

**APPENDIX F**  
**SUPPLEMENTAL TABLES FOR CHAPTER 6**

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**Table F.1. Proportion of Schools Offering Healthiest-Choice Lunches that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks: Lowest-Percent-Fat Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	33% of 1989 REA	44.9	20.7	16.3	34.7
Protein	33% of 1989 RDA	>97	>97	>97	>97
Vitamin A <sup>a</sup>	33% of 1989 RDA	89.8	55.7	50.5	75.7
Vitamin C	33% of 1989 RDA	72.9	76.4	79.9	74.9
Calcium	33% of 1989 RDA	>97	>97	>97	>97
Iron	33% of 1989 RDA	81.9	60.9	66.5	75.0
Percentage of Calories from Total Fat	≤ 30%	87.6	91.8	89.9	88.8
Percentage of Calories from Saturated Fat	< 10%	89.3	93.4	92.6	90.7
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	33.0	22.4	24.6	29.4
Cholesterol	< 100 mg <sup>b,c</sup>	>97	>97	>97	>97
Sodium	< 767 mg <sup>b,c</sup>	12	7	7	10
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	17	20	23	19
<b>Combinations of Standards</b>					
All SMI Standards		23.4	11.6	6.6	17.9
SMI Standards for all RDA Nutrients <sup>d</sup>		55.3	32.8	33.2	46.8
SMI Standards for Total Fat and Saturated Fat		82.6	89.2	86.0	84.5
SMI Standards for All RDA Nutrients <sup>d</sup> , and SMI Standard for Saturated Fat		49.7	30.7	31.1	42.5
SMI Standards for All RDA Nutrients <sup>d</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		19.1	3.8~	7.1	13.9
Updated Standards for All RDA Nutrients <sup>e</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		14.9	7.9	4.3~	11.5
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-third of recommended daily limit.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the *Dietary Reference Intakes*.

RDA = *Recommended Dietary Allowance*; REA = *Recommended Energy Allowance*; SMI = School Meals Initiative for Healthy Children.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table F.2. Proportion of Schools Offering Healthiest-Choice Lunches that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks: Lowest-Percent-Saturated-Fat Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	33% of 1989 REA	47.6	23.5	16.2	36.9
Protein	33% of 1989 RDA	>97	>97	>97	>97
Vitamin A <sup>a</sup>	33% of 1989 RDA	81.8	45.9	43.9	67.7
Vitamin C	33% of 1989 RDA	75.2	77.9	82.6	77.2
Calcium	33% of 1989 RDA	>97	91.4	91.5	96.6
Iron	33% of 1989 RDA	77.7	54.0	52.0	68.2
Percentage of Calories from Total Fat	≤ 30%	77.8	86.1	83.7	80.5
Percentage of Calories from Saturated Fat	< 10%	93.3	95.7~	95.9~	94.3
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	45.4	29.8	29.7	39.4
Cholesterol	< 100 mg <sup>b,c</sup>	>97	>97	>97	>97
Sodium	< 767 mg <sup>b,c</sup>	15	8	8	12
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	15	19	25	17
<b>Combinations of Standards</b>					
All SMI Standards		23.1	11.4	3.6~	17.0
SMI Standards for all RDA Nutrients <sup>d</sup>		51.2	26.4	21.3	40.7
SMI Standards for Total Fat and Saturated Fat		77.2	85.9	82.0	79.7
SMI Standards for All RDA Nutrients <sup>d</sup> , and SMI Standard for Saturated Fat		48.2	24.9	20.7	38.4
SMI Standards for All RDA Nutrients <sup>d</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		21.9	3.5~	6.2	15.4
Updated Standards for All RDA Nutrients <sup>e</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		23.1	7.6	5.6	16.8
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-third of recommended daily limit.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the *Dietary Reference Intakes*.

RDA = *Recommended Dietary Allowance*; REA = *Recommended Energy Allowance*; SMI = School Meals Initiative for Healthy Children.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table F.3. Proportion of Schools Offering Healthiest-Choice Lunches that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks: Lowest-Sodium Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	33% of 1989 REA	37.7	16.0	10.6	28.3
Protein	33% of 1989 RDA	>97	>97	>97	>97
Vitamin A <sup>a</sup>	33% of 1989 RDA	78.1	36.7	41.9	63.3
Vitamin C	33% of 1989 RDA	76.8	83.9	84.4	79.6
Calcium	33% of 1989 RDA	>97	92.0	94.1	97.1
Iron	33% of 1989 RDA	64.7	31.5	32.4	52.2
Percentage of Calories from Total Fat	≤ 30%	59.1	68.8	68.1	62.7
Percentage of Calories from Saturated Fat	< 10%	72.2	71.3	71.9	72.0
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	59.1	50.6	54.1	56.6
Cholesterol	< 100 mg <sup>b,c</sup>	>97	96~	>97	97
Sodium	< 767 mg <sup>b,c</sup>	34	39	37	36
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	18	29	31	22
<b>Combinations of Standards</b>					
All SMI Standards		11.1	4.6	<3	8.1
SMI Standards for all RDA Nutrients <sup>d</sup>		42.0	16.1	17.0	32.3
SMI Standards for Total Fat and Saturated Fat		53.6	57.8	57.2	55.1
SMI Standards for All RDA Nutrients <sup>d</sup> , and SMI Standard for Saturated Fat		29.8	11.6	14.6	23.4
SMI Standards for All RDA Nutrients <sup>d</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		16.7	3.3~	7.0	12.3
Updated Standards for All RDA Nutrients <sup>e</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		17.3	7.2	5.9	13.1
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-third of recommended daily limit.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the *Dietary Reference Intakes*.

RDA = *Recommended Dietary Allowance*; REA = *Recommended Energy Allowance*; SMI = School Meals Initiative for Healthy Children.

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between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.



**Table F.4. Proportion of Schools Offering Healthiest-Choice Lunches that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks: Highest-Fiber Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	33% of 1989 REA	78.9	56.6	52.2	69.4
Protein	33% of 1989 RDA	>97	>97	>97	>97
Vitamin A <sup>a</sup>	33% of 1989 RDA	93.8	78.3	78.6	87.9
Vitamin C	33% of 1989 RDA	82.1	85.9	86.9	83.8
Calcium	33% of 1989 RDA	>97	>97	>97	>97
Iron	33% of 1989 RDA	96.7~	81.9	87.8	92.3
Percentage of Calories from Total Fat	≤ 30%	50.6	61.3	55.5	53.5
Percentage of Calories from Saturated Fat	< 10%	73.5	72.3	72.8	73.1
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	62.1	55.9	59.6	60.5
Cholesterol	< 100 mg <sup>b,c</sup>	97~	>97	95~	96
Sodium	< 767 mg <sup>b,c</sup>	<3	<3	<3	2
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	37	55	50	43
<b>Combinations of Standards</b>					
All SMI Standards		24.7	15.7	13.5	20.8
SMI Standards for all RDA Nutrients <sup>d</sup>		74.4	60.2	62.9	69.5
SMI Standards for Total Fat and Saturated Fat		43.1	49.9	49.0	45.5
SMI Standards for All RDA Nutrients <sup>d</sup> , and SMI Standard for Saturated Fat		53.5	45.0	43.6	50.0
SMI Standards for All RDA Nutrients <sup>d</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		32.0	22.2	25.3	28.9
Updated Standards for All RDA Nutrients <sup>e</sup> , SMI Standard for Saturated Fat, and 200 <sup>5</sup> <i>Dietary Guidelines</i> Standard for Total Fat		32.3	27.1	24.6	29.8
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-third of recommended daily limit.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the *Dietary Reference Intakes*.

RDA = *Recommended Dietary Allowance*; REA = *Recommended Energy Allowance*; SMI = School Meals Initiative for Healthy Children.

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between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table F.5. Proportion of Schools Offering Healthiest-Choice Lunches that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks: Highest-Iron Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	33% of 1989 REA	79.9	62.9	59.9	72.8
Protein	33% of 1989 RDA	>97	>97	>97	>97
Vitamin A <sup>a</sup>	33% of 1989 RDA	95.2	76.2	76.1	87.9
Vitamin C	33% of 1989 RDA	78.6	79.5	78.6	78.7
Calcium	33% of 1989 RDA	>97	>97	>97	>97
Iron	33% of 1989 RDA	>97	96.4~	96.0~	97.8
Percentage of Calories from Total Fat	≤ 30%	59.3	66.2	53.4	59.3
Percentage of Calories from Saturated Fat	< 10%	70.1	68.9	67.9	69.4
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	61.8	56.2	61.2	60.7
Cholesterol	< 100 mg <sup>b,c</sup>	96	>97	94	96
Sodium	< 767 mg <sup>b,c</sup>	<3	<3	<3	<3
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	10	15	12	11
<b>Combinations of Standards</b>					
All SMI Standards		29.4	20.8	15.6	25.1
SMI Standards for all RDA Nutrients <sup>d</sup>		75.6	62.5	62.0	70.5
SMI Standards for Total Fat and Saturated Fat		49.2	55.2	45.8	49.6
SMI Standards for All RDA Nutrients <sup>d</sup> , and SMI Standard for Saturated Fat		53.3	45.5	41.7	49.6
SMI Standards for All RDA Nutrients <sup>d</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		32.2	19.4	26.0	28.7
Updated Standards for All RDA Nutrients <sup>e</sup> , SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		33.0	24.4	22.6	29.3
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-third of recommended daily limit.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the *Dietary Reference Intakes*.

RDA = *Recommended Dietary Allowance*; REA = *Recommended Energy Allowance*; SMI = School Meals Initiative for Healthy Children.

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between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table F.6. Foods Offered in Healthiest-Choice Lunches All NSLP Lunches**

	Percent of Daily Lunch Menus					All NSLP Lunches
	Lowest-Percent Fat Lunches	Lowest-Percent Saturated-Fat Lunches	Highest-Dietary Fiber Lunches	Lowest-Sodium Lunches	Highest-Iron Lunches	
<b>Milk:</b>						
1% fat, unflavored	2	2	3	13	1	73
1% fat, flavored	24	24	55	0	54	63
Skim, unflavored	44	44	0	24	2	47
Skim, flavored	28	28	38	37	38	39
2% fat, unflavored	0	0	1	21	1	30
2% fat, flavored	1	1	3	0	3	3
Whole milk, unflavored	0	0	0	3	0	3
Whole milk, flavored	0	0	0	0	0	1
<b>Entrees:</b>						
Entree salads (chef's salads)	2	2	11	4	4	30
Peanut butter sandwiches	1	9	22	15	7	28
Sandwiches with plain poultry	12	8	4	8	10	23
Pizza without meat (without vegetables)	9	3	4	4	6	21
Pizza with meat (without vegetables)	5	3	6	2	9	20
Sandwiches with breaded/fried poultry	4	10	4	4	5	18
Chicken nuggets	4	9	3	6	3	16
Cheeseburgers	1	1	2	0	5	15
Sausage sandwiches (not including frankfurters and corn dogs)	0	0	0	0	0	14
Sandwiches with plain meat	3	1	2	1	3	13
Hamburgers	1	1	1	6	3	10

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Table F.6 (continued)

	Percent of Daily Lunch Menus					
	Lowest-Percent Fat Lunches	Lowest-Percent Saturated-Fat Lunches	Highest-Dietary Fiber Lunches	Lowest-Sodium Lunches	Highest-Iron Lunches	All NSLP Lunches
Bag lunches and pre-plated meals	1	1	1	1	1	9
Sandwiches with only cheese	2	1	2	1	1	9
Beef/pork sandwiches (not including hamburgers)	5	4	2	2	3	8
Hot dogs	1	2	1	1	2	8
Burritos	4	2	5	2	5	7
Yogurt low-fat/fat-free	5	4	0	5	0	7
Cheese (as an entrée)	0	0	0	0	1	5
Sandwiches with tuna salad	2	0	0	0	1	5
Self-serve sandwich/deli bar	1	1	1	0	2	5
<b>Number of Daily Menus</b>						<b>4,230</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Ad hoc analysis.

Note: The percentage of daily lunch menus for all NSLP lunches considers multiple entrees per menu for schools that offered more than one entree choice. The percentage of daily lunch menus for the healthiest-choice lunches includes only one entree per menu day for each school. The analysis for each nutrient is based on the healthiest menu choices offered by each school.

**Table F.7. Average Calorie and Nutrient Content of Healthiest-Choice Lunches Offered to Students, Relative to SMI Nutrition Standards and Related Benchmarks: Lowest-Percent-Fat Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	33%	32.8	29.5	28.1	31.3
Protein	33%	102.0	68.5	64.3	88.3
Vitamin A <sup>a</sup>	33%	59.1	41.0	40.2	52.0
Vitamin C	33%	69.3	84.4	73.3	72.8
Calcium	33%	63.0	44.9	44.5	56.0
Iron	33%	40.9	36.2	37.0	39.3
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	23.0	20.6	20.7	22.1
Saturated Fat	< 10%	7.6	6.9	6.9	7.3
<b>Average Amount</b>					
Cholesterol	< 100 mg <sup>c,d</sup>	47	47	50	47
Sodium	< 767 mg <sup>c,d</sup>	1,152	1,251	1,279	1,196
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	11	12	12	11
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-third of recommended daily limit.

SMI = School Meals Initiative for Healthy Children; REA = *Recommended Energy Allowance*; RDA = *Recommended Dietary Allowance*.

**Table F.8. Average Calorie and Nutrient Content of Healthiest-Choice Lunches Offered to Students, Relative to SMI Nutrition Standards and Related Benchmarks: Lowest-Percent-Saturated-Fat Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	33%	33.2	29.6	27.9	31.5
Protein	33%	99.2	67.2	62.4	85.9
Vitamin A <sup>a</sup>	33%	56.8	39.2	38.6	49.9
Vitamin C	33%	73.9	88.2	80.3	77.8
Calcium	33%	57.1	39.9	39.4	50.4
Iron	33%	39.8	34.6	34.9	37.9
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	25.1	22.8	22.5	24.1
Saturated Fat	< 10%	6.8	6.1	6.0	6.5
<b>Average Amount</b>					
Cholesterol	< 100 mg <sup>c,d</sup>	41	49	48	44
Sodium	< 767 mg <sup>c,d</sup>	1,091	1,208	1,191	1,132
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	11	12	12	11
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-third of recommended daily limit.

SMI = School Meals Initiative for Healthy Children; REA = *Recommended Energy Allowance*; RDA = *Recommended Dietary Allowance*.



**Table F.9. Average Calorie and Nutrient Content of Healthiest-Choice Lunches Offered to Students, Relative to SMI Nutrition Standards and Related Benchmarks: *Lowest-Sodium Lunches***

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	33%	32.0	27.7	26.2	30.0
Protein	33%	96.9	64.3	59.3	83.4
Vitamin A <sup>a</sup>	33%	54.4	36.8	37.1	47.7
Vitamin C	33%	80.9	95.6	85.1	84.3
Calcium	33%	59.0	41.4	41.4	52.3
Iron	33%	36.1	30.3	30.1	33.8
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	28.5	27.2	27.5	28.1
Saturated Fat	< 10%	8.9	8.6	8.8	8.8
<b>Average Amount</b>					
Cholesterol	< 100 mg <sup>c,d</sup>	45	52	52	48
Sodium	< 767 mg <sup>c,d</sup>	932	918	928	928
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	11	12	13	12
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-third of recommended daily limit.

SMI = School Meals Initiative for Healthy Children; REA = *Recommended Energy Allowance*; RDA = *Recommended Dietary Allowance*.

**Table F.10. Average Calorie and Nutrient Content of Healthiest-Choice Lunches Offered to Students, Relative to SMI Nutrition Standards and Related Benchmarks: Highest-Fiber Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	33%	38.8	35.4	34.7	37.3
Protein	33%	109.8	74.5	69.9	95.3
Vitamin A <sup>a</sup>	33%	72.8	55.6	55.9	66.3
Vitamin C	33%	77.1	86.4	82.0	79.8
Calcium	33%	63.1	47.2	47.8	57.2
Iron	33%	47.4	41.5	42.9	45.4
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	30.2	29.2	29.8	29.9
Saturated Fat	< 10%	9.1	9.0	9.0	9.1
<b>Average Amount</b>					
Cholesterol	< 100 mg <sup>c,d</sup>	45	52	53	48
Sodium	< 767 mg <sup>c,d</sup>	1,308	1,505	1,553	1,393
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	13	14	14	14
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-third of recommended daily limit.

SMI = School Meals Initiative for Healthy Children; REA = *Recommended Energy Allowance*; RDA = *Recommended Dietary Allowance*.

**Table F.11. Average Calorie and Nutrient Content of Healthiest-Choice Lunches Offered to Students, Relative to SMI Nutrition Standards and Related Benchmarks: Highest-Iron Lunches**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	33%	38.6	36.2	35.9	37.7
Protein	33%	114.5	79.7	75.8	100.4
Vitamin A <sup>a</sup>	33%	68.8	51.7	52.2	62.4
Vitamin C	33%	72.4	75.8	68.8	72.2
Calcium	33%	64.8	48.7	49.9	58.9
Iron	33%	53.6	49.0	51.4	52.3
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	29.2	28.2	29.2	29.0
Saturated Fat	< 10%	9.3	9.2	9.4	9.3
<b>Average Amount</b>					
Cholesterol	< 100 mg <sup>c,d</sup>	54	59	64	57
Sodium	< 767 mg <sup>c,d</sup>	1,430	1,684	1,805	1,552
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	11	11	11	11
<b>Number of Schools</b>		<b>318</b>	<b>287</b>	<b>279</b>	<b>884</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-third of recommended daily limit.

SMI = School Meals Initiative for Healthy Children; REA = *Recommended Energy Allowance*; RDA = *Recommended Dietary Allowance*.

