

**Trends in purchases and consumption of foods and beverages containing
caloric and low-calorie sweeteners over the last decade in the U.S.**

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Table 1S. Trends in per capita purchases and % household purchasing foods and beverages by sweetener type, Homescan 2000-2010*.

PER CAPITA PURCHASES [†]	YEAR											P trend [‡]
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
BEVERAGES – Households with children												
LCS only	74.9	75.5	83.4	91.6	94.7	100.1	100.3	94.5	91.2	90.7	93.3	0.000
CS only	290.2	290.0	293.7	289.1	273.9	264.5	263.4	252.8	251.0	246.1	242.3	0.000
LCS and CS	20.8	23.3	25.2	27.7	34.7	43.8	47.8	52.4	54.4	62.2	61.7	0.000
BEVERAGES – Households without children												
LCS only	94.8	95.4	103.3	111.4	114.6	120.0	120.2	114.4	111.0	110.6	113.2	0.000
CS only	279.3	279.1	282.8	278.2	263.0	253.6	252.5	241.8	240.1	235.2	231.4	0.000
LCS and CS	23.0	25.5	27.4	29.8	36.8	45.9	50.0	54.6	56.5	64.4	63.9	0.000
FOODS – Households with children												
LCS only	0.9	1.1	1.4	1.4	1.8	2.2	2.3	2.2	2.3	2.9	2.5	0.000
CS only	173.5	177.6	181.6	184.2	181.8	182.3	186.3	184.0	183.2	183.6	180.9	0.000
LCS and CS	4.8	5.5	6.2	7.7	10.2	11.7	11.3	12.1	12.5	12.5	13.0	0.000
FOODS – Households without children												
LCS only	1.3	1.5	1.7	1.8	2.1	2.6	2.6	2.6	2.6	3.3	2.8	0.000
CS only	186.5	190.5	194.6	197.1	194.7	195.3	199.2	196.9	196.2	196.5	193.8	0.000
LCS and CS	6.3	7.0	7.7	9.2	11.7	13.2	12.8	13.6	14.0	14.0	14.5	0.000
% HOUSEHOLDS PURCHASING [†]	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	P trend [‡]
BEVERAGES – Households with children												
LCS only	50.6%	51.1%	52.6%	55.5%	57.8%	60.9%	61.8%	60.2%	57.7%	57.3%	57.4%	0.000
CS only	99.5%	99.3%	99.4%	99.4%	99.2%	99.1%	99.0%	98.8%	98.8%	98.7%	98.7%	0.000
LCS and CS	41.1%	43.5%	42.5%	48.8%	58.4%	62.7%	64.7%	65.6%	66.5%	68.4%	69.1%	0.000
BEVERAGES – Households without children												
LCS only	53.3%	53.8%	55.3%	58.2%	60.4%	63.5%	64.3%	62.8%	60.3%	59.9%	60.0%	0.000
CS only	98.5%	98.1%	98.2%	98.3%	97.6%	97.3%	97.0%	96.6%	96.5%	96.2%	96.2%	0.000
LCS and CS	33.3%	35.6%	34.6%	40.6%	50.2%	54.6%	56.8%	57.7%	58.7%	60.8%	61.5%	0.000
FOODS – Households with children												
LCS only	6.9%	8.2%	9.8%	10.6%	12.4%	14.0%	14.5%	14.1%	14.0%	18.0%	17.1%	0.000
CS only	100.0%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	0.752
LCS and CS	47.9%	50.8%	52.4%	57.7%	63.8%	66.6%	66.6%	69.1%	70.2%	71.2%	71.5%	0.000
FOODS – Households without children												
LCS only	7.8%	9.3%	11.1%	11.9%	14.0%	15.7%	16.3%	15.9%	15.8%	20.1%	19.1%	0.000
CS only	100.0%	99.9%	99.9%	99.9%	99.9%	99.9%	99.8%	99.8%	99.9%	99.8%	99.8%	0.000
LCS and CS	41.9%	44.8%	46.4%	51.7%	58.1%	61.0%	61.1%	63.7%	65.0%	66.0%	66.3%	0.000

* Means per capita for beverages (mL/d) and foods (g/d). LCS, low-caloric sweetened beverages or foods; CS, caloric-sweetened beverages or foods.

† Multivariable linear (per capita estimates) and logistic (% purchasing) regression models were used to adjust for household size, race and income.

‡ Statistically significant linear trends were tested using Wald tests, $P < 0.001$.

Table 2S. Trends in prevalence and per capita intake of beverages and foods by sweetener type, NHANES 2003-2010*.

