purchases on indicator variables for year. All models were adjusted for household size and composition, race/ethnicity, income, education, and geographic market. Means and percentiles were predicted at the distribution of race/ethnicity by income from US Census Bureau data.

^c Values are the change in mean or median sodium density between 2000 and 2014.

^d P-values for time trends were derived from multivariable regression models treating year as a continuous variable, including linear, quadratic, and cubic terms as appropriate.

^e Significantly different from 2000, Wald post-estimation test $P < 0.001$.

^f Values are adjusted 5th – 95th percentile of sodium density.

eTable 7. Changes in the Sodium Density of Packaged Foods Purchased by US Households by Food Group, 2000-2014^a

	Adjusted sodium density, mg/100 kcal ^b				Change (95% CI) ^c	P-trend ^d
	2000	2005	2009	2014		
Condiments, sauces, and dips						
Mean ± SE	540 ± 1.3	515 ± 1.1 ^e	525 ± 1.0 ^e	491 ± 1.0 ^e	-49 (-52, -46)	< 0.001
Median (p25-p75)	476 (343 - 651)	453 (330 - 620)	469 (344 - 636)	441 (328 - 591)	-35 (-39, -32)	
Range ^f	209 - 1061	201 - 1021	213 - 1033	209 - 971		
Mixed dishes						
Mean ± SE	302 ± 0.3	297 ± 0.2 ^e	283 ± 0.2 ^e	265 ± 0.2 ^e	-37 (-38, -37)	< 0.001
Median (p25-p75)	299 (268 - 335)	292 (264 - 326)	278 (251 - 310)	260 (235 - 289)	-39 (-39, -38)	
Range	227 - 400	226 - 390	215 - 373	197 - 348		
Salty snacks						
Mean ± SE	174 ± 0.2	172 ± 0.2 ^e	164 ± 0.1 ^e	144 ± 0.1 ^e	-30 (-30, -29)	< 0.001
Median (p25-p75)	171 (150 - 196)	170 (150 - 191)	161 (143 - 182)	142 (125 - 161)	-29 (-30, -29)	
Range	116 - 245	120 - 236	114 - 224	97 - 199		
Breads						
Mean ± SE	214 ± 0.2	208 ± 0.1 ^e	199 ± 0.1 ^e	188 ± 0.1 ^e	-26 (-26, -25)	< 0.001
Median (p25-p75)	211 (199 - 226)	205 (192 - 219)	195 (183 - 210)	185 (172 - 200)	-27 (-27, -26)	
Range	177 - 262	172 - 257	165 - 250	150 - 243		
Processed meat						
Mean ± SE	415 ± 0.7	414 ± 0.6	435 ± 0.5 ^e	403 ± 0.5 ^e	-13 (-14, -11)	0.01
Median (p25-p75)	379 (332 - 454)	379 (336 - 452)	400 (349 - 481)	377 (331 - 447)	-1 (-3, 0)	
Range	279 - 682	281 - 670	293 - 705	276 - 631		
Cheese						
Mean ± SE	282 ± 0.4	264 ± 0.3 ^e	262 ± 0.3 ^e	246 ± 0.3 ^e	-37 (-38, -36)	< 0.001
Median (p25-p75)	273 (221 - 335)	253 (207 - 310)	251 (209 - 303)	232 (196 - 279)	-41 (-43, -40)	
Range	167 - 438	159 - 412	166 - 397	159 - 373		
Soup						
Mean ± SE	1136 ± 5.0	1097 ± 4.3 ^e	1048 ± 4.0 ^e	1071 ± 4.0 ^e	-66 (-78, -54)	< 0.001
Median (p25-p75)	871 (666 - 1228)	813 (619 - 1161)	748 (570 - 1095)	723 (542 - 1103)	-148 (-154, -142)	
Range	471 - 2909	445 - 2947	427 - 2867	400 - 3171		

	Adjusted sodium density, mg/100 kcal ^b				Change (95% CI) ^c	P-trend ^d
	2000	2005	2009	2014		
Grain-based desserts						
Mean ± SE	94 ± 0.1	93 ± 0.1 ^e	95 ± 0.1 ^e	93 ± 0.1 ^e	-1 (-1, -1)	0.01
Median (p25-p75)	92 (82 - 104)	91 (81 - 103)	93 (83 - 105)	91 (80 - 103)	-1 (-2, -1)	
Range	67 - 129	66 - 127	68 - 131	66 - 132		
Vegetables						
Mean ± SE	850 ± 2.4	782 ± 2.0 ^e	766 ± 1.9 ^e	680 ± 1.9 ^e	-170 (-176, -165)	< 0.001
Median (p25-p75)	748 (498 - 1061)	683 (440 - 989)	660 (417 - 973)	569 (358 - 856)	-179 (-185, -173)	
Range	206 - 1787	179 - 1716	167 - 1743	152 - 1565		
Breakfast cereal						
Mean ± SE	127 ± 0.2	122 ± 0.2 ^e	122 ± 0.2 ^e	106 ± 0.2 ^e	-21 (-21, -20)	< 0.001
Median (p25-p75)	129 (100 - 154)	125 (93 - 151)	127 (96 - 151)	111 (81 - 134)	-18 (-18, -17)	
Range	42 - 191	37 - 189	39 - 185	27 - 166		

^a Data are from the Nielsen Homescan panel; n=172,042 households (754,608 year-level observations).

^b Values are adjusted sodium density of households' food group purchases from retail food stores in a given year, determined from multivariable longitudinal linear or quantile regression models regressing purchases on indicator variables for year. All models were adjusted for household size and composition, race/ethnicity, income, education, and geographic market. Means and percentiles were predicted at the distribution of race/ethnicity by income from US Census Bureau data.

^c Values are the change in mean or median sodium density between 2000 and 2014.

^d P-values for time trends were derived from multivariable regression models treating year as a continuous variable, including linear, quadratic, and cubic terms as appropriate.

^e Significantly different from 2000, Wald post-estimation test $P < 0.001$.

^f Values are adjusted 5th – 95th percentile of sodium density.