**APPENDIX G**  
**SUPPLEMENTAL TABLES FOR CHAPTER 7**

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**Table G.1. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Offered**

	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Amount</b>				
Calories	458	509	520	480
<b>Macronutrients</b>				
Total fat (g)	11	13	14	12
Saturated fat (g)	4	5	5	4
Monounsaturated fat (g)	4	5	5	4
Polyunsaturated fat (g)	2	3	3	2
Linoleic acid (g)	2	2	2	2
Alpha-linolenic acid (g)	0.2	0.2	0.2	0.2
Carbohydrate (g)	75	82	83	78
Protein (g)	16	17	17	16
<b>Vitamins</b>				
Vitamin A (mcg RE)	278	279	282	279
Vitamin A (mcg RAE)	279	283	287	282
Vitamin C (mg)	32	35	36	34
Vitamin E (mg AT)	1.0	1.2	1.2	1.1
Vitamin B <sub>6</sub> (mg)	0.6	0.6	0.6	0.6
Vitamin B <sub>12</sub> (mcg)	2.2	2.1	2.1	2.1
Folate (mcg DFE)	188	191	195	190
Niacin (mg)	5	6	6	5
Riboflavin (mg)	0.9	0.9	0.9	0.9
Thiamin (mg)	0.5	0.6	0.6	0.6
<b>Minerals</b>				
Calcium (mg)	428	443	439	433
Iron (mg)	5.0	5.1	5.2	5.1
Magnesium (mg)	66	68	70	67
Phosphorus (mg)	403	429	430	413
Potassium (mg)	726	765	775	743
Sodium (mg)	549	628	644	583
Zinc (mg)	3.3	3.3	3.3	3.3
<b>Other Dietary Components</b>				
Cholesterol (mg)	40	45	46	42
Dietary fiber (g)	3	3	3	3
Dietary fiber (g/1,000 calories)	7	6	6	6
<b>Average Percentage of Calories from:</b>				
Total fat	22.2	23.0	23.6	22.6
Saturated fat	8.2	8.3	8.4	8.2
Monounsaturated fat	7.9	8.5	8.8	8.2
Polyunsaturated fat	4.4	4.4	4.6	4.4
Linoleic acid	3.9	3.9	4.1	4.0
Alpha-linolenic acid	0.4	0.4	0.4	0.4
Carbohydrate	65.5	64.9	64.5	65.2
Protein	14.0	13.7	13.5	13.8
<b>Number of Schools</b>	<b>282</b>	<b>264</b>	<b>257</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalents; RAE = Retinol activity equivalents.

**Table G.2. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Offered, Relative to SMI Nutrition Standards and Related Benchmarks**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	23.3 <sup>α</sup>	21.8 <sup>β</sup>	20.6 <sup>γ</sup>	22.5
Protein	25%	56.6 <sup>α</sup>	38.4 <sup>β</sup>	35.0 <sup>γ</sup>	48.9
Vitamin A <sup>a</sup>	25%	42.9 <sup>α</sup>	31.3	31.3 <sup>γ</sup>	38.4
Vitamin C	25%	71.1	70.1 <sup>β</sup>	62.7 <sup>γ</sup>	69.2
Calcium	25%	51.4 <sup>α</sup>	37.5	36.6 <sup>γ</sup>	45.9
Iron	25%	48.5 <sup>α</sup>	38.5	38.5 <sup>γ</sup>	44.6
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	22.2 <sup>α</sup>	23.0	23.7 <sup>γ</sup>	22.6
Saturated Fat	< 10%	8.2	8.3	8.4	8.2
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	40 <sup>α</sup>	45	46 <sup>γ</sup>	42
Sodium	< 575 mg <sup>c,d</sup>	549 <sup>α</sup>	628	644 <sup>γ</sup>	583
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	7	6	6	6
<b>Number of Schools</b>		<b>282</b>	<b>264</b>	<b>257</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between elementary and middle schools is significantly different from zero at the .05 level.

<sup>β</sup>Difference between middle and high schools is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between elementary and high schools is significantly different from zero at the .05 level.

**Table G.3. Proportion of Schools Offering School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	24.3 <sup>α</sup>	15.6	12.1 <sup>γ</sup>	20.2
Protein	25% of 1989 RDA	>97	>97 <sup>β</sup>	96.1 <sup>γ~</sup>	>97
Vitamin A	25% of 1989 RDA <sup>a</sup>	>97 <sup>α</sup>	84.4	79.0 <sup>γ</sup>	92.3
Vitamin C	25% of 1989 RDA	96.9 <sup>~</sup>	>97	>97	97.0
Calcium	25% of 1989 RDA	>97	>97	>97	>97
Iron	25% of 1989 RDA	93.8	89.7	86.0 <sup>γ</sup>	91.5
Percentage of Calories from Total Fat	≤ 30%	94.6	93.7 <sup>β</sup>	88.5 <sup>γ</sup>	93.2
Percentage of Calories from Saturated Fat	< 10%	81.1	84.8	78.8	81.3
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	25.3 <sup>α</sup>	35.3	36.6 <sup>γ</sup>	29.4
Cholesterol	< 75 mg <sup>b,c</sup>	93	91	88	91
Sodium	< 575 mg <sup>b,c</sup>	70 <sup>α</sup>	50	49 <sup>γ</sup>	62
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		19.0 <sup>α</sup>	10.7 <sup>β</sup>	5.5 <sup>γ</sup>	14.7
SMI Standards for all RDA Nutrients <sup>c</sup>		90.6 <sup>α</sup>	78.0	72.6 <sup>γ</sup>	84.6
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		75.3	67.5	59.2 <sup>γ</sup>	70.6
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		12.7	18.3	13.5	13.9
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		9.0	12.2 <sup>β</sup>	4.8 <sup>~</sup>	8.7
<b>Number of Schools</b>		<b>282</b>	<b>264</b>	<b>257</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

Table G.3 (*continued*)

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between elementary and middle schools is significantly different from zero at the .05 level.

<sup>b</sup>Difference between middle and high schools is significantly different from zero at the .05 level.

<sup>c</sup>Difference between elementary and high schools is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.4. Proportion of Schools Meeting SMI Nutrition Standards and Related Nutrition Benchmarks, and Distribution of Schools Not Meeting Standards, School Breakfast Program Breakfasts Offered**

Percent Meeting/Above/Below Standard	Standard/ Recommendation	Percentage of Schools			
		Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA				
Percent Meeting Standard		24.3 <sup>α</sup>	15.6	12.1 <sup>γ</sup>	20.2
Percent Below Standard					
>0 to ≤5%		11.7	6.2	3.5~	9.0
>5 to ≤10%		14.3	9.8	7.9	12.2
>10 to ≤15%		18.3	13.6	6.5	15.0
>15 to ≤20%		11.2	14.3	14.4	12.4
>20 to ≤25%		8.6	13.5	19.0	11.6
>25%		11.6	27.0	36.6	19.6
Vitamin A <sup>a</sup>	25% of 1989 RDA				
Percent Meeting Standard		99.1 <sup>α~</sup>	84.4	78.9 <sup>γ</sup>	92.3
Percent Below Standard					
>0 to ≤5%		0.9~	6.8	4.6~	2.7
>5 to ≤10%		0.0~	4.5~	6.1	2.1
>10 to ≤15%		0.0~	1.6~	3.4~	1.0~
>15%		0.0~	2.7~	6.9	1.9~
Iron	25% of 1989 RDA				
Percent Meeting Standard		93.8	89.7	86.0 <sup>γ</sup>	91.5
Percent Below Standard					
>0 to ≤5%		1.2~	1.4~	1.7~	1.3~
>5 to ≤10%		0.1~	1.1~	2.2~	0.7~
>10 to ≤15%		2.1~	3.0~	2.6~	2.4
>15%		0.8~	4.8	7.6	4.0
Percentage of Calories from Total Fat	≤ 30%				
Percent Meeting Standard		94.6	93.7 <sup>β</sup>	88.5 <sup>γ</sup>	93.2
Percent Above Standard					
>0 to ≤5%		1.3~	2.3~	5.5	2.3
>5 to ≤10%		2.7~	2.0~	1.7~	2.4
>10%		1.4~	1.9~	4.3~	2.1~
Percentage of Calories from Saturated Fat	< 10%				
Percent Meeting Standard		81.1	84.8	78.8	81.3
Percent Above Standard					
>0 to ≤5%		7.8	6.0	6.1	7.1
>5 to ≤10%		4.2~	2.1~	3.6~	3.7
>10 to ≤15%		1.4~	2.3~	4.9~	2.3
>15%		5.5	4.8~	6.7	5.6

Table G.4 (continued)

Percent Meeting/Above/Below Standard	Standard/ Recommendation	Percentage of Schools			
		Elementary Schools	Middle Schools	High Schools	All Schools
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% - 35% <sup>a</sup>				
Percent Meeting Standard		25.3 <sup>α</sup>	35.3	36.6 <sup>γ</sup>	29.4
Percent Above Standard		1.0~	0.6~	3.5~	1.5~
Percent Below Standard					
>0 to ≤5%		8.7	7.7	7.7	8.3
>5 to ≤10%		10.6	11.8	8.5	10.4
>10 to ≤15%		10.6	8.8	9.8	10.1
>15 to ≤20%		9.2	6.2	10.3	8.9
>20 to ≤25%		11.6	11.0	5.2 <sup>γ</sup>	10.2
>25%		23.1	18.5	18.4	21.3
Sodium	< 575 mg <sup>a,b</sup>				
Percent Meeting Standard		69.6 <sup>α</sup>	50.4	48.6 <sup>γ</sup>	61.8
Percent Above Standard					
>0 to ≤5%		6.0	11.8	6.1	7.1
>5 to ≤10%		6.7	7.1	9.4	7.3
>10 to ≤15%		3.3~	5.2	4.4~	3.9
>15 to ≤20%		3.0~	5.3	3.8~	3.6
>20 to ≤25%		1.7~	1.3~	3.3~	2.0
>25 to ≤50%		5.1	7.9	13.3	7.3
>50%		4.6~	11.0	10.9	7.1
Dietary Fiber (g/1,000 calories)	14 <sup>a</sup>				
Percent Meeting Standard		0.1~	0.0~	0.0~	0.1~
Percent Below Standard					
>0 to ≤25%		5.4	5.4	5.2	5.3
>25 to ≤50%		30.1	29.3	30.8	30.1
>50%		64.4	65.3	64.1	64.5
<b>Number of Schools</b>		<b>282</b>	<b>264</b>	<b>257</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Note: Protein, calcium, and cholesterol are not included in the table because virtually all schools met the relevant standard/benchmark.

<sup>a</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>b</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between elementary and middle schools is significantly different from zero at the .05 level.

<sup>β</sup>Difference between middle and high schools is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between elementary and high schools is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.5. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Served**

	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Amount</b>				
Calories	434	503	504	461
<b>Macronutrients</b>				
Total fat (g)	12	15	15	13
Saturated fat (g)	4	5	5	5
Monounsaturated fat (g)	4	6	6	5
Polyunsaturated fat (g)	2	3	3	2
Linoleic acid (g)	2	3	3	2
Alpha-linolenic acid (g)	0.2	0.2	0.2	0.2
Carbohydrate (g)	69	77	77	72
Protein (g)	15	17	17	16
<b>Vitamins</b>				
Vitamin A (mcg RE)	245	241	234	242
Vitamin A (mcg RAE)	248	244	237	245
Vitamin C (mg)	28	32	33	30
Vitamin E (mg AT)	0.9	1.2	1.1	1.0
Vitamin B <sub>6</sub> (mg)	0.5	0.5	0.5	0.5
Vitamin B <sub>12</sub> (mcg)	1.9	1.7	1.6	1.8
Folate (mcg DFE)	163	158	160	162
Niacin (mg)	5	5	5	5
Riboflavin (mg)	0.8	0.8	0.8	0.8
Thiamin (mg)	0.5	0.5	0.5	0.5
<b>Minerals</b>				
Calcium (mg)	382	390	373	382
Iron (mg)	4.5	4.5	4.6	4.5
Magnesium (mg)	59	63	62	61
Phosphorus (mg)	378	414	402	389
Potassium (mg)	660	706	699	676
Sodium (mg)	569	687	703	618
Zinc (mg)	3.0	2.9	2.9	2.9
<b>Other Dietary Components</b>				
Cholesterol (mg)	44	54	56	48
Dietary fiber (g)	3	3	3	3
Dietary fiber (g/1,000 calories)	6	6	6	6
<b>Average Percentage of Calories from:</b>				
Total fat	23.8	26.0	26.6	24.8
Saturated fat	8.6	8.9	9.1	8.7
Monounsaturated fat	8.7	10.1	10.3	9.3
Polyunsaturated fat	4.6	4.9	5.0	4.7
Linoleic acid	4.1	4.4	4.4	4.2
Alpha-linolenic acid	0.4	0.4	0.4	0.4
Carbohydrate	63.8	61.7	61.4	63.0
Protein	13.9	13.5	13.3	13.7
<b>Number of Schools</b>	<b>282</b>	<b>263</b>	<b>257</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalents; RAE = Retinol activity equivalents.



**Table G.6. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Served to Students, Relative to SMI Nutrition Standards and Related Benchmarks**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	22.1	21.5	19.9 <sup>γ</sup>	21.6
Protein	25%	53.7 <sup>α</sup>	37.9 <sup>β</sup>	33.7 <sup>γ</sup>	46.8
Vitamin A <sup>a</sup>	25%	37.9 <sup>α</sup>	27.1	26.0 <sup>γ</sup>	33.5
Vitamin C	25%	62.5	63.7	58.1	61.8
Calcium	25%	46.0 <sup>α</sup>	33.1	31.1 <sup>γ</sup>	40.6
Iron	25%	43.7 <sup>α</sup>	34.0	33.8 <sup>γ</sup>	39.9
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	23.8 <sup>α</sup>	26.0	26.6 <sup>γ</sup>	24.8
Saturated Fat	< 10%	8.6 <sup>α</sup>	8.9	9.1 <sup>γ</sup>	8.7
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	44 <sup>α</sup>	54	56 <sup>γ</sup>	48
Sodium	< 575 mg <sup>c,d</sup>	569 <sup>α</sup>	687	703 <sup>γ</sup>	618
Dietary Fiber (g/ 1,000 calories)	14 <sup>c</sup>	6 <sup>α</sup>	6	6 <sup>γ</sup>	6
<b>Number of Schools</b>		<b>282</b>	<b>263</b>	<b>257</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. The methodology is fully described in Appendix D of this report.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children

<sup>α</sup>Difference between elementary and middle schools is significantly different from zero at the .05 level.

<sup>β</sup>Difference between middle and high schools is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between elementary and high schools is significantly different from zero at the .05 level.

**Table G.7. Proportion of Schools *Serving* School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks**

	Standard/ Recommendation	Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	23.1 <sup>α</sup>	15.1	10.3 <sup>γ</sup>	19.0
Protein	25% of 1989 RDA	>97 <sup>α</sup>	93.4 <sup>β</sup>	81.6 <sup>γ</sup>	94.4
Vitamin A <sup>a</sup>	25% of 1989 RDA	89.7 <sup>α</sup>	47.9	49.6 <sup>γ</sup>	73.9
Vitamin C	25% of 1989 RDA	94.9	93.9	91.8	94.1
Calcium	25% of 1989 RDA	>97 <sup>α</sup>	81.0	75.7 <sup>γ</sup>	90.7
Iron	25% of 1989 RDA	92.2 <sup>α</sup>	75.4	79.6 <sup>γ</sup>	86.6
Percentage of Calories from Total Fat	≤ 30%	88.6 <sup>α</sup>	81.6	78.2 <sup>γ</sup>	85.2
Percentage of Calories from Saturated Fat	< 10%	78.4	74.6	67.6 <sup>γ</sup>	75.5
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	33.1 <sup>α</sup>	54.0	55.6 <sup>γ</sup>	41.5
Cholesterol	< 75 mg <sup>b,c</sup>	91 <sup>α</sup>	81	79 <sup>γ</sup>	87
Sodium	< 575 mg <sup>b,c</sup>	53 <sup>α</sup>	37	36 <sup>γ</sup>	46
Dietary fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		14.6 <sup>α</sup>	6.8	3.2 <sup>γ~</sup>	10.9
SMI Standards for all RDA Nutrients <sup>c</sup>		81.6 <sup>α</sup>	42.1	37.7 <sup>γ</sup>	65.5
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		65.7 <sup>α</sup>	33.4	26.2 <sup>γ</sup>	51.8
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		11.9	12.6	10.3	11.7
Updated Standards for All RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		6.5	9.3	4.8 <sup>~</sup>	6.7
<b>Number of Schools</b>		<b>282</b>	<b>263</b>	<b>257</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. One school did not provide adequate data on the number of servings selected for each menu item and was excluded from the weighted analysis. The methodology is fully described in Appendix D of this report.

Table G.7 (continued)

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between elementary and middle schools is significantly different from zero at the .05 level.

<sup>b</sup>Difference between middle and high schools is significantly different from zero at the .05 level.