<i>Per Capita Intake</i> [†]	STORE					TOTAL				
	2003-04	2005-06	2007-08	2009-10	<i>P</i> trend ‡	2003-04	2005-06	2007-08	2009-10	<i>P</i> trend ‡
Children 2-18-y										
LCS Beverages	30.7	39.3	69.4	69.9	0.000	42.7	46.8	83.2	76.8	0.001
CS Beverages	417.9	368.1	294.8	314.5	0.000	616.2	539.6	473.7	460.0	0.000
LCS Foods	2.8	3.2	1.8	2.5	0.529	2.8	3.4	2.2	3.6	0.757
CS Foods	110.3	107.0	98.5	98.7	0.014	141.1	145.2	132.2	133.4	0.019
Adults ≥ 19-y										
LCS Beverages	125.6	163.0	161.3	151.1	0.138	172.4	214.2	204.4	184.5	0.716
CS Beverages	369.7	325.0	337.3	325.6	0.098	536.4	468.6	463.3	441.0	0.002
LCS Foods	4.3	8.2	5.1	7.1	0.143	4.4	8.5	5.4	7.3	0.137
CS Foods	90.5	89.8	89.1	90.0	0.871	120.2	120.1	116.2	114.8	0.125
<i>% Consumers</i> [†]	STORE					TOTAL				
	2003-04	2005-06	2007-08	2009-10	<i>P</i> trend ‡	2003-04	2005-06	2007-08	2009-10	<i>P</i> trend ‡
Children 2-18-y										
LCS Beverages	6.4%	8.4%	14.8%	17.1%	0.000	7.8%	10.3%	17.0%	18.9%	0.000
CS Beverages	65.7%	56.0%	54.2%	52.8%	0.000	80.6%	72.4%	72.2%	71.7%	0.001
LCS Foods	1.5%	1.8%	1.2%	1.8%	0.848	1.5%	1.9%	1.4%	2.3%	0.357
CS Foods	62.2%	61.5%	57.0%	57.2%	0.025	73.4%	73.7%	70.6%	70.8%	0.060
Adults ≥ 19-y										
LCS Beverages	17.7%	21.8%	21.3%	21.6%	0.010	21.1%	26.2%	24.8%	24.9%	0.037
CS Beverages	47.8%	42.8%	44.0%	42.4%	0.007	59.5%	53.6%	54.7%	52.1%	0.000
LCS Foods	2.4%	4.6%	3.3%	4.1%	0.048	2.6%	4.9%	3.5%	4.3%	0.058
CS Foods	50.9%	48.7%	49.9%	51.0%	0.756	61.4%	61.1%	60.0%	59.6%	0.206

* Per capita means for beverages (mL/d) and foods (g/d). LCS, low-caloric sweetened beverages or foods; CS, caloric-sweetened beverages or foods

† Multivariable linear (per capita estimates) and logistic (% purchasing) regression models were used to adjust for age, gender, race and income

‡ Statistically significant linear trends were tested using Wald tests, *P*<0.05

Table 3S. Change in percent volume (mL/day) purchased from each type of beverage using estimated average marginal effects from random-effects longitudinal regression models, among U.S. households from the Nielsen Homescan Longitudinal dataset, 2000-2010.