<sup>c</sup>Difference between elementary and high schools is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.8. Proportion of Schools Meeting SMI Nutrition Standards and Related Nutrition Benchmarks, and Distribution of Schools Not Meeting Standards, School Breakfast Program Breakfasts Served**

Percent Meeting/Below/Above Standard	Standard/ Recommendation	Percentage of Schools			
		Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA				
Percent Meeting Standard		23.1 <sup>α</sup>	15.1	10.3 <sup>γ</sup>	19.0
Percent Below Standard					
>0 to ≤5%		7.8	2.4~	5.2	6.3
>5 to ≤10%		14.8	6.3	7.9	11.9
>10 to ≤15%		10.9	14.2	5.6	10.4
>15 to ≤20%		10.6	9.9	12.8	10.9
>20 to ≤25%		12.9	16.4	17.8	14.5
>25%		20.1	35.7	40.5	27.0
Protein	25% of 1989 RDA				
Percent Meeting Standard		99.0 <sup>α~</sup>	93.4 <sup>β</sup>	81.6 <sup>γ</sup>	94.4
Percent Below Standard					
>0 to ≤5%		0.0~	2.0~	6.9	1.8
>5 to ≤10%		0.0~	1.7~	3.1~	0.9~
>10 to ≤15%		0.5~	0.6~	0.4~	0.5~
>15 to ≤20%		0.0~	0.2~	2.7~	0.6~
>20 to ≤25%		0.0~	0.9~	1.4~	0.5~
>25%		0.4~	1.2~	4.0~	1.3~
Vitamin A <sup>a</sup>	25% of 1989 RDA				
Percent Meeting Standard		89.7 <sup>α</sup>	47.9	49.6 <sup>γ</sup>	73.9
Percent Below Standard					
>0 to ≤5%		2.7~	9.0	7.5	4.8
>5 to ≤10%		2.3~	8.3	7.2	4.4
>10 to ≤15%		0.7~	5.9	2.2~	2.0
>15 to ≤20%		1.7~	6.6	6.4	3.5
>20 to ≤25%		1.2~	3.3~	6.7	2.7
>25%		1.7~	18.9	20.2	8.6
Calcium	25% of 1989 RDA				
Percent Meeting Standard		98.6 <sup>α~</sup>	81.0	75.7 <sup>γ</sup>	90.7
Percent Below Standard					
>0 to ≤5%		0.7~	1.9~	4.9~	1.8
>5 to ≤10%		0.0~	3.9	4.2~	1.6~
>10 to ≤15%		0.0~	1.3~	2.5~	0.8~
>15 to ≤20%		0.3~	2.5~	2.0~	1.0~
>20 to ≤25%		0.0~	4.4~	2.5~	1.3~
>25%		0.4~	5.0~	8.1	2.8
Iron	25% of 1989 RDA				
Percent Meeting Standard		92.2 <sup>α</sup>	75.4	79.6 <sup>γ</sup>	86.6
Percent Below Standard					
>0 to ≤5%		4.2~	7.6	6.8	5.3
>5 to ≤10%		0.3~	3.5~	4.8~	1.8
>10 to ≤15%		1.7~	5.7	2.6~	2.6
>15 to ≤20%		0.0~	2.6~	1.5~	0.8~
>20 to ≤25%		0.5~	3.1~	0.9~	1.1~
>25%		1.1~	2.1~	3.9~	1.9~

Table G.8 (continued)

Percent Above/Below Standard	Standard/ Recommendation	Percentage of Schools			
		Elementary Schools	Middle Schools	High Schools	All Schools
<b>SMI Nutrition Standards</b>					
Percentage of Calories from Total Fat	≤ 30%				
Percent Meeting Standard		88.6 <sup>α</sup>	81.6	78.2 <sup>γ</sup>	85.2
Percent Above Standard					
>0 to ≤5%		5.0	6.5	5.6	5.4
>5 to ≤10%		2.5~	3.2~	6.4	3.4
>10 to ≤15%		1.6~	4.2~	2.9~	2.4
>15%		2.3~	4.5~	6.9	3.6~
Percentage of Calories from Saturated Fat	< 10%				
Percent Meeting Standard		78.4	74.6	67.6 <sup>γ</sup>	75.5
Percent Above Standard					
>0 to ≤5%		7.2	7.0	8.5	7.5
>5 to ≤10%		4.8	4.8~	9.7	5.8
>10 to ≤15%		1.6~	3.8~	4.7~	2.6
>15 to ≤20%		2.1~	2.6~	2.3~	2.2
>20%		5.9	7.4	7.3	6.5
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>				
Percent Meeting Standard		33.1 <sup>α</sup>	54.0	55.6 <sup>γ</sup>	41.5
Percent Above Standard		2.0~	4.5~	5.9	3.2~
Percent Below Standard					
>0 to ≤5%		10.6	9.6	9.2	10.1
>5 to ≤10%		11.4	8.1	9.3	10.4
>10 to ≤15%		12.9	5.7	7.4	10.5
>15 to ≤20%		9.9	8.0	2.2~	8.0
>20 to ≤25%		6.2	3.0~	3.5~	5.1
>25%		13.9	7.0	7.0	11.3
<b>Other Nutrition Benchmarks</b>					
Cholesterol	< 75 mg <sup>b,c</sup>				
Percent Meeting Standard		90.7 <sup>α</sup>	81.5	78.9 <sup>γ</sup>	86.6
Percent Above Standard					
>0 to ≤5%		1.9~	1.3~	1.5~	1.7
>5 to ≤10%		0.4~	4.5~	2.1~	1.5~
>10 to ≤15%		0.7~	3.2~	2.7~	0.6~
>15 to ≤20%		1.0~	2.1~	1.2~	1.3~
>20%		5.3	7.3	13.6	7.4
Sodium	< 575 mg <sup>b,c</sup>				
Percent Meeting Standard		52.6 <sup>α</sup>	36.6	35.9 <sup>γ</sup>	46.3
Percent Above Standard					
>0 to ≤5%		12.2 <sup>α</sup>	5.8	2.4 <sup>γ</sup> ~	9.1
>5 to ≤10%		7.1	3.6~	6.0	6.2
>10 to ≤15%		1.9~	8.3	3.4~	3.3
>15 to ≤20%		5.1	6.4	4.7~	5.2
>20 to ≤25%		2.1~	5.0	5.0~	3.2
>25 to ≤50%		12.2	17.1	21.4	15.0
>50%		6.9	17.2	21.2	11.7

Table G.8 (continued)

Percent Above/Below Standard	Standard/ Recommendation	Percentage of Schools			
		Elementary Schools	Middle Schools	High Schools	All Schools
<b>Other Nutrition Benchmarks</b>					
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>				
Percent Meeting Standard		0.0~	0.0~	0.0~	0.0~
Percent Below Standard					
>0 to ≤25%		3.6~	1.9~	2.7~	3.0~
>25 to ≤50%		28.1	19.2	23.4	25.5
>50%		68.2	78.8	73.9	71.3
<b>Number of Schools</b>		<b>282</b>	<b>263</b>	<b>257</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children

<sup>a</sup>Difference between elementary and middle schools is significantly different from zero at the .05 level.

<sup>b</sup>Difference between middle and high schools is significantly different from zero at the .05 level.

<sup>c</sup>Difference between elementary and high schools is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

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**Table G.9. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Offered to Students in Elementary Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	458	6.5	342	369	403	445	491	570	600
<b>Macronutrients</b>									
Total fat (g)	11	0.3	6	7	9	11	13	16	18
Saturated fat (g)	4	0.1	2	2	3	4	5	6	7
Monounsaturated fat (g)	4	0.1	2	2	3	4	5	6	8
Polyunsaturated fat (g)	2	0.1	1	1	2	2	3	4	4
Linoleic acid (g)	2	0.1	1	1	1	2	2	3	4
Alpha-linolenic acid (g)	0.2	0.01	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Carbohydrate (g)	75	1.0	55	58	65	73	81	94	100
Protein (g)	16	0.2	12	13	14	15	17	19	20
<b>Vitamins</b>									
Vitamin A (mcg RE)	278	5.2	188	200	230	262	311	367	402
Vitamin A (mcg RAE)	279	5.4	185	197	229	264	316	374	404
Vitamin C (mg)	32	0.8	16	19	25	32	38	47	52
Vitamin E (mg AT)	1.0	0.05	0.4	0.5	0.6	0.8	1.1	1.8	2.3
Vitamin B <sub>6</sub> (mg)	0.6	0.02	0.3	0.3	0.4	0.5	0.7	0.8	0.9
Vitamin B <sub>12</sub> (mcg)	2.2	0.04	1.4	1.5	1.8	2.1	2.4	2.9	3.2
Folate (mcg)	127	4.0	66	72	91	119	149	181	219
Folate (mcg DFE)	188	6.7	88	96	132	175	223	269	336
Niacin (mg)	5	0.2	3	3	4	5	6	8	9
Riboflavin (mg)	0.9	0.01	0.7	0.7	0.8	0.9	1.0	1.1	1.2
Thiamin (mg)	0.5	0.02	0.3	0.3	0.4	0.5	0.6	0.7	0.8
<b>Minerals</b>									
Calcium (mg)	428	4.7	355	367	389	415	457	500	527
Iron (mg)	5.0	0.14	2.3	2.8	3.7	4.8	5.8	7.5	8.5
Magnesium (mg)	66	1.1	51	53	58	62	70	81	87
Phosphorus (mg)	403	4.8	326	342	370	394	420	467	518
Potassium (mg)	726	6.0	619	634	670	712	767	826	883
Sodium (mg)	549	12.0	339	399	454	524	599	716	844
Zinc (mg)	3.3	0.08	2.0	2.1	2.6	3.2	3.7	4.6	5.1
<b>Other Components</b>									
Cholesterol (mg)	40	1.7	16	20	27	35	46	62	85
Dietary fiber (g)	3	0.1	2	2	2	3	3	4	5



Table G.9 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Percentage of Calories from:									
Total fat	22.2	0.34	14.1	16.0	18.9	22.2	25.2	28.2	30.4
Saturated fat	8.2	0.16	4.8	5.5	6.6	7.9	9.5	10.6	11.7
Monosaturated fat	7.9	0.16	4.2	5.1	6.4	7.6	9.2	10.9	12.0
Polyunsaturated fat	4.4	0.10	2.3	2.5	3.2	4.3	5.1	6.2	7.2
Linoleic acid	3.9	0.09	2.1	2.3	2.9	3.8	4.6	5.7	6.6
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.2	0.3	0.5	0.6	0.6
Carbohydrate	65.5	0.39	55.5	58.0	62.3	65.8	69.1	72.3	74.8
Protein	14.0	0.12	11.5	12.1	12.8	14.0	15.0	16.1	17.1
<b>Number of Schools</b>	<b>282</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.10. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Offered to Students in Middle Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	509	9.2	373	400	436	486	543	634	701
<b>Macronutrients</b>									
Total fat (g)	13	0.4	7	8	10	13	15	19	24
Saturated fat (g)	5	0.1	3	3	4	4	5	7	8
Monounsaturated fat (g)	5	0.2	2	3	4	5	6	8	10
Polyunsaturated fat (g)	3	0.1	1	1	2	2	3	4	5
Linoleic acid (g)	2	0.1	1	1	2	2	3	3	4
Alpha-linolenic acid (g)	0.2	0.01	0.1	0.1	0.1	0.2	0.3	0.3	0.4
Carbohydrate (g)	82	1.4	60	62	72	79	88	102	116
Protein (g)	17	0.3	13	14	15	16	18	21	24
<b>Vitamins</b>									
Vitamin A (mcg RE)	279	4.6	204	215	235	271	305	357	385
Vitamin A (mcg RAE)	283	4.8	203	215	235	271	310	363	408
Vitamin C (mg)	35	1.2	15	20	27	32	42	49	60
Vitamin E (mg AT)	1.2	0.05	0.5	0.6	0.7	1.0	1.3	2.0	2.7
Vitamin B <sub>6</sub> (mg)	0.6	0.02	0.3	0.4	0.4	0.5	0.6	0.8	0.9
Vitamin B <sub>12</sub> (mcg)	2.1	0.05	1.5	1.5	1.7	2.1	2.4	2.7	2.9
Folate (mcg)	131	4.3	68	81	96	123	152	188	205
Folate (mcg DFE)	191	6.9	91	107	135	176	230	284	309
Niacin (mg)	6	0.2	3	3	4	5	6	7	9
Riboflavin (mg)	0.9	0.01	0.7	0.8	0.8	0.9	1.0	1.1	1.2
Thiamin (mg)	0.6	0.02	0.3	0.4	0.5	0.5	0.6	0.7	0.8
<b>Minerals</b>									
Calcium (mg)	443	6.1	359	373	394	427	469	524	557
Iron (mg)	5.1	0.15	2.9	3.3	3.8	4.8	6.0	7.0	8.1
Magnesium (mg)	68	1.1	53	55	59	66	72	83	89
Phosphorus (mg)	429	6.2	351	361	379	408	449	516	567
Potassium (mg)	765	8.3	642	662	702	740	812	866	966
Sodium (mg)	628	17.8	399	430	505	570	662	872	1,095
Zinc (mg)	3.3	0.09	2.0	2.2	2.6	3.1	3.9	4.4	5.5
<b>Other Components</b>									
Cholesterol (mg)	45	1.9	17	20	27	40	55	72	87
Dietary fiber (g)	3	0.1	1	2	2	3	4	5	5

Table G.10 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Percentage of Calories from:</b>									
Total fat	23.0	0.39	15.2	17.4	19.6	23.1	26.2	28.9	30.2
Saturated fat	8.3	0.16	5.3	6.0	6.8	8.2	9.4	10.4	11.3
Monosaturated fat	8.5	0.17	5.1	5.9	6.8	8.4	9.9	11.3	12.5
Polyunsaturated fat	4.4	0.11	2.3	2.8	3.4	4.3	5.4	6.1	6.5
Linoleic acid	3.9	0.10	2.0	2.5	3.0	3.9	4.9	5.4	5.9
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.3	0.4	0.6	0.6
Carbohydrate	64.9	0.43	56.5	57.8	61.1	65.7	68.6	71.1	73.5
Protein	13.7	0.14	10.7	11.5	12.4	13.6	14.8	16.2	16.8
<b>Number of Schools</b>	<b>264</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.11. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Offered to Students in High Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	520	11.1	372	402	438	495	563	666	721
<b>Macronutrients</b>									
Total fat (g)	14	0.4	7	8	10	13	16	20	26
Saturated fat (g)	5	0.2	3	3	4	5	6	7	9
Monounsaturated fat (g)	5	0.2	2	3	4	5	6	8	10
Polyunsaturated fat (g)	3	0.1	1	1	2	2	3	4	5
Linoleic acid (g)	2	0.1	1	1	2	2	3	4	5
Alpha-linolenic acid (g)	0.2	0.01	0.1	0.1	0.1	0.2	0.3	0.4	0.4
Carbohydrate (g)	83	1.7	59	63	72	80	92	104	116
Protein (g)	17	0.4	13	14	15	16	19	22	25
<b>Vitamins</b>									
Vitamin A (mcg RE)	282	6.1	180	202	237	267	315	369	434
Vitamin A (mcg RAE)	287	6.1	184	201	240	273	324	385	423
Vitamin C (mg)	36	1.5	16	19	27	33	42	52	68
Vitamin E (mg AT)	1.2	0.06	0.5	0.6	0.7	1.0	1.4	2.0	2.6
Vitamin B <sub>6</sub> (mg)	0.6	0.02	0.3	0.4	0.4	0.5	0.6	0.8	0.9
Vitamin B <sub>12</sub> (mcg)	2.1	0.05	1.3	1.5	1.7	2.0	2.3	2.8	3.2
Folate (mcg)	134	4.9	68	78	99	124	154	197	250
Folate (mcg DFE)	195	7.7	91	104	139	178	233	300	382
Niacin (mg)	6	0.2	3	3	4	5	6	8	10
Riboflavin (mg)	0.9	0.02	0.7	0.7	0.8	0.9	1.0	1.1	1.3
Thiamin (mg)	0.6	0.02	0.4	0.4	0.5	0.5	0.6	0.8	0.9
<b>Minerals</b>									
Calcium (mg)	439	9.0	343	368	392	419	466	537	589
Iron (mg)	5.2	0.17	2.7	3.0	3.9	4.8	5.9	8.0	9.1
Magnesium (mg)	70	1.4	53	56	60	66	76	89	95
Phosphorus (mg)	430	8.6	326	354	384	412	461	510	548
Potassium (mg)	775	12.7	615	666	703	750	799	919	1,029
Sodium (mg)	644	21.2	398	440	512	582	709	879	1,052
Zinc (mg)	3.3	0.10	2.1	2.2	2.5	3.1	3.8	4.8	5.6
<b>Other Components</b>									
Cholesterol (mg)	46	2.3	16	20	31	40	55	83	99
Dietary fiber (g)	3	0.1	2	2	2	3	4	5	6

Table G.11 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Percentage of Calories from:</b>									
Total fat	23.6	0.40	15.0	17.0	20.1	23.6	26.8	30.1	31.5
Saturated fat	8.4	0.16	5.3	5.5	7.1	8.3	9.8	11.2	11.8
Monosaturated fat	8.8	0.19	4.8	5.9	7.1	8.6	10.1	12.1	13.2
Polyunsaturated fat	4.6	0.11	2.3	2.7	3.7	4.4	5.6	6.3	6.7
Linoleic acid	4.1	0.10	2.0	2.5	3.2	3.9	5.0	5.7	6.1
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.4	0.5	0.6	0.6
Carbohydrate	64.5	0.47	54.9	56.5	60.5	64.9	68.6	72.3	73.8
Protein	13.5	0.15	10.5	11.0	12.2	13.5	14.6	16.1	16.5
<b>Number of Schools</b>	<b>257</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.12. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Offered to Students in All Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	480	6.2	351	376	412	461	512	595	665
<b>Macronutrients</b>									
Total fat (g)	12	0.3	6	7	9	12	14	18	21
Saturated fat (g)	4	0.1	2	3	3	4	5	6	7
Monounsaturated fat (g)	4	0.1	2	2	3	4	5	7	8
Polyunsaturated fat (g)	2	0.1	1	1	2	2	3	4	4
Linoleic acid (g)	2	0.0	1	1	1	2	3	4	4
Alpha-linolenic acid (g)	0.2	0.00	0.1	0.1	0.1	0.2	0.3	0.3	0.4
Carbohydrate (g)	78	1.0	56	60	67	75	85	97	107
Protein (g)	16	0.2	13	13	15	16	17	20	22
<b>Vitamins</b>									
Vitamin A (mcg RE)	279	4.3	188	203	233	265	311	367	409
Vitamin A (mcg RAE)	282	4.4	187	203	233	268	320	374	414
Vitamin C (mg)	34	0.8	16	19	26	32	39	48	54
Vitamin E (mg AT)	1.1	0.04	0.5	0.5	0.7	0.9	1.2	1.8	2.5
Vitamin B <sub>6</sub> (mg)	0.6	0.01	0.3	0.4	0.4	0.5	0.7	0.8	0.9
Vitamin B <sub>12</sub> (mcg)	2.1	0.04	1.4	1.5	1.7	2.1	2.4	2.9	3.2
Folate (mcg)	129	3.6	66	75	95	121	150	186	221
Folate (mcg DFE)	190	5.9	88	99	134	176	228	281	341
Niacin (mg)	5	0.2	3	3	4	5	6	8	9
Riboflavin (mg)	0.9	0.01	0.7	0.7	0.8	0.9	1.0	1.1	1.3
Thiamin (mg)	0.6	0.02	0.3	0.4	0.4	0.5	0.6	0.7	0.8
<b>Minerals</b>									
Calcium (mg)	433	4.5	354	368	391	418	459	506	549
Iron (mg)	5.1	0.12	2.6	2.9	3.7	4.8	5.8	7.5	8.5
Magnesium (mg)	67	0.9	52	54	58	64	72	82	90
Phosphorus (mg)	413	4.5	329	347	375	400	432	487	530
Potassium (mg)	743	5.9	620	641	681	726	784	857	922
Sodium (mg)	583	11.6	365	408	467	545	628	804	939
Zinc (mg)	3.3	0.07	2.0	2.2	2.6	3.1	3.8	4.6	5.5
<b>Other Components</b>									
Cholesterol (mg)	42	1.5	16	20	28	36	49	71	89
Dietary fiber (g)	3	0.1	2	2	2	3	4	5	5

Table G.12 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Percentage of Calories from:</b>									
Total fat	22.6	0.27	14.6	16.6	19.3	22.5	25.9	29.0	30.8
Saturated fat	8.2	0.13	5.0	5.5	6.8	8.1	9.5	10.8	11.6
Monosaturated fat	8.2	0.13	4.6	5.2	6.6	7.9	9.6	11.3	12.4
Polyunsaturated fat	4.4	0.08	2.3	2.6	3.4	4.3	5.3	6.2	6.9
Linoleic acid	4.0	0.07	2.1	2.3	3.0	3.9	4.8	5.7	6.3
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.3	0.5	0.6	0.6
Carbohydrate	65.2	0.32	55.5	58.0	61.7	65.5	68.9	72.3	74.4
Protein	13.8	0.10	10.7	11.7	12.6	13.8	14.9	16.1	16.8
<b>Number of Schools</b>	<b>803</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.13. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Served to Students in Elementary Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	434	5.7	310	337	381	431	481	527	570
<b>Macronutrients</b>									
Total fat (g)	12	0.2	7	7	9	11	13	17	18
Saturated fat (g)	4	0.1	2	3	3	4	5	6	7
Monounsaturated fat (g)	4	0.1	2	2	3	4	5	7	8
Polyunsaturated fat (g)	2	0.1	1	1	2	2	3	3	4
Linoleic acid (g)	2	0.0	1	1	1	2	2	3	3
Alpha-linolenic acid (g)	0.2	0.00	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Carbohydrate (g)	69	1.0	46	52	60	68	77	86	91
Protein (g)	15	0.2	10	11	13	15	17	18	20
<b>Vitamins</b>									
Vitamin A (mcg RE)	245	5.2	148	160	196	232	284	346	387
Vitamin A (mcg RAE)	248	5.4	145	162	196	237	289	349	384
Vitamin C (mg)	28	0.8	11	14	21	28	35	45	51
Vitamin E (mg AT)	0.9	0.03	0.4	0.5	0.6	0.9	1.1	1.4	1.7
Vitamin B <sub>6</sub> (mg)	0.5	0.01	0.3	0.3	0.4	0.5	0.6	0.8	0.9
Vitamin B <sub>12</sub> (mcg)	1.9	0.04	1.0	1.2	1.5	1.8	2.1	2.6	2.8
Folate (mcg)	111	2.9	62	68	80	103	132	170	189
Folate (mcg DFE)	163	4.7	80	92	112	148	196	257	295
Niacin (mg)	5	0.1	3	3	4	5	6	7	8
Riboflavin (mg)	0.8	0.01	0.6	0.6	0.7	0.8	0.9	1.1	1.1
Thiamin (mg)	0.5	0.01	0.3	0.3	0.4	0.5	0.5	0.7	0.8
<b>Minerals</b>									
Calcium (mg)	382	6.0	242	274	338	387	425	468	499
Iron (mg)	4.5	0.11	2.4	2.7	3.3	4.2	5.4	7.0	7.8
Magnesium (mg)	59	0.9	40	44	51	58	67	74	82
Phosphorus (mg)	378	5.7	241	283	327	376	419	470	492
Potassium (mg)	660	9.4	456	503	575	670	740	791	846
Sodium (mg)	569	11.1	342	372	449	563	664	807	875
Zinc (mg)	3.0	0.07	1.7	1.9	2.2	2.8	3.5	4.3	5.2
<b>Other Components</b>									
Cholesterol (mg)	44	1.6	15	19	27	40	53	73	92
Dietary fiber (g)	3	0.1	1	2	2	3	3	4	5



Table G.13 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Percentage of Calories from:									
Total fat	23.8	0.33	16.3	18.1	20.9	23.5	26.8	30.5	31.9
Saturated fat	8.6	0.15	5.3	6.1	7.1	8.4	9.7	10.9	12.2
Monosaturated fat	8.7	0.16	5.0	5.8	7.2	8.5	9.9	11.8	13.7
Polyunsaturated fat	4.6	0.09	2.6	2.9	3.6	4.4	5.4	6.2	6.8
Linoleic acid	4.1	0.08	2.3	2.6	3.2	3.9	4.9	5.6	6.0
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.4	0.5	0.6	0.6
Carbohydrate	63.8	0.41	53.9	56.3	60.6	64.2	67.8	70.7	72.7
Protein	13.9	0.12	11.1	11.9	12.8	13.6	14.9	16.1	16.6
<b>Number of Schools</b>	<b>282</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.14. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts *Served* to Students in Middle Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Calories</b>	503	20.0	354	379	423	465	524	602	661
<b>Macronutrients</b>									
Total fat (g)	15	0.7	8	9	12	14	16	21	23
Saturated fat (g)	5	0.2	3	3	4	5	6	7	8
Monounsaturated fat (g)	6	0.2	3	3	4	5	6	8	10
Polyunsaturated fat (g)	3	0.3	1	2	2	2	3	4	4
Linoleic acid (g)	3	0.3	1	1	2	2	3	3	4
Alpha-linolenic acid (g)	0.2	0.02	0.1	0.1	0.1	0.2	0.3	0.3	0.4
Carbohydrate (g)	77	3.0	53	58	64	71	82	96	107
Protein (g)	17	0.6	11	12	14	16	18	21	23
<b>Vitamins</b>									
Vitamin A (mcg RE)	241	10.8	119	137	184	218	272	331	379
Vitamin A (mcg RAE)	244	10.0	121	154	187	225	275	329	388
Vitamin C (mg)	32	1.4	11	15	22	29	39	47	54
Vitamin E (mg AT)	1.2	0.09	0.5	0.6	0.7	1.0	1.3	1.6	1.9
Vitamin B <sub>6</sub> (mg)	0.5	0.02	0.3	0.3	0.3	0.4	0.5	0.7	0.8
Vitamin B <sub>12</sub> (mcg)	1.7	0.07	0.9	1.0	1.2	1.6	2.0	2.4	2.9
Folate (mcg)	111	4.9	61	64	78	99	126	161	181
Folate (mcg DFE)	158	7.3	80	87	107	139	181	233	277
Niacin (mg)	5	0.2	3	3	4	5	6	7	9
Riboflavin (mg)	0.8	0.03	0.5	0.6	0.7	0.8	0.9	1.1	1.1
Thiamin (mg)	0.5	0.02	0.3	0.4	0.4	0.5	0.6	0.7	0.8
<b>Minerals</b>									
Calcium (mg)	390	15.8	223	242	308	367	426	501	555
Iron (mg)	4.5	0.16	2.7	2.9	3.4	4.2	5.1	6.5	7.2
Magnesium (mg)	63	2.7	41	44	49	58	67	79	85
Phosphorus (mg)	414	14.8	242	275	333	390	463	530	572
Potassium (mg)	706	25.7	446	493	578	677	766	862	927
Sodium (mg)	687	23.5	404	438	508	645	794	956	1,095
Zinc (mg)	2.9	0.11	1.6	1.8	2.1	2.5	3.3	4.3	5.0
<b>Other Components</b>									
Cholesterol (mg)	54	3.4	16	21	30	43	70	86	116
Dietary fiber (g)	3	0.2	2	2	2	3	3	4	5

Table G.14 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Percentage of Calories from:</b>									
Total fat	26.0	0.40	17.2	19.9	22.9	26.2	29.0	31.9	34.3
Saturated fat	8.9	0.17	5.9	6.6	7.3	8.9	10.1	11.5	12.2
Monosaturated fat	10.1	0.21	6.2	6.8	8.2	9.8	11.5	13.7	15.0
Polyunsaturated fat	4.9	0.11	2.9	3.3	3.9	4.6	5.7	6.8	7.3
Linoleic acid	4.4	0.10	2.5	2.9	3.5	4.2	5.1	6.1	6.5
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate	61.7	0.45	51.3	54.1	58.0	61.2	66.2	68.7	71.1
Protein	13.5	0.15	10.2	11.1	12.3	13.4	14.8	16.0	16.9
<b>Number of Schools</b>	<b>263</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.15. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Served to Students in High Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	504	9.1	353	377	426	492	558	634	722
<b>Macronutrients</b>									
Total fat (g)	15	0.4	8	9	12	14	18	21	24
Saturated fat (g)	5	0.1	3	3	4	5	6	7	8
Monounsaturated fat (g)	6	0.2	3	3	4	5	7	9	10
Polyunsaturated fat (g)	3	0.1	1	2	2	3	3	4	5
Linoleic acid (g)	3	0.1	1	1	2	2	3	4	5
Alpha-linolenic acid (g)	0.2	0.01	0.1	0.1	0.2	0.2	0.3	0.4	0.5
Carbohydrate (g)	77	1.4	52	58	65	75	85	97	105
Protein (g)	17	0.4	10	12	14	16	19	22	25
<b>Vitamins</b>									
Vitamin A (mcg RE)	234	6.0	120	135	178	223	268	353	386
Vitamin A (mcg RAE)	237	6.0	118	143	181	226	274	356	398
Vitamin C (mg)	33	1.3	10	16	22	32	42	53	59
Vitamin E (mg AT)	1.1	0.03	0.5	0.6	0.8	1.1	1.4	1.7	2.0
Vitamin B <sub>6</sub> (mg)	0.5	0.01	0.3	0.3	0.3	0.4	0.5	0.7	0.8
Vitamin B <sub>12</sub> (mcg)	1.6	0.05	0.8	0.9	1.2	1.5	2.0	2.5	2.8
Folate (mcg)	112	3.6	61	67	83	104	132	168	198
Folate (mcg DFE)	160	5.9	78	90	115	143	188	256	304
Niacin (mg)	5	0.2	3	3	4	5	6	8	9
Riboflavin (mg)	0.8	0.02	0.5	0.5	0.7	0.8	0.9	1.1	1.2
Thiamin (mg)	0.5	0.01	0.3	0.4	0.4	0.5	0.6	0.8	0.8
<b>Minerals</b>									
Calcium (mg)	373	7.9	172	233	302	375	423	502	568
Iron (mg)	4.6	0.13	2.7	3.1	3.5	4.2	5.1	6.5	7.7
Magnesium (mg)	62	1.1	38	43	51	60	71	80	88
Phosphorus (mg)	402	8.5	209	268	329	397	457	527	567
Potassium (mg)	699	12.8	416	478	579	698	787	899	982
Sodium (mg)	703	19.9	408	438	522	679	844	1,004	1,119
Zinc (mg)	2.9	0.09	1.5	1.7	2.1	2.6	3.4	4.4	5.5
<b>Other Components</b>									
Cholesterol (mg)	56	2.9	19	22	31	47	65	97	126
Dietary fiber (g)	3	0.1	2	2	2	3	3	4	6

Table G.15 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Percentage of Calories from:</b>									
Total fat	26.6	0.40	17.3	19.8	23.0	26.6	29.5	33.0	35.8
Saturated fat	9.1	0.16	6.0	6.7	7.8	9.1	10.4	11.3	13.0
Monosaturated fat	10.3	0.21	5.6	6.6	8.4	10.1	12.0	13.9	15.3
Polyunsaturated fat	5.0	0.11	2.8	3.2	4.0	4.8	5.9	6.8	7.4
Linoleic acid	4.4	0.10	2.3	2.9	3.6	4.3	5.3	6.2	6.6
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.4	0.5	0.6	0.8
Carbohydrate	61.4	0.50	49.3	52.9	57.6	61.5	65.9	68.6	70.0
Protein	13.3	0.17	9.6	10.3	12.0	13.3	14.8	16.1	16.7
<b>Number of Schools</b>	<b>257</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.16. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts *Served* to Students in All Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	461	5.8	316	352	394	447	509	575	617
<b>Macronutrients</b>									
Total fat (g)	13	0.2	7	8	10	12	15	18	21
Saturated fat (g)	5	0.1	2	3	3	4	5	7	8
Monounsaturated fat (g)	5	0.1	2	3	3	5	6	8	9
Polyunsaturated fat (g)	2	0.1	1	1	2	2	3	4	4
Linoleic acid (g)	2	0.1	1	1	2	2	3	3	4
Alpha-linolenic acid (g)	0.2	0.01	0.1	0.1	0.1	0.2	0.2	0.3	0.4
Carbohydrate (g)	72	0.9	49	55	63	70	80	90	98
Protein (g)	16	0.2	10	11	13	15	17	20	22
<b>Vitamins</b>									
Vitamin A (mcg RE)	242	4.2	133	156	189	229	277	346	387
Vitamin A (mcg RAE)	245	4.2	134	157	192	233	285	348	388
Vitamin C (mg)	30	0.7	11	15	21	28	37	47	54
Vitamin E (mg AT)	1.0	0.03	0.5	0.5	0.7	0.9	1.2	1.5	1.8
Vitamin B <sub>6</sub> (mg)	0.5	0.01	0.3	0.3	0.4	0.4	0.6	0.7	0.9
Vitamin B <sub>12</sub> (mcg)	1.8	0.03	0.9	1.0	1.4	1.7	2.1	2.6	2.9
Folate (mcg)	112	2.3	61	67	80	103	131	170	195
Folate (mcg DFE)	162	3.8	80	91	112	147	190	255	295
Niacin (mg)	5	0.1	3	3	4	5	6	7	9
Riboflavin (mg)	0.8	0.01	0.5	0.6	0.7	0.8	0.9	1.1	1.2
Thiamin (mg)	0.5	0.01	0.3	0.3	0.4	0.5	0.6	0.7	0.8
<b>Minerals</b>									
Calcium (mg)	382	5.3	227	262	327	384	426	483	513
Iron (mg)	4.5	0.09	2.5	2.9	3.4	4.2	5.3	6.7	7.7
Magnesium (mg)	61	0.8	40	44	51	59	67	78	83
Phosphorus (mg)	389	5.2	240	277	329	383	431	494	528
Potassium (mg)	676	8.4	452	501	576	673	750	831	894
Sodium (mg)	618	10.6	353	388	469	584	727	878	1,004
Zinc (mg)	2.9	0.06	1.6	1.8	2.2	2.7	3.4	4.4	5.2
<b>Other Components</b>									
Cholesterol (mg)	48	1.7	16	20	28	42	59	83	97
Dietary fiber (g)	3	0.1	2	2	2	3	3	4	5

Table G.16 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Percentage of Calories from:									
Total fat	24.8	0.27	16.6	18.6	21.3	24.3	28.2	31.4	33.8
Saturated fat	8.7	0.12	5.5	6.3	7.2	8.6	9.9	11.3	12.5
Monosaturated fat	9.3	0.14	5.2	6.1	7.5	9.0	10.8	12.9	14.3
Polyunsaturated fat	4.7	0.07	2.6	3.1	3.7	4.5	5.5	6.6	7.2
Linoleic acid	4.2	0.07	2.3	2.7	3.3	4.1	5.0	5.9	6.4
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate	63.0	0.33	52.3	55.3	59.2	63.7	67.2	70.0	72.4
Protein	13.7	0.11	10.5	11.4	12.5	13.5	14.8	16.1	16.7
<b>Number of Schools</b>	<b>802</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.17. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts Offered to Students in Elementary Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>		Percentiles per 1,000 Calories						
			Ages 4 – 8 Males/ Females	Ages 9 – 13 Males/ Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>											
Total fat (g)	25	0.4	n.a.	n.a.	16	18	21	25	28	31	34
Saturated fat (g)	9	0.2	n.a.	n.a.	5	6	7	9	11	12	13
Monounsaturated fat (g)	9	0.2	n.a.	n.a.	5	6	7	8	10	12	13
Polyunsaturated fat (g)	5	0.1	n.a.	n.a.	3	3	4	5	6	7	8
Linoleic acid (g) <sup>b</sup>	4	0.1	6	6	2	3	3	4	5	6	7
Alpha-linolenic acid (g) <sup>b</sup>	0.4	0.01	0.5	0.6	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate (g) <sup>c</sup>	164	1.0	76	68	139	145	156	164	173	181	187
Protein (g) <sup>c</sup>	35	0.3	11	18	29	30	32	35	38	40	43
<b>Vitamins</b>											
Vitamin A (mcg RE) <sup>c</sup>	616	10.3	n.a.	n.a.	381	445	517	599	689	808	863
Vitamin A (mcg RAE) <sup>c</sup>	619	10.3	235	316	374	439	514	610	700	828	861
Vitamin C (mg) <sup>c</sup>	72	1.8	15	24	34	42	54	71	85	110	116
Vitamin E (mg AT) <sup>c</sup>	2.2	0.09	4	6	1.1	1.3	1.5	1.8	2.3	3.4	4.3
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	1.3	0.03	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.8	2.0
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	4.8	0.09	0.7	0.9	2.9	3.3	4.0	4.7	5.6	6.3	6.9
Folate (mcg) <sup>c</sup>	278	6.7	n.a.	n.a.	157	167	213	262	331	392	478
Folate (mcg DFE) <sup>c</sup>	410	11.3	118	158	198	225	307	389	483	609	733
Niacin (mg) <sup>c</sup>	12	0.3	5	6	6	7	9	11	14	16	18
Riboflavin (mg) <sup>c</sup>	2.0	0.02	0.4	0.5	1.5	1.6	1.8	2.0	2.2	2.5	2.6
Thiamin (mg) <sup>c</sup>	1.2	0.02	0.4	0.5	0.8	0.8	0.9	1.1	1.3	1.5	1.7
<b>Minerals</b>											
Calcium (mg) <sup>c</sup>	956	11.2	588	684	723	749	843	945	1,046	1,150	1,229
Iron (mg) <sup>c</sup>	10.9	0.26	6	4	5.4	6.4	8.1	10.5	12.8	16.2	17.6
Magnesium (mg) <sup>c</sup>	146	1.9	76	126	110	116	128	142	161	177	191
Phosphorus (mg) <sup>c</sup>	892	7.5	294	658	718	759	819	887	960	1,024	1,078
Potassium (mg) <sup>b</sup>	1,620	15.3	2235	2368	1,281	1,379	1,455	1,600	1,754	1,890	1,971
Sodium (mg) <sup>d</sup>	1,195	15.5	< 1118	< 1158	873	915	1,048	1,153	1,329	1,483	1,576
Zinc (mg) <sup>c</sup>	7.3	0.15	3	4	4.4	4.9	5.9	7.0	8.4	10.4	11.2
<b>Other Components</b>											
Cholesterol (mg) <sup>e</sup>	87	2.7	< 176	< 158	37	47	62	78	104	131	159
Dietary fiber (g) <sup>e</sup>	7	0.1	14	14	4	4	5	6	8	9	11
<b>Number of Schools</b>	<b>282</b>										

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.