BEVERAGES Predictors	LCS only†				CS only†				LCS and CS			
	β	[95%CI]		P value‡	β	[95%CI]		P value‡	β	[95%CI]		P value‡
Year												
2001	-0.1	-0.3	0.1	0.476	-1.2	-1.5	-1.0	0.000	0.5	0.3	0.6	0.000
2002	0.7	0.5	0.9	0.000	-2.3	-2.6	-2.1	0.000	0.3	0.2	0.5	0.000
2003	1.5	1.3	1.7	0.000	-4.6	-4.8	-4.3	0.000	0.9	0.7	1.0	0.000
2004	2.6	2.4	2.8	0.000	-7.5	-7.8	-7.3	0.000	2.4	2.3	2.6	0.000
2005	3.3	3.1	3.5	0.000	-10.5	-10.8	-10.3	0.000	3.6	3.5	3.8	0.000
2006	2.9	2.7	3.1	0.000	-11.9	-12.1	-11.6	0.000	4.4	4.2	4.5	0.000
2007	2.3	2.1	2.5	0.000	-13.0	-13.2	-12.7	0.000	5.6	5.4	5.7	0.000
2008	1.6	1.4	1.8	0.000	-12.8	-13.0	-12.6	0.000	6.2	6.1	6.4	0.000
2009	1.4	1.2	1.6	0.000	-12.9	-13.1	-12.6	0.000	7.3	7.1	7.4	0.000
2010	1.7	1.5	1.9	0.000	-13.4	-13.7	-13.2	0.000	7.5	7.4	7.7	0.000
Gender and age categories												
Female												
2-6 y-old	-0.5	-0.8	-0.2	0.002	1.4	1.1	1.8	0.000	-0.3	-0.5	0.0	0.026
7-12 y-old	-0.4	-0.7	-0.2	0.001	0.4	0.1	0.7	0.015	0.3	0.1	0.5	0.002
13-18 y-old	-0.7	-1.0	-0.5	0.000	0.3	-0.1	0.6	0.110	0.2	0.0	0.3	0.134
Male												
2-6 y-old	-0.7	-1.0	-0.4	0.000	1.5	1.1	1.9	0.000	-0.2	-0.5	0.0	0.042
7-12 y-old	-0.7	-1.0	-0.5	0.000	0.8	0.5	1.1	0.000	0.1	-0.1	0.3	0.185
13-18 y-old	-1.6	-1.8	-1.3	0.000	2.0	1.7	2.4	0.000	0.0	-0.2	0.2	0.830
Female												
19-39 y-old	-0.4	-0.6	-0.2	0.000	-0.1	-0.4	0.1	0.318	0.3	0.2	0.4	0.000
40-59 y-old	1.1	0.9	1.3	0.000	-2.2	-2.5	-2.0	0.000	0.6	0.5	0.8	0.000
>60 y-old	1.1	0.8	1.3	0.000	-1.7	-2.0	-1.4	0.000	0.4	0.2	0.5	0.000
Male												
19-39 y-old	-1.8	-2.0	-1.6	0.000	2.6	2.4	2.8	0.000	-0.4	-0.5	-0.3	0.000
40-59 y-old	0.0	-0.2	0.2	0.839	1.3	1.1	1.5	0.000	-0.5	-0.6	-0.3	0.000
>60 y-old	1.0	0.7	1.2	0.000	0.7	0.4	1.0	0.000	-0.6	-0.8	-0.5	0.000
Presence of children												
Presence vs. Absence	-1.8	-2.1	-1.6	0.000	3.0	2.6	3.3	0.000	-0.4	-0.7	-0.2	0.000
Race/ethnicity												
African-American vs. White	-12.0	-12.5	-11.6	0.000	9.3	8.8	9.8	0.000	-0.6	-0.8	-0.3	0.000
Hispanic vs. White	-5.3	-5.8	-4.8	0.000	3.9	3.3	4.5	0.000	-1.0	-1.3	-0.6	0.000
Other vs. White	-5.9	-6.6	-5.3	0.000	5.8	5.0	6.6	0.000	-2.1	-2.5	-1.7	0.000
Income												
Middle vs. Low Income	1.2	1.0	1.3	0.000	-2.0	-2.2	-1.8	0.000	0.4	0.3	0.6	0.000
High vs. Low Income	2.7	2.5	2.9	0.000	-4.6	-4.8	-4.3	0.000	0.9	0.8	1.1	0.000

Race/ethnicity-Presence of children

No Children

African-American vs. White	-12.6	-13.1	-12.2	0.000	9.8	9.2	10.3	0.000	-0.6	-0.9	-0.3	0.000
Hispanic vs. White	-5.6	-6.2	-5.0	0.000	4.1	3.4	4.8	0.000	-1.0	-1.3	-0.6	0.000
Other vs. White	-6.0	-6.8	-5.3	0.000	5.9	5.0	6.7	0.000	-2.1	-2.6	-1.7	0.000

Children

African-American vs. White	-10.4	-11.0	-9.9	0.000	7.8	7.2	8.5	0.000	-0.6	-1.0	-0.3	0.000
Hispanic vs. White	-4.5	-5.1	-3.9	0.000	3.4	2.6	4.1	0.000	-0.9	-1.3	-0.5	0.000
Other vs. White	-5.6	-6.4	-4.8	0.000	5.7	4.7	6.7	0.000	-2.1	-2.6	-1.6	0.000

Race/ethnicity-Income

Low income

African-American vs. White	-11.3	-11.9	-10.7	0.000	7.7	6.9	8.4	0.000	-0.4	-0.8	0.0	0.069
Hispanic vs. White	-5.0	-5.8	-4.2	0.000	3.4	2.5	4.4	0.000	-0.9	-1.5	-0.4	0.001
Other vs. White	-5.1	-6.2	-4.0	0.000	4.3	2.9	5.7	0.000	-1.4	-2.1	-0.6	0.001