Table G.17 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 1,700 calorie diet for 4–8 year olds and a 1,900 calorie diet for 9–13 year olds. These calorie levels represent weighted averages for each age group, assuming an active level of physical activity for 4–8 year olds and a moderately active level of physical activity for 9–13 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.18. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts Offered to Students in Middle Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>	Percentiles per 1,000 Calories						
			Ages 9 - 13 Males/Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>										
Total fat (g)	26	0.4	n.a.	17	19	22	26	29	32	34
Saturated fat (g)	9	0.2	n.a.	6	7	8	9	10	12	13
Monounsaturated fat (g)	9	0.2	n.a.	6	7	8	9	11	13	14
Polyunsaturated fat (g)	5	0.1	n.a.	3	3	4	5	6	7	7
Linoleic acid (g) <sup>b</sup>	4	0.1	6	2	3	3	4	5	6	7
Alpha-linolenic acid (g) <sup>b</sup>	0.4	0.01	0.6	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate (g) <sup>c</sup>	162	1.1	68	141	145	153	164	171	178	184
Protein (g) <sup>c</sup>	34	0.3	18	27	29	31	34	37	41	42
<b>Vitamins</b>										
Vitamin A (mcg RE) <sup>c</sup>	561	8.8	n.a.	387	409	473	546	649	713	748
Vitamin A (mcg RAE) <sup>c</sup>	569	9.3	316	390	417	471	555	663	722	760
Vitamin C (mg) <sup>c</sup>	70	2.1	24	30	39	53	66	85	107	111
Vitamin E (mg AT) <sup>c</sup>	2.3	0.09	6	1.2	1.3	1.6	1.9	2.5	3.4	4.5
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	1.1	0.03	0.5	0.7	0.7	0.9	1.1	1.3	1.6	1.9
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	4.3	0.09	0.9	2.6	3.0	3.4	4.1	5.0	5.7	6.5
Folate (mcg) <sup>c</sup>	258	6.6	n.a.	148	164	200	245	309	368	387
Folate (mcg DFE) <sup>c</sup>	375	10.9	158	195	219	280	353	466	553	594
Niacin (mg) <sup>c</sup>	11	0.2	6	7	8	9	10	12	15	15
Riboflavin (mg) <sup>c</sup>	1.9	0.03	0.5	1.4	1.5	1.7	1.8	2.1	2.2	2.4
Thiamin (mg) <sup>c</sup>	1.1	0.02	0.5	0.8	0.8	0.9	1.1	1.3	1.4	1.5
<b>Minerals</b>										
Calcium (mg) <sup>c</sup>	894	12.6	684	654	699	777	887	998	1,092	1,134
Iron (mg) <sup>c</sup>	10.1	0.23	4	6.0	6.7	7.8	9.6	11.7	13.8	15.1
Magnesium (mg) <sup>c</sup>	136	1.8	126	98	110	121	136	150	166	171
Phosphorus (mg) <sup>c</sup>	857	8.9	658	678	727	768	849	939	986	1,084
Potassium (mg) <sup>b</sup>	1,543	19.4	2368	1,182	1,252	1,370	1,531	1,690	1,864	1,954
Sodium (mg) <sup>d</sup>	1,221	17.4	< 1158	911	971	1,064	1,183	1,328	1,575	1,648
Zinc (mg) <sup>c</sup>	6.6	0.18	4	4.0	4.3	5.2	6.4	7.9	8.9	9.8
<b>Other Components</b>										
Cholesterol (mg) <sup>e</sup>	87	3.3	< 158	39	42	58	77	110	134	161
Dietary fiber (g) <sup>e</sup>	6	0.1	14	3	4	5	6	8	9	11
<b>Number of Schools</b>	<b>264</b>									

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Table G.18 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 1,900 calorie diet for 9–13 year olds. These calorie levels represent weighted averages for each age group, assuming a moderately active level of physical activity for 9–13 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.19. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts Offered to Students in High Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>		Percentiles per 1,000 Calories						
			Ages 14 - 18 Males	Ages 14 - 18 Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>											
Total fat (g)	26	0.4	n.a.	n.a.	17	19	22	26	30	33	35
Saturated fat (g)	9	0.2	n.a.	n.a.	6	6	8	9	11	12	13
Monounsaturated fat (g)	10	0.2	n.a.	n.a.	5	7	8	10	11	13	15
Polyunsaturated fat (g)	5	0.1	n.a.	n.a.	3	3	4	5	6	7	7
Linoleic acid (g) <sup>b</sup>	5	0.1	6	6	2	3	4	4	6	6	7
Alpha-linolenic acid (g) <sup>b</sup>	0.4	0.01	0.6	0.6	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate (g) <sup>c</sup>	161	1.2	50	65	137	141	151	162	172	181	184
Protein (g) <sup>c</sup>	34	0.4	20	23	26	27	31	34	36	40	41
<b>Vitamins</b>											
Vitamin A (mcg RE) <sup>c</sup>	555	10.3	n.a.	n.a.	344	392	468	545	620	738	792
Vitamin A (mcg RAE) <sup>c</sup>	565	10.6	346	350	368	402	471	547	629	752	830
Vitamin C (mg) <sup>c</sup>	70	2.2	29	33	33	39	52	67	84	100	115
Vitamin E (mg AT) <sup>c</sup>	2.2	0.07	6	8	1.1	1.3	1.6	2.0	2.6	3.5	4.3
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	1.1	0.03	0.5	0.6	0.6	0.7	0.9	1.1	1.3	1.6	1.8
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	4.1	0.09	0.9	1.2	2.4	2.8	3.2	4.0	4.7	5.7	6.5
Folate (mcg) <sup>c</sup>	258	6.9	n.a.	n.a.	139	163	199	243	305	365	436
Folate (mcg DFE) <sup>c</sup>	375	11.5	154	200	189	212	274	347	446	562	666
Niacin (mg) <sup>c</sup>	11	0.2	6	7	7	7	9	10	12	15	17
Riboflavin (mg) <sup>c</sup>	1.8	0.03	0.5	0.5	1.4	1.5	1.6	1.8	2.1	2.3	2.5
Thiamin (mg) <sup>c</sup>	1.1	0.02	0.5	0.5	0.8	0.8	0.9	1.0	1.2	1.5	1.6
<b>Minerals</b>											
Calcium (mg) <sup>c</sup>	863	11.9	500	650	641	663	749	852	939	1,057	1,136
Iron (mg) <sup>c</sup>	10.1	0.27	4	8	6.0	6.7	7.7	9.2	11.3	15.3	16.5
Magnesium (mg) <sup>c</sup>	136	1.6	158	180	105	110	119	133	151	166	172
Phosphorus (mg) <sup>c</sup>	840	9.3	481	625	651	687	756	834	917	973	1,038
Potassium (mg) <sup>b</sup>	1,529	17.9	1808	2350	1,181	1,262	1,359	1,523	1,680	1,818	1,918
Sodium (mg) <sup>d</sup>	1,227	21.9	< 885	< 1150	872	920	1,047	1,184	1,404	1,611	1,673
Zinc (mg) <sup>c</sup>	6.6	0.16	4	5	4.0	4.2	5.2	6.2	7.5	9.3	10.8
<b>Other Components</b>											
Cholesterol (mg) <sup>e</sup>	88	3.4	< 115	<150	36	43	58	81	104	140	171
Dietary fiber (g) <sup>e</sup>	6	0.2	14	14	4	4	5	6	8	9	11
<b>Number of Schools</b>	<b>257</b>										

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Table G.19 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 2,600 calorie diet for 14–18 year old males and a 2,000 calorie diet for 14–18 year old females. These calorie levels represent weighted averages for each age group, assuming a moderately active level of physical activity for all 14–18 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.20. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts Offered to Students in All Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>				Percentiles per 1,000 Calories						
			Ages 4 – 8 Males/ Females	Ages 9 – 13 Males/ Females	Ages 14 – 18 Males	Ages 14 – 18 Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>													
Total fat (g)	25	0.3	n.a.	n.a.	n.a.	n.a.	16	18	21	25	29	32	34
Saturated fat (g)	9	0.1	n.a.	n.a.	n.a.	n.a.	6	6	8	9	11	12	13
Monounsaturated fat (g)	9	0.1	n.a.	n.a.	n.a.	n.a.	5	6	7	9	11	13	14
Polyunsaturated fat (g)	5	0.1	n.a.	n.a.	n.a.	n.a.	3	3	4	5	6	7	8
Linoleic acid (g) <sup>b</sup>	4	0.1	6	6	6	6	2	3	3	4	5	6	7
Alpha-linolenic acid (g) <sup>b</sup>	0.4	0.01	0.5	0.6	0.6	0.6	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate (g) <sup>c</sup>	163	0.8	76	68	50	65	139	145	154	164	172	181	186
Protein (g) <sup>c</sup>	35	0.2	11	18	20	23	27	29	31	35	37	40	42
<b>Vitamins</b>													
Vitamin A (mcg RE) <sup>c</sup>	594	7.7	n.a.	n.a.	n.a.	n.a.	380	428	495	583	668	781	854
Vitamin A (mcg RAE) <sup>c</sup>	599	7.7	235	316	346	350	376	432	494	590	678	784	844
Vitamin C (mg) <sup>c</sup>	71	1.4	15	24	29	33	33	40	54	69	85	109	116
Vitamin E (mg AT) <sup>c</sup>	2.2	0.07	4	6	6	8	1.1	1.3	1.6	1.9	2.4	3.4	4.4
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	1.2	0.02	0.4	0.5	0.5	0.6	0.6	0.7	0.9	1.2	1.4	1.7	1.9
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	4.6	0.07	0.7	0.9	0.9	1.2	2.8	3.1	3.7	4.5	5.3	6.2	6.7
Folate (mcg) <sup>c</sup>	271	5.3	n.a.	n.a.	n.a.	n.a.	147	167	208	258	317	382	434
Folate (mcg DFE) <sup>c</sup>	397	8.9	118	158	154	200	196	222	288	371	474	584	657
Niacin (mg) <sup>c</sup>	11	0.2	5	6	6	7	6	7	9	11	13	16	18
Riboflavin (mg) <sup>c</sup>	2.0	0.02	0.4	0.5	0.5	0.5	1.4	1.5	1.7	1.9	2.2	2.4	2.6
Thiamin (mg) <sup>c</sup>	1.1	0.02	0.4	0.5	0.5	0.5	0.8	0.8	0.9	1.1	1.3	1.5	1.6
<b>Minerals</b>													
Calcium (mg) <sup>c</sup>	926	9.1	588	684	500	650	677	724	814	918	1,022	1,125	1,222
Iron (mg) <sup>c</sup>	10.6	0.21	6	4	4	8	5.9	6.6	8.0	10.1	12.4	15.6	17.2
Magnesium (mg) <sup>c</sup>	142	1.4	76	126	158	180	107	112	126	140	156	174	181
Phosphorus (mg) <sup>c</sup>	875	6.2	294	658	481	625	683	729	805	870	945	1,013	1,077
Potassium (mg) <sup>b</sup>	1,587	12.6	2235	2368	1808	2350	1,226	1,298	1,439	1,577	1,732	1,863	1,956
Sodium (mg) <sup>d</sup>	1,206	13.4	< 1118	< 1158	< 885	< 1150	876	939	1,048	1,163	1,344	1,493	1,647
Zinc (mg) <sup>c</sup>	7.0	0.12	3	4	4	5	4.2	4.7	5.6	6.7	8.2	9.9	11.0
<b>Other Components</b>													
Cholesterol (mg) <sup>e</sup>	87	2.4	< 176	< 158	< 115	< 150	37	45	60	78	104	136	164
Dietary fiber (g) <sup>e</sup>	6	0.1	14	14	14	14	4	4	5	6	8	9	11
<b>Number of Schools</b>	<b>803</b>												

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

Table G.20 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 1,700 calorie diet for 4–8 year olds, a 1,900 calorie diet for 9–13 year olds, a 2,600 calorie diet for 14–18 year old males and a 2,000 calorie diet for 14–18 year old females. These calorie levels represent weighted averages for each age group, assuming an active level of physical activity for 4–8 year olds and a moderately active level of physical activity for 9–13 and 14–18 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.21. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts *Served* to Students in Elementary Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>		Percentiles per 1,000 Calories						
			Ages 4 – 8 Males/ Females	Ages 9 – 13 Males/ Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>											
Total fat (g)	26	0.4	n.a.	n.a.	18	20	23	26	30	34	35
Saturated fat (g)	10	0.2	n.a.	n.a.	6	7	8	9	11	12	14
Monounsaturated fat (g)	10	0.2	n.a.	n.a.	6	6	8	9	11	13	15
Polyunsaturated fat (g)	5	0.1	n.a.	n.a.	3	3	4	5	6	7	8
Linoleic acid (g) <sup>b</sup>	5	0.1	6	6	3	3	4	4	5	6	7
Alpha-linolenic acid (g) <sup>b</sup>	0.4	0.01	0.5	0.6	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate (g) <sup>c</sup>	160	1.0	76	68	135	141	151	161	169	177	182
Protein (g) <sup>c</sup>	35	0.3	11	18	28	30	32	34	37	40	42
<b>Vitamins</b>											
Vitamin A (mcg RE) <sup>c</sup>	570	10.7	n.a.	n.a.	350	401	473	540	655	760	791
Vitamin A (mcg RAE) <sup>c</sup>	577	11.2	235	316	349	395	468	556	669	767	886
Vitamin C (mg) <sup>c</sup>	66	1.9	15	24	27	37	46	63	86	106	112
Vitamin E (mg AT) <sup>c</sup>	2.2	0.07	4	6	1.2	1.4	1.6	1.9	2.4	3.0	3.8
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	1.2	0.03	0.4	0.5	0.6	0.7	0.9	1.1	1.4	1.8	2.0
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	4.3	0.09	0.7	0.9	2.4	2.8	3.5	4.2	4.9	6.0	6.9
Folate (mcg) <sup>c</sup>	261	6.5	n.a.	n.a.	141	158	185	246	301	381	428
Folate (mcg DFE) <sup>c</sup>	382	10.9	118	158	187	221	259	353	452	591	655
Niacin (mg) <sup>c</sup>	11	0.2	5	6	7	7	9	11	13	16	18
Riboflavin (mg) <sup>c</sup>	1.9	0.03	0.4	0.5	1.3	1.4	1.7	1.9	2.1	2.4	2.7
Thiamin (mg) <sup>c</sup>	1.1	0.02	0.4	0.5	0.7	0.8	0.9	1.1	1.3	1.5	1.7
<b>Minerals</b>											
Calcium (mg) <sup>c</sup>	891	11.1	588	684	604	672	788	891	984	1,105	1,160
Iron (mg) <sup>c</sup>	10.6	0.27	6	4	5.8	6.6	7.8	9.7	12.3	16.5	17.7
Magnesium (mg) <sup>c</sup>	138	1.6	76	126	103	109	121	138	152	168	176
Phosphorus (mg) <sup>c</sup>	874	7.4	294	658	669	725	808	878	942	1,006	1,050
Potassium (mg) <sup>b</sup>	1,531	14.1	2,235	2,368	1,182	1,252	1,388	1,540	1,662	1,775	1,868
Sodium (mg) <sup>d</sup>	1,302	16.4	< 1118	< 1158	919	993	1,131	1,276	1,448	1,610	1,769
Zinc (mg) <sup>c</sup>	6.9	0.15	3	4	4.1	4.5	5.3	6.5	7.9	9.5	11.2
<b>Other Components</b>											
Cholesterol (mg) <sup>e</sup>	101	3.4	< 176	< 158	42	46	64	91	121	163	191
Dietary fiber (g) <sup>e</sup>	6	0.1	14	14	4	4	5	6	7	9	10
<b>Number of Schools</b>	<b>282</b>										

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.



Table G.21 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 1,700 calorie diet for 4–8 year olds and a 1,900 calorie diet for 9–13 year olds. These calorie levels represent weighted averages for each age group, assuming an active level of physical activity for 4–8 year olds and a moderately active level of physical activity for 9–13 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.22. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts Served to Students in Middle Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>	Percentiles per 1,000 Calories						
			Ages 9 - 13 Males/Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>										
Total fat (g)	29	0.4	n.a.	19	22	25	29	32	35	38
Saturated fat (g)	10	0.2	n.a.	7	7	8	10	11	13	14
Monounsaturated fat (g)	11	0.2	n.a.	7	8	9	11	13	15	17
Polyunsaturated fat (g)	5	0.1	n.a.	3	4	4	5	6	8	8
Linoleic acid (g) <sup>b</sup>	5	0.1	6	3	3	4	5	6	7	7
Alpha-linolenic acid (g) <sup>b</sup>	0.4	0.01	0.6	0.2	0.3	0.3	0.4	0.5	0.7	0.8
Carbohydrate (g) <sup>c</sup>	154	1.1	68	128	135	145	153	165	172	178
Protein (g) <sup>c</sup>	34	0.4	18	25	28	31	34	37	40	42
<b>Vitamins</b>										
Vitamin A (mcg RE) <sup>c</sup>	480	10.0	n.a.	280	320	385	470	559	664	695
Vitamin A (mcg RAE) <sup>c</sup>	489	10.3	316	283	324	396	480	565	658	706
Vitamin C (mg) <sup>c</sup>	65	2.5	24	22	30	45	63	82	101	119
Vitamin E (mg AT) <sup>c</sup>	2.2	0.08	6	1.2	1.4	1.7	2.0	2.4	3.0	4.1
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	1.0	0.03	0.5	0.6	0.6	0.7	0.9	1.1	1.4	1.7
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	3.5	0.10	0.9	2.0	2.1	2.5	3.3	4.2	5.3	5.4
Folate (mcg) <sup>c</sup>	225	7.3	n.a.	125	142	171	210	255	343	416
Folate (mcg DFE) <sup>c</sup>	322	11.8	158	170	186	232	289	365	511	642
Niacin (mg) <sup>c</sup>	10	0.2	6	7	7	8	10	11	13	16
Riboflavin (mg) <sup>c</sup>	1.7	0.03	0.5	1.2	1.3	1.4	1.6	1.9	2.1	2.2
Thiamin (mg) <sup>c</sup>	1.0	0.02	0.5	0.8	0.8	0.9	1.0	1.1	1.3	1.5
<b>Minerals</b>										
Calcium (mg) <sup>c</sup>	784	14.5	684	495	551	639	775	916	1,026	1,092
Iron (mg) <sup>c</sup>	9.3	0.25	4	5.9	6.2	7.3	8.7	10.4	12.7	14.6
Magnesium (mg) <sup>c</sup>	126	2.0	126	87	97	108	124	141	160	164
Phosphorus (mg) <sup>c</sup>	829	11.0	658	595	631	738	841	919	998	1,042
Potassium (mg) <sup>b</sup>	1,419	20.5	2368	1,011	1,092	1,245	1,422	1,580	1,752	1,869
Sodium (mg) <sup>d</sup>	1,375	20.6	< 1158	962	1,041	1,152	1,346	1,543	1,766	1,853
Zinc (mg) <sup>c</sup>	5.8	0.19	4	3.4	3.8	4.5	5.3	6.7	8.5	9.2
<b>Other Components</b>										
Cholesterol (mg) <sup>e</sup>	104	4.0	< 158	39	46	64	91	138	172	197
Dietary fiber (g) <sup>e</sup>	6	0.1	14	3	4	5	6	7	8	10
<b>Number of Schools</b>	<b>263</b>									