Middle income

African-American vs. White	-11.8	-12.2	-11.3	0.000	8.7	8.1	9.3	0.000	-0.5	-0.8	-0.2	0.001
Hispanic vs. White	-5.3	-5.9	-4.7	0.000	4.0	3.2	4.7	0.000	-0.8	-1.2	-0.4	0.000
Other vs. White	-5.4	-6.2	-4.6	0.000	5.5	4.5	6.4	0.000	-2.2	-2.7	-1.7	0.000

High Income

African-American vs. White	-12.7	-13.2	-12.2	0.000	10.6	10.0	11.2	0.000	-0.8	-1.1	-0.4	0.000
Hispanic vs. White	-5.4	-6.1	-4.8	0.000	4.1	3.3	4.9	0.000	-1.1	-1.5	-0.7	0.000
Other vs. White	-6.9	-7.6	-6.1	0.000	6.9	6.0	7.8	0.000	-2.4	-2.9	-1.9	0.000

* Coefficients can be interpreted as the change in the percent of grocery expenditure (volume purchased, mL/d) on each type of beverage respect to the total purchases of beverages. Changes with time, presence of different family members by age and gender, presence of children, race/ethnicity, income, and the interactions race/ethnicity with presence of children and income are shown.

† LCS, low-caloric sweetened beverages or foods; CS, caloric-sweetened beverages or foods.

‡ Significance level: $P < 0.001$

Table 4S. Change in percent volume (gr/day) purchased from each type of food using estimated average marginal effects from random-effects longitudinal regression models, among U.S. households from the Nielsen Homescan Longitudinal dataset, 2000-2010.

FOODS Predictors	LCS only [†]				CS only [†]				LCS and CS			
	β	[95%CI]	P value [‡]	β	[95%CI]	P value [‡]	β	[95%CI]	P value [‡]			
Year												
2001	0.1	0.0	0.1	0.000	-0.3	-0.4	-0.2	0.000	0.2	0.2	0.3	0.000
2002	0.2	0.2	0.2	0.000	-0.6	-0.7	-0.5	0.000	0.4	0.3	0.5	0.000
2003	0.2	0.1	0.2	0.000	-1.3	-1.4	-1.2	0.000	1.0	0.9	1.0	0.000
2004	0.3	0.3	0.4	0.000	-2.8	-2.9	-2.7	0.000	2.1	2.0	2.2	0.000
2005	0.4	0.4	0.4	0.000	-3.3	-3.4	-3.2	0.000	2.4	2.3	2.5	0.000
2006	0.4	0.4	0.5	0.000	-3.1	-3.2	-3.0	0.000	2.3	2.2	2.3	0.000
2007	0.4	0.4	0.4	0.000	-3.7	-3.8	-3.6	0.000	2.8	2.7	2.8	0.000
2008	0.4	0.4	0.4	0.000	-3.8	-3.9	-3.7	0.000	2.8	2.8	2.9	0.000
2009	0.7	0.6	0.7	0.000	-4.1	-4.2	-4.0	0.000	2.8	2.8	2.9	0.000
2010	0.5	0.5	0.6	0.000	-4.8	-4.9	-4.7	0.000	3.1	3.0	3.2	0.000
Gender and age categories												
Female												
2-6 y-old	-0.1	-0.1	0.0	0.003	0.4	0.3	0.6	0.000	-0.2	-0.2	-0.1	0.001
7-12 y-old	-0.1	-0.1	0.0	0.000	0.6	0.5	0.8	0.000	-0.1	-0.2	0.0	0.021
13-18 y-old	0.0	0.0	0.0	0.386	0.3	0.2	0.4	0.000	0.0	-0.1	0.1	0.843
Male												
2-6 y-old	-0.1	-0.1	0.0	0.000	0.5	0.4	0.7	0.000	-0.2	-0.3	-0.1	0.000
7-12 y-old	-0.1	-0.1	-0.1	0.000	0.9	0.8	1.0	0.000	-0.1	-0.2	0.0	0.001
13-18 y-old	-0.1	-0.1	0.0	0.000	0.8	0.7	0.9	0.000	-0.2	-0.3	-0.1	0.000
Female												
19-39 y-old	0.0	0.0	0.0	0.155	0.2	0.1	0.3	0.000	0.1	0.1	0.2	0.000
40-59 y-old	0.0	0.0	0.1	0.000	-0.4	-0.5	-0.3	0.000	0.2	0.1	0.2	0.000
>60 y-old	0.1	0.0	0.1	0.000	-0.8	-0.9	-0.7	0.000	0.4	0.3	0.4	0.000
Male												
19-39 y-old	-0.2	-0.2	-0.1	0.000	1.1	1.0	1.2	0.000	-0.4	-0.5	-0.4	0.000
40-59 y-old	-0.2	-0.2	-0.2	0.000	1.0	0.9	1.1	0.000	-0.5	-0.6	-0.5	0.000
>60 y-old	-0.1	-0.2	-0.1	0.000	0.5	0.4	0.6	0.000	-0.4	-0.4	-0.3	0.000
Presence of children												
Presence vs. Absence	-0.2	-0.2	-0.1	0.000	1.4	1.3	1.6	0.000	-0.3	-0.4	-0.2	0.000
Race/ethnicity												
African-American vs. White	-0.3	-0.3	-0.3	0.000	2.1	2.0	2.3	0.000	-1.4	-1.5	-1.3	0.000
Hispanic vs. White	0.0	-0.1	0.0	0.223	-1.1	-1.3	-0.9	0.000	-0.3	-0.4	-0.1	0.000
Other vs. White	-0.2	-0.2	-0.1	0.000	-0.8	-1.0	-0.5	0.000	-0.7	-0.8	-0.5	0.000
Income												
Middle vs. Low Income	0.1	0.1	0.1	0.000	-1.0	-1.0	-0.9	0.000	0.4	0.4	0.5	0.000
High vs. Low Income	0.3	0.3	0.3	0.000	-2.3	-2.4	-2.2	0.000	1.0	0.9	1.0	0.000