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Table G.22 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 1,900 calorie diet for 9–13 year olds. These calorie levels represent weighted averages for each age group, assuming a moderately active level of physical activity for 9–13 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.23. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts Served to Students in High Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>		Percentiles per 1,000 Calories						
			Ages 14 - 18 Males	Ages 14 - 18 Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>											
Total fat (g)	30	0.4	n.a.	n.a.	19	22	26	30	33	37	40
Saturated fat (g)	10	0.2	n.a.	n.a.	7	7	9	10	12	13	14
Monounsaturated fat (g)	11	0.2	n.a.	n.a.	6	7	9	11	13	15	17
Polyunsaturated fat (g)	6	0.1	n.a.	n.a.	3	4	4	5	7	8	8
Linoleic acid (g) <sup>b</sup>	5	0.1	6	6	3	3	4	5	6	7	7
Alpha-linolenic acid (g) <sup>b</sup>	0.5	0.01	0.6	0.6	0.2	0.3	0.3	0.4	0.5	0.7	0.9
Carbohydrate (g) <sup>c</sup>	153	1.2	50	65	123	132	144	154	165	172	175
Protein (g) <sup>c</sup>	33	0.4	20	23	24	26	30	33	37	40	42
<b>Vitamins</b>											
Vitamin A (mcg RE) <sup>c</sup>	467	10.2	n.a.	n.a.	265	304	367	464	539	624	722
Vitamin A (mcg RAE) <sup>c</sup>	475	10.6	346	350	275	313	373	468	546	653	728
Vitamin C (mg) <sup>c</sup>	67	2.4	29	33	19	32	46	65	83	108	116
Vitamin E (mg AT) <sup>c</sup>	2.2	0.06	6	8	1.2	1.4	1.7	2.1	2.5	3.2	3.7
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	0.9	0.02	0.5	0.6	0.6	0.6	0.7	0.8	1.1	1.4	1.5
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	3.2	0.09	0.9	1.2	1.7	2.0	2.4	3.0	3.8	4.8	5.4
Folate (mcg) <sup>c</sup>	224	5.8	n.a.	n.a.	125	135	170	215	264	328	370
Folate (mcg DFE) <sup>c</sup>	319	9.6	154	200	164	188	230	282	378	490	584
Niacin (mg) <sup>c</sup>	10	0.2	6	7	7	7	8	9	11	14	16
Riboflavin (mg) <sup>c</sup>	1.6	0.02	0.5	0.5	1.1	1.2	1.4	1.5	1.8	2.1	2.2
Thiamin (mg) <sup>c</sup>	1.0	0.02	0.5	0.5	0.8	0.8	0.9	1.0	1.2	1.4	1.4
<b>Minerals</b>											
Calcium (mg) <sup>c</sup>	747	13.9	500	650	448	530	622	741	865	964	1,041
Iron (mg) <sup>c</sup>	9.1	0.20	4	8	5.9	6.4	7.3	8.5	10.5	13.0	14.0
Magnesium (mg) <sup>c</sup>	124	1.6	158	180	89	97	107	123	140	151	155
Phosphorus (mg) <sup>c</sup>	798	11.1	481	625	564	616	691	806	879	960	1,028
Potassium (mg) <sup>b</sup>	1,398	19.1	1808	2350	993	1,108	1,220	1,408	1,568	1,691	1,820
Sodium (mg) <sup>d</sup>	1,379	24.4	< 885	< 1150	923	1,008	1,133	1,358	1,582	1,815	1,956
Zinc (mg) <sup>c</sup>	5.8	0.16	4	5	3.4	3.7	4.4	5.3	6.5	8.8	10.1
<b>Other Components</b>											
Cholesterol (mg) <sup>e</sup>	109	4.9	< 115	<150	39	49	64	94	132	190	211
Dietary fiber (g) <sup>e</sup>	6	0.1	14	14	4	4	5	6	7	8	9
<b>Number of Schools</b>	<b>257</b>										

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Table G.23 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 2,600 calorie diet for 14–18 year old males and a 2,000 calorie diet for 14–18 year old females. These calorie levels represent weighted averages for each age group, assuming a moderately active level of physical activity for all 14–18 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.24. Average and Distribution of Nutrients per 1,000 Calories in School Breakfast Program Breakfasts Served to Students in All Schools**

	Average per 1,000 Calories	SE	Reference Standard <sup>a</sup>				Percentiles per 1,000 Calories						
			Ages 4 – 8 Males/ Females	Ages 9 – 13 Males/ Females	Ages 14 – 18 Males	Ages 14 – 18 Females	5th	10th	25th	50th	75th	90th	95th
<b>Macronutrients</b>													
Total fat (g)	28	0.3	n.a.	n.a.	n.a.	n.a.	18	21	24	27	31	35	38
Saturated fat (g)	10	0.1	n.a.	n.a.	n.a.	n.a.	6	7	8	10	11	13	14
Monounsaturated fat (g)	10	0.2	n.a.	n.a.	n.a.	n.a.	6	7	8	10	12	14	16
Polyunsaturated fat (g)	5	0.1	n.a.	n.a.	n.a.	n.a.	3	3	4	5	6	7	8
Linoleic acid (g) <sup>b</sup>	5	0.1	6	6	6	6	3	3	4	5	6	7	7
Alpha-linolenic acid (g) <sup>b</sup>	0.4	0.01	0.5	0.6	0.6	0.6	0.2	0.2	0.3	0.4	0.5	0.7	0.7
Carbohydrate (g) <sup>c</sup>	157	0.8	76	68	50	65	131	138	148	159	168	175	181
Protein (g) <sup>c</sup>	34	0.3	11	18	20	23	26	29	31	34	37	40	42
<b>Vitamins</b>													
Vitamin A (mcg RE) <sup>c</sup>	533	8.1	n.a.	n.a.	n.a.	n.a.	315	350	435	515	611	722	780
Vitamin A (mcg RAE) <sup>c</sup>	540	8.5	235	316	346	350	310	349	433	521	625	729	784
Vitamin C (mg) <sup>c</sup>	66	1.5	15	24	29	33	25	36	46	63	85	105	114
Vitamin E (mg AT) <sup>c</sup>	2.2	0.05	4	6	6	8	1.2	1.4	1.6	2.0	2.4	3.0	3.8
Vitamin B <sub>6</sub> (mg) <sup>c</sup>	1.1	0.02	0.4	0.5	0.5	0.6	0.6	0.6	0.8	1.0	1.3	1.6	1.9
Vitamin B <sub>12</sub> (mcg) <sup>c</sup>	4.0	0.07	0.7	0.9	0.9	1.2	2.0	2.3	2.9	3.8	4.8	5.7	6.3
Folate (mcg) <sup>c</sup>	247	4.9	n.a.	n.a.	n.a.	n.a.	131	149	180	231	292	367	412
Folate (mcg DFE) <sup>c</sup>	358	8.1	118	158	154	200	175	204	251	330	434	565	633
Niacin (mg) <sup>c</sup>	11	0.2	5	6	6	7	7	7	8	10	12	15	18
Riboflavin (mg) <sup>c</sup>	1.8	0.02	0.4	0.5	0.5	0.5	1.2	1.3	1.5	1.8	2.0	2.3	2.5
Thiamin (mg) <sup>c</sup>	1.1	0.01	0.4	0.5	0.5	0.5	0.8	0.8	0.9	1.0	1.2	1.5	1.6
<b>Minerals</b>													
Calcium (mg) <sup>c</sup>	842	9.1	588	684	500	650	547	593	723	854	953	1,075	1,146
Iron (mg) <sup>c</sup>	10.0	0.19	6	4	4	8	5.9	6.5	7.6	9.3	11.7	15.0	17.4
Magnesium (mg) <sup>c</sup>	133	1.3	76	126	158	180	97	103	116	132	148	162	173
Phosphorus (mg) <sup>c</sup>	851	6.6	294	658	481	625	625	673	777	859	933	1,001	1,041
Potassium (mg) <sup>b</sup>	1,484	11.6	2235	2368	1808	2350	1,114	1,181	1,317	1,497	1,636	1,767	1,848
Sodium (mg) <sup>d</sup>	1,331	14.5	< 1118	< 1158	< 885	< 1150	919	1,010	1,133	1,307	1,497	1,724	1,825
Zinc (mg) <sup>c</sup>	6.5	0.12	3	4	4	5	3.8	4.1	5.0	6.0	7.5	9.2	10.9
<b>Other Components</b>													
Cholesterol (mg) <sup>e</sup>	103	3.0	< 176	< 158	< 115	< 150	42	47	64	91	125	172	197
Dietary fiber (g) <sup>e</sup>	6	0.1	14	14	14	14	4	4	5	6	7	9	10
<b>Number of Schools</b>	<b>802</b>												

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Table G.24 (continued)

<sup>a</sup>The "per 1,000 calorie" reference standards are based on Dietary Reference Intakes and assume a 1,700 calorie diet for 4–8 year olds, a 1,900 calorie diet for 9–13 year olds, a 2,600 calorie diet for 14–18 year old males and a 2,000 calorie diet for 14–18 year old females. These calorie levels represent weighted averages for each age group, assuming an active level of physical activity for 4–8 year olds and a moderately active level of physical activity for 9–13 and 14–18 year olds (IOM 2010).

<sup>b</sup>Reference standards is based on the Adequate Intake (AI), Institute of Medicine, IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>c</sup>Reference standard is based on the Recommended Dietary Allowance (RDA), IOM. Dietary Reference intakes: The essential guide to nutrient requirements. Washington (DC): The National Academies Press; 2006.

<sup>d</sup>Reference standard is based on the Upper Limit (UL), *Dietary Guidelines*, 2010 recommendation.

<sup>e</sup>Reference standard is based on the *Dietary Guidelines*, 2010 recommendation.

n.a. = Not applicable; AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.25. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Offered to Students, by Menu Planning System All Schools**

	Food-Based			Nutrient-Based (NSMP or ANSMP)
	Traditional	Enhanced	All Food-Based	
<b>Average Amount</b>				
Calories	459	487	467	513
<b>Macronutrients</b>				
Total fat (g)	12	13	12	13
Saturated fat (g)	4	5	4	5
Monounsaturated fat (g)	4	5	4	5
Polyunsaturated fat (g)	2	2	2	3
Linoleic acid (g)	2	2	2	2
Alpha-linolenic acid (g)	0.2	0.2	0.2	0.2
Carbohydrate (g)	75	79	76	83
Protein (g)	16	16	16	18
<b>Vitamins</b>				
Vitamin A (mcg RE)	270	284	274	290
Vitamin A (mcg RAE)	274	287	278	292
Vitamin C (mg)	33	35	34	33
Vitamin E (mg AT)	1.0	1.1	1.0	1.3
Vitamin B <sub>6</sub> (mg)	0.5	0.6	0.6	0.6
Vitamin B <sub>12</sub> (mcg)	2.1	2.2	2.1	2.2
Folate (mcg)	120	129	123	146
Folate (mcg DFE)	176	190	180	216
Niacin (mg)	5	5	5	6
Riboflavin (mg)	0.9	0.9	0.9	1.0
Thiamin (mg)	0.5	0.5	0.5	0.6
<b>Minerals</b>				
Calcium (mg)	422	438	427	448
Iron (mg)	4.8	5.0	4.8	5.6
Magnesium (mg)	64	67	65	72
Phosphorus (mg)	398	412	402	440
Potassium (mg)	724	748	731	774
Sodium (mg)	555	552	554	655
Zinc (mg)	3.2	3.4	3.2	3.5
<b>Other Dietary Components</b>				
Cholesterol (mg)	40	40	40	48
Dietary fiber (g)	3	3	3	4
Dietary fiber (g/1,000 calories)	6	6	6	7
<b>Average Percentage of Calories from:</b>				
Total fat	22.4	23.0	22.6	22.7
Saturated fat	8.2	8.4	8.3	8.1
Monounsaturated fat	8.1	8.3	8.1	8.3
Polyunsaturated fat	4.4	4.5	4.4	4.5
Linoleic acid	3.9	4.0	3.9	4.0
Alpha-linolenic acid	0.4	0.4	0.4	0.4
Carbohydrate	65.4	65.0	65.3	65.0
Protein	13.8	13.5	13.7	14.1
<b>Number of Schools</b>	<b>396</b>	<b>159</b>	<b>555</b>	<b>248</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalents; RAE = Retinol activity equivalents; NSMP = Nutrient Standard Menu Planning; ANSMP = Assisted Nutrient Standard Menu Planning.



**Table G.26. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Served to Students, by Menu Planning System All Schools**

	Food-Based			Nutrient-Based (NSMP or ANSMP)
	Traditional	Enhanced	All Food-Based	
<b>Average Amount</b>				
Calories	465	475	468	444
<b>Macronutrients</b>				
Total fat (g)	13	13	13	12
Saturated fat (g)	5	5	5	4
Monounsaturated fat (g)	5	5	5	5
Polyunsaturated fat (g)	3	2	2	2
Linoleic acid (g)	2	2	2	2
Alpha-linolenic acid (g)	0.2	0.2	0.2	0.2
Carbohydrate (g)	73	74	73	70
Protein (g)	16	16	16	15
<b>Vitamins</b>				
Vitamin A (mcg RE)	241	258	246	233
Vitamin A (mcg RAE)	244	258	248	237
Vitamin C (mg)	30	31	30	30
Vitamin E (mg AT)	1.0	1.0	1.0	1.0
Vitamin B <sub>6</sub> (mg)	0.5	0.5	0.5	0.5
Vitamin B <sub>12</sub> (mcg)	1.8	1.9	1.8	1.7
Folate (mcg)	107	118	110	115
Folate (mcg DFE)	154	173	160	167
Niacin (mg)	5	5	5	5
Riboflavin (mg)	0.8	0.9	0.8	0.8
Thiamin (mg)	0.5	0.5	0.5	0.5
<b>Minerals</b>				
Calcium (mg)	387	393	389	364
Iron (mg)	4.4	4.8	4.5	4.6
Magnesium (mg)	61	61	61	59
Phosphorus (mg)	396	399	397	371
Potassium (mg)	686	687	686	652
Sodium (mg)	629	623	627	594
Zinc (mg)	2.9	3.2	3.0	2.9
<b>Other Dietary Components</b>				
Cholesterol (mg)	49	49	49	46
Dietary fiber (g)	3	3	3	3
Dietary fiber (g/1,000 calories)	6	6	6	7
<b>Average Percentage of Calories from:</b>				
Total fat	24.8	25.1	24.9	24.4
Saturated fat	8.8	9.0	8.9	8.5
Monounsaturated fat	9.3	9.5	9.3	9.2
Polyunsaturated fat	4.7	4.6	4.7	4.8
Linoleic acid	4.2	4.1	4.2	4.3
Alpha-linolenic acid	0.4	0.4	0.4	0.4
Carbohydrate	62.9	62.5	62.8	63.4
Protein	13.7	13.6	13.7	13.7
<b>Number of Schools</b>	<b>396</b>	<b>159</b>	<b>555</b>	<b>247</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalents; RAE = Retinol activity equivalents; NSMP = Nutrient Standard Menu Planning; ANSMP = Assisted Nutrient Standard Menu Planning.