Race/ethnicity-Presence of children

No Children

African-American vs. White	-0.3	-0.3	-0.3	0.000	2.3	2.1	2.5	0.000	-1.5	-1.6	-1.4	0.000
Hispanic vs. White	0.0	-0.1	0.0	0.258	-1.2	-1.5	-0.9	0.000	-0.2	-0.4	-0.1	0.001
Other vs. White	-0.2	-0.3	-0.2	0.000	-0.8	-1.2	-0.5	0.000	-0.7	-0.9	-0.5	0.000

Children

African-American vs. White	-0.2	-0.3	-0.2	0.000	1.7	1.4	1.9	0.000	-1.1	-1.3	-1.0	0.000
Hispanic vs. White	0.0	-0.1	0.0	0.523	-0.8	-1.1	-0.6	0.000	-0.3	-0.4	-0.1	0.000
Other vs. White	-0.1	-0.2	0.0	0.042	-0.5	-0.9	-0.2	0.005	-0.7	-0.9	-0.5	0.000

Race/ethnicity-Income

Low income

African-American vs. White	-0.3	-0.3	-0.2	0.000	1.9	1.6	2.2	0.000	-1.3	-1.5	-1.1	0.000
Hispanic vs. White	0.0	-0.1	0.0	0.368	-1.0	-1.3	-0.6	0.000	-0.3	-0.5	0.0	0.020
Other vs. White	-0.1	-0.2	0.0	0.168	-0.7	-1.2	-0.2	0.005	-0.5	-0.8	-0.2	0.001

Middle income

African-American vs. White	-0.3	-0.3	-0.2	0.000	2.1	1.8	2.3	0.000	-1.4	-1.5	-1.3	0.000
Hispanic vs. White	0.0	-0.1	0.1	0.970	-1.4	-1.7	-1.1	0.000	-0.2	-0.4	-0.1	0.006
Other vs. White	-0.2	-0.2	-0.1	0.000	-1.0	-1.3	-0.7	0.000	-0.6	-0.8	-0.4	0.000

High Income

African-American vs. White	-0.3	-0.3	-0.2	0.000	2.4	2.1	2.6	0.000	-1.5	-1.6	-1.3	0.000
Hispanic vs. White	0.0	-0.1	0.0	0.097	-0.8	-1.1	-0.5	0.000	-0.3	-0.5	-0.1	0.000
Other vs. White	-0.2	-0.3	-0.2	0.000	-0.5	-0.8	-0.2	0.002	-0.9	-1.0	-0.7	0.000

* Coefficients can be interpreted as the change in the percent of grocery expenditure (volume purchased, gr/d) on each type of food respect to the total purchases of foods. Changes with time, presence of different family members by age and gender, presence of children, race/ethnicity, income, and the interactions race/ethnicity with presence of children and income are shown.

† LCS, low-caloric sweetened beverages or foods; CS, caloric-sweetened beverages or foods.

‡ Significance level: $P < 0.001$