**Table G.27. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Offered to Students in Schools with a Traditional Food-Based Menu Planning System All Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	459	4.7	374	392	412	449	494	540	581
<b>Macronutrients</b>									
Total fat (g)	12	0.3	6	7	9	11	14	16	18
Saturated fat (g)	4	0.1	2	3	3	4	5	6	7
Monounsaturated fat (g)	4	0.1	2	2	3	4	5	6	7
Polyunsaturated fat (g)	2	0.1	1	1	2	2	3	3	4
Linoleic acid (g)	2	0.1	1	1	1	2	2	3	3
Alpha-linolenic acid (g)	0.2	0.01	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Carbohydrate (g)	75	0.8	57	61	68	74	81	88	93
Protein (g)	16	0.2	13	13	14	15	17	18	19
<b>Vitamins</b>									
Vitamin A (mcg RE)	270	4.6	185	198	231	264	304	344	387
Vitamin A (mcg RAE)	274	4.8	178	195	235	265	309	354	391
Vitamin C (mg)	33	0.9	18	22	26	33	38	46	48
Vitamin E (mg AT)	1.0	0.04	0.4	0.5	0.6	0.9	1.1	1.6	2.1
Vitamin B <sub>6</sub> (mg)	0.5	0.01	0.3	0.3	0.4	0.5	0.6	0.7	0.8
Vitamin B <sub>12</sub> (mcg)	2.1	0.04	1.4	1.5	1.8	2.1	2.4	2.6	2.9
Folate (mcg)	120	3.1	66	74	91	116	143	163	191
Folate (mcg DFE)	176	5.1	87	97	130	167	211	250	293
Niacin (mg)	5	0.1	3	3	4	5	6	7	8
Riboflavin (mg)	0.9	0.01	0.7	0.7	0.8	0.9	1.0	1.0	1.1
Thiamin (mg)	0.5	0.01	0.3	0.4	0.4	0.5	0.6	0.7	0.7
<b>Minerals</b>									
Calcium (mg)	422	3.9	349	368	390	414	457	493	506
Iron (mg)	4.8	0.12	2.6	2.9	3.7	4.7	5.6	6.6	7.6
Magnesium (mg)	64	0.7	51	54	58	63	69	76	82
Phosphorus (mg)	398	3.3	340	349	373	397	417	453	484
Potassium (mg)	724	5.9	622	641	681	713	765	818	856
Sodium (mg)	555	11.2	405	430	467	539	605	695	780
Zinc (mg)	3.2	0.07	2.0	2.1	2.5	3.0	3.6	4.4	4.6
<b>Other Components</b>									
Cholesterol (mg)	40	2.1	16	18	26	35	46	61	76
Dietary fiber (g)	3	0.1	1	2	2	3	3	4	5

Table G.27 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Percentage of Calories from:									
Total fat	22.4	0.41	14.6	16.1	18.9	22.4	25.4	29.2	31.3
Saturated fat	8.2	0.20	4.6	5.3	6.8	8.1	9.4	10.9	12.1
Monosaturated fat	8.1	0.18	4.2	4.9	6.4	7.8	9.5	11.3	12.5
Polyunsaturated fat	4.4	0.10	2.3	2.7	3.4	4.3	5.1	6.0	6.6
Linoleic acid	3.9	0.09	2.0	2.4	3.0	3.8	4.6	5.4	5.9
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.3	0.5	0.6	0.7
Carbohydrate	65.4	0.48	54.1	57.8	61.9	65.7	69.5	72.7	74.5
Protein	13.8	0.12	11.0	11.9	12.6	13.8	14.8	15.9	16.6
<b>Number of Schools</b>	<b>396</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.28. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Offered to Students in Schools with an Enhanced Food-Based Menu Planning System All Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	487	8.0	377~	406	442	480	512	585	618~
<b>Macronutrients</b>									
Total fat (g)	13	0.4	8~	8	10	12	14	17	19~
Saturated fat (g)	5	0.1	2~	3	4	5	5	6	7~
Monounsaturated fat (g)	5	0.2	2~	3	3	4	5	7	8~
Polyunsaturated fat (g)	2	0.1	1~	1	2	2	3	4	4~
Linoleic acid (g)	2	0.1	1~	1	2	2	3	4	4~
Alpha-linolenic acid (g)	0.2	0.01	0.1~	0.1	0.1	0.2	0.3	0.3	0.4~
Carbohydrate (g)	79	1.5	61~	63	69	77	87	97	100~
Protein (g)	16	0.2	14~	14	15	16	17	19	20~
<b>Vitamins</b>									
Vitamin A (mcg RE)	284	7.9	197~	211	247	276	315	367	395~
Vitamin A (mcg RAE)	287	7.8	187~	209	246	287	315	363	389~
Vitamin C (mg)	35	1.5	18~	20	27	33	38	52	58~
Vitamin E (mg AT)	1.1	0.10	0.5~	0.5	0.7	0.9	1.2	1.8	2.7~
Vitamin B <sub>6</sub> (mg)	0.6	0.03	0.3~	0.4	0.5	0.5	0.7	0.8	1.0~
Vitamin B <sub>12</sub> (mcg)	2.2	0.07	1.4~	1.6	1.8	2.1	2.5	2.9	3.2~
Folate (mcg)	129	5.8	68~	75	104	125	152	166	204~
Folate (mcg DFE)	190	9.8	91~	97	143	185	231	249	314~
Niacin (mg)	5	0.2	3~	3	4	5	6	7	9~
Riboflavin (mg)	0.9	0.02	0.7~	0.8	0.9	0.9	1.0	1.1	1.2~
Thiamin (mg)	0.5	0.02	0.3~	0.4	0.5	0.5	0.6	0.7	0.8~
<b>Minerals</b>									
Calcium (mg)	438	7.5	364~	381	398	427	466	502	563~
Iron (mg)	5.0	0.20	2.7~	3.0	4.0	5.0	5.6	6.8	8.3~
Magnesium (mg)	67	1.9	52~	55	60	64	72	83	90~
Phosphorus (mg)	412	6.0	342~	363	383	400	434	473	519~
Potassium (mg)	748	8.9	638~	659	703	740	788	840	873~
Sodium (mg)	552	16.4	348~	401	476	533	609	730	809~
Zinc (mg)	3.4	0.13	1.9~	2.2	2.8	3.3	4.1	4.7	5.0~
<b>Other Components</b>									
Cholesterol (mg)	40	2.1	20~	24	28	35	47	61	78~
Dietary fiber (g)	3	0.1	1~	2	2	3	4	4	5~

Table G.28 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Percentage of Calories from:									
Total fat	23.0	0.46	15.8~	17.5	20.1	22.4	25.8	28.3	29.7~
Saturated fat	8.4	0.23	5.0~	5.5	7.3	8.4	9.6	10.8	11.9~
Monosaturated fat	8.3	0.25	5.5~	5.7	6.9	7.8	9.4	10.4	11.9~
Polyunsaturated fat	4.5	0.18	2.3~	2.5	3.3	4.3	5.6	6.6	7.3~
Linoleic acid	4.0	0.16	2.0~	2.3	3.0	3.8	5.0	6.0	6.6~
Alpha-linolenic acid	0.4	0.02	0.2~	0.2	0.3	0.3	0.5	0.6	0.7~
Carbohydrate	65.0	0.57	56.7~	57.5	62.2	65.8	68.1	70.5	73.4~
Protein	13.5	0.26	10.1~	10.7	12.3	13.7	14.5	15.7	16.1~
<b>Number of Schools</b>	<b>159</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.29. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts Offered to Students in Schools with a Nutrient-Based Menu Planning System All Schools**

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	513	18.4	313~	342	390	473	577	717	890~
<b>Macronutrients</b>									
Total fat (g)	13	0.6	5~	6	9	12	15	22	27~
Saturated fat (g)	5	0.2	2~	2	3	4	6	7	10~
Monounsaturated fat (g)	5	0.3	2~	2	3	5	6	8	10~
Polyunsaturated fat (g)	3	0.1	1~	1	2	2	3	4	5~
Linoleic acid (g)	2	0.1	1~	1	1	2	3	4	5~
Alpha-linolenic acid (g)	0.2	0.01	0.1~	0.1	0.1	0.2	0.3	0.4	0.4~
Carbohydrate (g)	83	2.9	53~	57	62	76	95	116	136~
Protein (g)	18	0.6	12~	12	14	16	20	24	29~
<b>Vitamins</b>									
Vitamin A (mcg RE)	290	11.6	198~	211	230	256	332	407	447~
Vitamin A (mcg RAE)	292	11.5	193~	207	228	257	339	413	459~
Vitamin C (mg)	33	2.0	11~	17	23	31	41	52	60~
Vitamin E (mg AT)	1.3	0.09	0.5~	0.5	0.7	1.0	1.4	2.3	3.2~
Vitamin B <sub>6</sub> (mg)	0.6	0.04	0.3~	0.3	0.4	0.5	0.7	0.9	1.0~
Vitamin B <sub>12</sub> (mcg)	2.2	0.10	1.4~	1.5	1.7	2.0	2.5	3.3	3.7~
Folate (mcg)	146	10.3	66~	77	95	125	169	223	268~
Folate (mcg DFE)	216	16.9	88~	100	134	183	252	340	422~
Niacin (mg)	6	0.5	3~	3	4	5	7	9	10~
Riboflavin (mg)	1.0	0.04	0.7~	0.7	0.8	0.9	1.1	1.3	1.4~
Thiamin (mg)	0.6	0.07	0.3~	0.3	0.4	0.5	0.7	0.9	1.0~
<b>Minerals</b>									
Calcium (mg)	448	12.7	351~	367	383	416	468	559	649~
Iron (mg)	5.6	0.35	2.5~	2.8	3.5	4.9	6.8	9.6	10.9~
Magnesium (mg)	72	2.7	51~	53	58	67	77	93	111~
Phosphorus (mg)	440	13.3	307~	329	366	405	473	594	751~
Potassium (mg)	774	15.7	607~	630	668	735	825	993	1,046~
Sodium (mg)	655	31.9	311~	380	460	568	801	1,056	1,360~
Zinc (mg)	3.5	0.17	2.0~	2.3	2.6	3.3	3.8	5.5	6.1~
<b>Other Components</b>									
Cholesterol (mg)	48	3.1	16~	21	28	39	61	90	107~
Dietary fiber (g)	4	0.2	2~	2	3	3	4	6	7~

Table G.29 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Percentage of Calories from:</b>									
Total fat	22.7	0.49	14.0~	16.2	19.7	22.6	26.3	28.5	30.6~
Saturated fat	8.1	0.20	5.5~	5.7	6.6	8.0	9.7	10.4	10.8~
Monosaturated fat	8.3	0.23	4.7~	5.3	6.6	8.2	9.7	11.7	12.4~
Polyunsaturated fat	4.5	0.14	2.3~	2.6	3.3	4.4	5.5	6.3	6.8~
Linoleic acid	4.0	0.13	2.1~	2.4	3.0	3.9	5.0	5.7	6.1~
Alpha-linolenic acid	0.4	0.01	0.2~	0.2	0.3	0.4	0.4	0.5	0.6~
Carbohydrate	65.0	0.55	55.6~	58.1	60.8	65.2	69.1	71.9	74.1~
Protein	14.1	0.18	11.6~	12.0	12.8	14.1	15.1	16.4	17.4~
<b>Number of Schools</b>	<b>248</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.30. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts *Served* to Students in Schools with a Traditional Food-Based Menu Planning System *All Schools***

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	465	9.9	327	356	395	445	501	570	616
<b>Macronutrients</b>									
Total fat (g)	13	0.4	7	8	10	12	15	19	22
Saturated fat (g)	5	0.2	2	3	3	4	5	7	8
Monounsaturated fat (g)	5	0.2	2	2	3	4	6	8	9
Polyunsaturated fat (g)	3	0.1	1	1	2	2	3	4	4
Linoleic acid (g)	2	0.1	1	1	2	2	3	3	4
Alpha-linolenic acid (g)	0.2	0.01	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Carbohydrate (g)	73	1.5	50	56	63	69	78	87	97
Protein (g)	16	0.4	10	11	13	15	18	20	23
<b>Vitamins</b>									
Vitamin A (mcg RE)	241	6.5	123	148	183	228	278	331	363
Vitamin A (mcg RAE)	244	6.5	120	153	189	235	285	332	382
Vitamin C (mg)	30	0.9	11	14	22	28	36	46	51
Vitamin E (mg AT)	1.0	0.04	0.4	0.5	0.7	0.9	1.2	1.5	1.8
Vitamin B <sub>6</sub> (mg)	0.5	0.01	0.3	0.3	0.3	0.4	0.6	0.7	0.8
Vitamin B <sub>12</sub> (mcg)	1.8	0.05	0.8	1.0	1.4	1.7	2.0	2.5	2.7
Folate (mcg)	107	3.2	60	66	80	97	120	154	179
Folate (mcg DFE)	154	5.0	76	89	112	140	173	237	275
Niacin (mg)	5	0.1	3	3	4	4	5	7	9
Riboflavin (mg)	0.8	0.02	0.5	0.6	0.7	0.8	0.9	1.1	1.1
Thiamin (mg)	0.5	0.01	0.3	0.3	0.4	0.5	0.5	0.7	0.8
<b>Minerals</b>									
Calcium (mg)	387	8.6	217	254	336	389	426	477	504
Iron (mg)	4.4	0.11	2.5	2.9	3.3	4.0	5.1	6.5	7.6
Magnesium (mg)	61	1.3	39	44	51	59	67	77	83
Phosphorus (mg)	396	8.7	239	277	334	378	437	502	536
Potassium (mg)	686	14.2	447	501	582	677	750	808	903
Sodium (mg)	629	17.3	344	394	476	580	728	886	1,035
Zinc (mg)	2.9	0.08	1.6	1.8	2.2	2.7	3.3	4.1	4.7
<b>Other Components</b>									
Cholesterol (mg)	49	2.6	16	20	27	42	60	82	97
Dietary fiber (g)	3	0.1	1	2	2	3	3	4	5



Table G.30 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Percentage of Calories from:									
Total fat	24.8	0.42	16.3	18.1	21.0	24.2	28.3	31.9	34.3
Saturated fat	8.8	0.19	5.2	6.0	7.1	8.6	10.1	11.4	12.5
Monosaturated fat	9.3	0.20	4.9	5.6	7.4	8.9	10.9	13.1	14.4
Polyunsaturated fat	4.7	0.11	2.6	3.1	3.7	4.6	5.6	6.6	7.2
Linoleic acid	4.2	0.10	2.3	2.7	3.3	4.1	5.0	5.9	6.3
Alpha-linolenic acid	0.4	0.01	0.2	0.2	0.3	0.4	0.5	0.6	0.7
Carbohydrate	62.9	0.50	50.6	54.0	58.9	63.7	67.5	70.6	72.7
Protein	13.7	0.14	10.4	11.4	12.5	13.6	14.9	16.1	16.6
<b>Number of Schools</b>	<b>396</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

**Table G.31. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts *Served* to Students in Schools with an Enhanced Food-Based Menu Planning System *All Schools***

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	475	9.6	371~	385	414	466	506	585	630~
<b>Macronutrients</b>									
Total fat (g)	13	0.5	7~	9	11	12	16	19	21~
Saturated fat (g)	5	0.2	3~	3	4	5	5	7	7~
Monounsaturated fat (g)	5	0.2	3~	3	4	5	6	8	9~
Polyunsaturated fat (g)	2	0.1	1~	1	2	2	3	4	4~
Linoleic acid (g)	2	0.1	1~	1	2	2	3	3	4~
Alpha-linolenic acid (g)	0.2	0.01	0.1~	0.1	0.1	0.2	0.2	0.3	0.4~
Carbohydrate (g)	74	1.7	53~	59	63	70	84	93	97~
Protein (g)	16	0.4	12~	12	14	16	18	20	23~
<b>Vitamins</b>									
Vitamin A (mcg RE)	258	10.8	156~	160	201	233	305	382	443~
Vitamin A (mcg RAE)	258	10.7	155~	161	199	238	301	376	438~
Vitamin C (mg)	31	1.8	15~	17	20	29	38	51	56~
Vitamin E (mg AT)	1.0	0.04	0.5~	0.5	0.7	1.0	1.2	1.4	1.7~
Vitamin B <sub>6</sub> (mg)	0.5	0.03	0.3~	0.3	0.4	0.5	0.6	0.8	0.9~
Vitamin B <sub>12</sub> (mcg)	1.9	0.09	1.0~	1.1	1.3	1.8	2.2	2.8	3.3~
Folate (mcg)	118	6.4	63~	67	79	109	143	187	206~
Folate (mcg DFE)	173	10.6	85~	91	105	158	213	283	326~
Niacin (mg)	5	0.3	3~	3	4	5	6	8	9~
Riboflavin (mg)	0.9	0.03	0.6~	0.6	0.7	0.8	0.9	1.2	1.2~
Thiamin (mg)	0.5	0.02	0.3~	0.4	0.4	0.5	0.6	0.7	0.9~
<b>Minerals</b>									
Calcium (mg)	393	9.9	272~	286	328	387	456	497	531~
Iron (mg)	4.8	0.22	2.6~	3.0	3.4	4.5	5.7	7.2	7.8~
Magnesium (mg)	61	1.6	42~	46	50	58	69	82	87~
Phosphorus (mg)	399	9.2	290~	303	329	395	452	502	519~
Potassium (mg)	687	14.0	498~	527	584	666	764	860	880~
Sodium (mg)	623	25.5	368~	384	462	582	727	907	1,006~
Zinc (mg)	3.2	0.17	1.7~	1.9	2.2	2.8	3.8	5.3	5.9~
<b>Other Components</b>									
Cholesterol (mg)	49	4.1	18~	22	28	37	58	95	111~
Dietary fiber (g)	3	0.1	1~	2	2	3	3	3	4~

Table G.31 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
<b>Percentage of Calories from:</b>									
Total fat	25.1	0.59	17.1~	19.6	22.2	24.3	27.7	31.2	34.4~
Saturated fat	9.0	0.26	6.0~	6.7	7.4	8.9	10.1	12.0	13.1~
Monosaturated fat	9.5	0.34	5.6~	6.7	7.5	9.1	10.6	13.5	14.5~
Polyunsaturated fat	4.6	0.14	2.4~	2.8	3.7	4.4	5.3	6.6	7.1~
Linoleic acid	4.1	0.13	2.1~	2.6	3.3	3.9	4.7	6.0	6.4~
Alpha-linolenic acid	0.4	0.01	0.2~	0.2	0.3	0.3	0.4	0.6	0.6~
Carbohydrate	62.5	0.77	52.7~	55.3	59.3	63.3	66.5	68.6	70.7~
Protein	13.6	0.29	10.2~	10.7	12.4	13.3	14.6	16.5	17.5~
<b>Number of Schools</b>	<b>159</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.32. Average and Distribution of Calories and Nutrients in School Breakfast Program Breakfasts *Served* to Students in Schools with a Nutrient-Based Menu Planning System *All Schools***

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Calories	444	8.8	279~	316	378	439	512	575	608~
<b>Macronutrients</b>									
Total fat (g)	12	0.3	7~	7	9	12	14	17	20~
Saturated fat (g)	4	0.1	2~	3	3	4	5	6	7~
Monounsaturated fat (g)	5	0.2	2~	3	3	5	6	7	8~
Polyunsaturated fat (g)	2	0.1	1~	1	2	2	3	4	4~
Linoleic acid (g)	2	0.1	1~	1	2	2	2	3	4~
Alpha-linolenic acid (g)	0.2	0.01	0.1~	0.1	0.1	0.2	0.2	0.3	0.4~
Carbohydrate (g)	70	1.5	42~	49	59	70	82	90	98~
Protein (g)	15	0.3	9~	10	13	16	17	19	21~
<b>Vitamins</b>									
Vitamin A (mcg RE)	233	7.0	139~	152	189	223	260	328	381~
Vitamin A (mcg RAE)	237	7.3	141~	153	193	227	272	342	380~
Vitamin C (mg)	30	1.5	8~	12	19	28	39	47	57~
Vitamin E (mg AT)	1.0	0.05	0.5~	0.6	0.7	0.9	1.2	1.6	2.1~
Vitamin B <sub>6</sub> (mg)	0.5	0.02	0.3~	0.3	0.4	0.4	0.6	0.7	0.9~
Vitamin B <sub>12</sub> (mcg)	1.7	0.06	1.0~	1.0	1.4	1.6	2.0	2.6	3.0~
Folate (mcg)	115	4.3	63~	70	86	106	136	183	188~
Folate (mcg DFE)	167	7.1	85~	97	120	149	203	273	292~
Niacin (mg)	5	0.2	3~	3	4	5	6	7	8~
Riboflavin (mg)	0.8	0.02	0.5~	0.6	0.7	0.8	0.9	1.1	1.1~
Thiamin (mg)	0.5	0.01	0.3~	0.3	0.4	0.5	0.5	0.7	0.7~
<b>Minerals</b>									
Calcium (mg)	364	8.4	232~	246	306	367	418	455	518~
Iron (mg)	4.6	0.17	2.5~	2.9	3.4	4.3	5.3	7.0	7.9~
Magnesium (mg)	59	1.2	40~	43	49	58	68	77	79~
Phosphorus (mg)	371	7.8	233~	251	316	380	419	467	501~
Potassium (mg)	652	12.9	395~	473	538	673	746	820	897~
Sodium (mg)	594	15.7	340~	371	464	586	725	817	922~
Zinc (mg)	2.9	0.10	1.6~	1.8	2.2	2.7	3.4	4.3	5.2~
<b>Other Components</b>									
Cholesterol (mg)	46	2.1	13~	19	30	42	56	80	92~
Dietary fiber (g)	3	0.1	2~	2	2	3	3	5	5~

Table G.32 (continued)

	Average	SE	Percentiles						
			5th	10th	25th	50th	75th	90th	95th
Percentage of Calories from:									
Total fat	24.4	0.43	17.5~	18.7	21.3	24.4	27.7	29.9	31.4~
Saturated fat	8.5	0.18	5.7~	6.5	7.2	8.4	9.5	10.7	11.4~
Monosaturated fat	9.2	0.24	5.8~	6.3	7.4	8.8	10.7	12.3	13.7~
Polyunsaturated fat	4.8	0.12	2.8~	3.1	3.9	4.6	5.7	6.6	7.2~
Linoleic acid	4.3	0.11	2.5~	2.7	3.4	4.2	5.1	6.0	6.3~
Alpha-linolenic acid	0.4	0.02	0.2~	0.2	0.3	0.4	0.5	0.6	0.7~
Carbohydrate	63.4	0.51	54.2~	57.0	59.7	64.1	67.4	69.3	71.2~
Protein	13.7	0.18	11.1~	11.7	12.6	13.6	14.9	16.1	16.5~
<b>Number of Schools</b>	<b>247</b>								

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009-2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

AT = Alpha-tocopherol; DFE = Dietary folate equivalents; RE = Retinol equivalent; RAE = Retinol activity equivalent; SE=Standard error.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.33. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Offered, Relative to SMI Nutrition Standards and Related Benchmarks, by School Size**

	Standard/ Recommendation	School Size			All Schools
		Small (Less than 500 Students)	Medium (500–999 Students)	Large (1,000 or more Students)	
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	22.3	22.8	22.1	22.5
Protein	25%	50.1	50.4 <sup>β</sup>	38.2 <sup>γ</sup>	48.9
Vitamin A <sup>a</sup>	25%	40.2 <sup>α</sup>	37.9 <sup>β</sup>	31.7 <sup>γ</sup>	38.4
Vitamin C	25%	67.8	72.2	66.1	69.2
Calcium	25%	46.7	47.2 <sup>β</sup>	37.8 <sup>γ</sup>	45.9
Iron	25%	45.3	44.9 <sup>β</sup>	40.3 <sup>γ</sup>	44.6
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	22.8	22.1	23.2	22.6
Saturated Fat	< 10%	8.5 <sup>α</sup>	7.9	8.1	8.2
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	41	42 <sup>β</sup>	51 <sup>γ</sup>	42
Sodium	< 575 mg <sup>c,d</sup>	560	582 <sup>β</sup>	693 <sup>γ</sup>	583
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	6 <sup>α</sup>	7	7 <sup>γ</sup>	6
<b>Number of Schools</b>		<b>322</b>	<b>288</b>	<b>193</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between small and medium size schools is significantly different from zero at the .05 level.

<sup>β</sup>Difference between middle and large size schools is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between small and large size schools is significantly different from zero at the .05 level.

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**Table G.34. Proportion of Schools Offering School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks, by School Size**

	Standard/ Recommendation	School Size			All Schools
		Small (Less than 500 Students)	Medium (500–999 Students)	Large (1,000 or more Students)	
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	19.1	22.3	18.6	20.2
Protein	25% of 1989 RDA	>97	>97	>97	>97
Vitamin A	25% of 1989 RDA <sup>a</sup>	93.5	92.5	86.4	92.3
Vitamin C	25% of 1989 RDA	96.1~	>97	>97	97.0
Calcium	25% of 1989 RDA	>97	>97	>97	>97
Iron	25% of 1989 RDA	89.9	93.1	93.6~	91.5
Percentage of Calories from Total Fat	≤ 30%	91.5	95.7~	93.2	93.2
Percentage of Calories from Saturated Fat	< 10%	78.0	85.1	84.6	81.3
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	29.3	27.2	37.4	29.4
Cholesterol	< 75 mg <sup>b,c</sup>	93	92 <sup>β</sup>	81 <sup>γ</sup>	91
Sodium	< 575 mg <sup>b,c</sup>	67	60 <sup>β</sup>	44 <sup>γ</sup>	62
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		13.1	17.9	12.2	14.7
SMI Standards for all RDA Nutrients <sup>c</sup>		83.6	86.7	82.8	84.6
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		68.1	74.3	70.0	70.6
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		10.7	16.4	20.7 <sup>γ</sup>	13.9
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		6.9	10.7	10.9	8.7
<b>Number of Schools</b>		<b>322</b>	<b>288</b>	<b>193</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.



Table G.34 (continued)

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between small and medium size schools is significantly different from zero at the .05 level.

<sup>b</sup>Difference between middle and large size schools is significantly different from zero at the .05 level.

<sup>c</sup>Difference between small and large size schools is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.35. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Served to Students, Relative to SMI Nutrition Standards and Related Benchmarks, by School Size**

	Standard/ Recommendation	School Size			All Schools
		Small (Less than 500 Students)	Medium (500–999 Students)	Large (1,000 or more Students)	
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	22.4 <sup>α</sup>	21.1 <sup>β</sup>	19.5 <sup>γ</sup>	21.6
Protein	25%	49.9 <sup>α</sup>	46.3 <sup>β</sup>	33.6 <sup>γ</sup>	46.8
Vitamin A <sup>a</sup>	25%	36.6 <sup>α</sup>	32.2 <sup>β</sup>	23.6 <sup>γ</sup>	33.5
Vitamin C	25%	62.2	62.5	57.7	61.8
Calcium	25%	43.4 <sup>α</sup>	40.1 <sup>β</sup>	29.1 <sup>γ</sup>	40.6
Iron	25%	41.6	40.0 <sup>β</sup>	31.9 <sup>γ</sup>	39.9
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	24.8	24.4 <sup>β</sup>	26.1 <sup>γ</sup>	24.8
Saturated Fat	< 10%	8.9 <sup>α</sup>	8.4	8.8	8.7
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	49	45 <sup>β</sup>	55	48
Sodium	< 575 mg <sup>c,d</sup>	621	595 <sup>β</sup>	678 <sup>γ</sup>	618
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	6	6	6	6
<b>Number of Schools</b>		<b>322</b>	<b>287</b>	<b>193</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. The methodology is fully described in Appendix D of this report.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between small and medium size schools is significantly different from zero at the .05 level.

<sup>β</sup>Difference between middle and large size schools is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between small and large size schools is significantly different from zero at the .05 level.

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**Table G.36. Proportion of Schools *Serving* School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks, by School Size**

	Standard/ Recommendation	School Size			All Schools
		Small (Less than 500 Students)	Medium (500–999 Students)	Large (1,000 or more Students)	
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	24.9 <sup>α</sup>	14.6 <sup>β</sup>	5.4 <sup>γ~</sup>	19.0
Protein	25% of 1989 RDA	95.6	95.8 <sup>β~</sup>	84.5 <sup>γ</sup>	94.4
Vitamin A	25% of 1989 RDA <sup>a</sup>	82.3 <sup>α</sup>	72.0 <sup>β</sup>	40.9 <sup>γ</sup>	73.9
Vitamin C	25% of 1989 RDA	93.7	95.2	91.9	94.1
Calcium	25% of 1989 RDA	95.8 <sup>α</sup>	90.9 <sup>β</sup>	66.4 <sup>γ</sup>	90.7
Iron	25% of 1989 RDA	87.7	88.8 <sup>β</sup>	74.2 <sup>γ</sup>	86.6
Percentage of Calories from Total Fat	≤ 30%	86.1	87.3 <sup>β</sup>	74.3 <sup>γ</sup>	85.2
Percentage of Calories from Saturated Fat	< 10%	72.7	79.3	76.3	75.5
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	39.1	42.3	50.0	41.5
Cholesterol	< 75 mg <sup>b,c</sup>	84 <sup>α</sup>	93 <sup>β</sup>	79	87
Sodium	< 575 mg <sup>b,c</sup>	45	49	42	46
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		14.3	8.5	<3 <sup>γ</sup>	10.9
SMI Standards for all RDA Nutrients <sup>c</sup>		72.5	66.1 <sup>β</sup>	31.0 <sup>γ</sup>	65.5
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		56.5	53.5 <sup>β</sup>	24.5 <sup>γ</sup>	51.8
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		12.0	11.8	9.5	11.7
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		7.7	5.8	5.0 <sup>~</sup>	6.7
<b>Number of Schools</b>		<b>322</b>	<b>287</b>	<b>193</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Table G.36 (continued)

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. One school did not provide adequate data on the number of servings selected for each menu item and was excluded from the weighted analysis. The methodology is fully described in Appendix D of this report.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between small and medium size schools is significantly different from zero at the .05 level.

<sup>b</sup>Difference between middle and large size schools is significantly different from zero at the .05 level.

<sup>c</sup>Difference between small and large size schools is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.37. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Offered, Relative to SMI Nutrition Standards and Related Benchmarks, by District Child Poverty Level**

	Standard/ Recommendation	District Child Poverty Level		All Schools
		Low Poverty (Less than 30% of children in poverty)	Higher Poverty (30% or more of children in poverty)	
<b>Average Percentage of 1989 REA/RDA</b>				
Calories	25%	23.1 <sup>a</sup>	21.4	22.5
Protein	25%	50 <sup>a</sup>	46.9	48.9
Vitamin A <sup>a</sup>	25%	39.4 <sup>a</sup>	36.7	38.4
Vitamin C	25%	70.1	67.7	69.2
Calcium	25%	46.8 <sup>a</sup>	44.2	45.9
Iron	25%	46.0	42.1	44.6
<b>Average Percentage of Calories from:</b>				
Total Fat	≤ 30% <sup>b</sup>	22.8	22.4	22.6
Saturated Fat	< 10%	8.4 <sup>a</sup>	7.9	8.2
<b>Average Amount</b>				
Cholesterol	< 75 mg <sup>c,d</sup>	44 <sup>a</sup>	39	42
Sodium	< 575 mg <sup>c,d</sup>	590	571	583
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	6	7	6
<b>Number of Schools</b>		<b>526</b>	<b>277</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between low and higher district child poverty level is significantly different from zero at the .05 level.

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**Table G.38. Proportion of Schools *Offering* School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks, by District Child Poverty Level**

	Standard/ Recommendation	District Child Poverty Level		All Schools
		Low Poverty (Less than 30% of children in poverty)	Higher Poverty (30% or more of children in poverty)	
<b>SMI Nutrition Standards</b>				
Calories	25% of 1989 REA	23.2 <sup>α</sup>	15.0	20.2
Protein	25% of 1989 RDA	>97	>97	>97
Vitamin A	25% of 1989 RDA <sup>a</sup>	93.9	89.5	92.3
Vitamin C	25% of 1989 RDA	96.9	>97	97.0
Calcium	25% of 1989 RDA	>97	>97	>97
Iron	25% of 1989 RDA	92.2	90.2	91.5
Percentage of Calories from Total Fat	≤ 30%	92.5	94.5	93.2
Percentage of Calories from Saturated Fat	< 10%	80.3	83.1	81.3
<b>Other Nutrition Benchmarks</b>				
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	30.1	28.3	29.4
Cholesterol	< 75 mg <sup>b,c</sup>	88 <sup>α</sup>	96~	91
Sodium	< 575 mg <sup>b,c</sup>	64	58	62
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	0	<3
<b>Combinations of Standards</b>				
All SMI Standards		15.8	12.8	14.7
SMI Standards for all RDA Nutrients <sup>c</sup>		85.0	83.9	84.6
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		69.5	72.5	70.6
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		15.1	11.6	13.9
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		11.3 <sup>α</sup>	4.2	8.7
<b>Number of Schools</b>		<b>526</b>	<b>277</b>	<b>803</b>



Table G.38 (continued)

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between low and higher district child poverty level is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.39. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Served to Students, Relative to SMI Nutrition Standards and Related Benchmarks, by District Child Poverty Level**

	Standard/ Recommendation	District Child Poverty Level		All Schools
		Low Poverty (Less than 30% of children in poverty)	Higher Poverty (30% or more of children in poverty)	
<b>Average Percentage of 1989 REA/RDA</b>				
Calories	25%	21.5	21.8	21.6
Protein	25%	46.5	47.2	46.8
Vitamin A <sup>a</sup>	25%	33.6	33.5	33.5
Vitamin C	25%	60.4	64.2	61.8
Calcium	25%	40.6	40.6	40.6
Iron	25%	39.6	40.6	39.9
<b>Average Percentage of Calories from:</b>				
Total Fat	≤ 30% <sup>b</sup>	24.7	24.9	24.8
Saturated Fat	< 10%	8.8	8.6	8.7
<b>Average Amount</b>				
Cholesterol	< 75 mg <sup>c,d</sup>	48	48	48
Sodium	< 575 mg <sup>c,d</sup>	601 <sup>e</sup>	649	618
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	6	6	6
<b>Number of Schools</b>		<b>525</b>	<b>277</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. The methodology is fully described in Appendix D of this report.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>e</sup>Difference between low and higher district child poverty level is significantly different from zero at the .05 level.

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**Table G.40. Proportion of Schools *Serving* School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks, by District Child Poverty Level**

	Standard/ Recommendation	District Child Poverty Level		All Schools
		Low Poverty (Less than 30% of children in poverty)	Higher Poverty (30% or more of children in poverty)	
<b>SMI Nutrition Standards</b>				
Calories	25% of 1989 REA	19.0	19.0	19.0
Protein	25% of 1989 RDA	94.5	94.3	94.4
Vitamin A	25% of 1989 RDA <sup>a</sup>	75.3	71.5	73.9
Vitamin C	25% of 1989 RDA	93.5	95.1	94.1
Calcium	25% of 1989 RDA	91.3	89.7	90.7
Iron	25% of 1989 RDA	86.1	87.4	86.6
Percentage of Calories from Total Fat	≤ 30%	85.2	85.1	85.2
Percentage of Calories from Saturated Fat	< 10%	73.8	78.5	75.5
<b>Other Nutrition Benchmarks</b>				
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	42.5	39.8	41.5
Cholesterol	< 75 mg <sup>b,c</sup>	86	88	87
Sodium	< 575 mg <sup>b,c</sup>	51 <sup>α</sup>	37	46
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	0	<3
<b>Combinations of Standards</b>				
All SMI Standards		9.5	13.3	10.9
SMI Standards for all RDA Nutrients <sup>c</sup>		65.9	65.4	65.5
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		50.4	54.3	51.8
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		12.5	10.3	11.7
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		7.1	6.0	6.7
<b>Number of Schools</b>		<b>525</b>	<b>277</b>	<b>802</b>

Table G.40 (continued)

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. One school did not provide adequate data on the number of servings selected for each menu item and was excluded from the weighted analysis. The methodology is fully described in Appendix D of this report.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between low and higher district child poverty level is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.41. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Offered, Relative to SMI Nutrition Standards and Related Benchmarks, by Community Type**

	Standard/ Recommendation	Community Type			All Schools
		Urban	Suburban	Rural	
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	23.1	22.4	21.9	22.5
Protein	25%	50.9	48.0	48.3	48.9
Vitamin A <sup>a</sup>	25%	38.5	38.9	37.7	38.4
Vitamin C	25%	69.6	69.3	68.7	69.2
Calcium	25%	47.1	45.8	44.8 <sup>γ</sup>	45.9
Iron	25%	46.3	45.5	41.5	44.6
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>β</sup>	21.9	22.4 <sup>β</sup>	23.8 <sup>γ</sup>	22.6
Saturated Fat	< 10%	7.8	8.3	8.6 <sup>γ</sup>	8.2
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	44	41	43	42
Sodium	< 575 mg <sup>c,d</sup>	606	566	586	583
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	7 <sup>α</sup>	6	6 <sup>γ</sup>	6
<b>Number of Schools</b>		<b>264</b>	<b>351</b>	<b>188</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between urban and suburban community types is significantly different from zero at the .05 level.

<sup>β</sup>Difference between suburban and rural community types is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between urban and rural community types is significantly different from zero at the .05 level.

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**Table G.42. Proportion of Schools Offering School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks, by Community Type**

	Standard/ Recommendation	Community Type			All Schools
		Urban	Suburban	Rural	
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	25.8	19.4	15.7	20.2
Protein	25% of 1989 RDA	>97	>97	>97	>97
Vitamin A	25% of 1989 RDA <sup>a</sup>	94.6	92.6	89.6	92.3
Vitamin C	25% of 1989 RDA	96.7~	>97	96.5~	97.0
Calcium	25% of 1989 RDA	>97	>97	>97	>97
Iron	25% of 1989 RDA	95.7~	91.8	86.6 <sup>r</sup>	91.5
Percentage of Calories from Total Fat	≤ 30%	95.5~	92.7	91.7	93.2
Percentage of Calories from Saturated Fat	< 10%	83.1	82.2	78.0	81.3
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	29.7	24.7 <sup>β</sup>	36.5	29.4
Cholesterol	< 75 mg <sup>b,c</sup>	89	93	91	91
Sodium	< 575 mg <sup>b,c</sup>	53 <sup>α</sup>	69	60	62
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		20.7 <sup>α</sup>	12.0	12.7	14.7
SMI Standards for all RDA Nutrients <sup>c</sup>		88.6	84.6	80.5	84.6
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		73.9	71.0	66.5	70.6
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		15.9	11.9	14.8	13.9
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		11.5	6.9	8.6	8.7
<b>Number of Schools</b>		<b>264</b>	<b>351</b>	<b>188</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.



Table G.42 (continued)

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between urban and suburban community types is significantly different from zero at the .05 level.

<sup>b</sup>Difference between suburban and rural community types is significantly different from zero at the .05 level.

<sup>c</sup>Difference between urban and rural community types is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.43. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Served to Students, Relative to SMI Nutrition Standards and Related Benchmarks, by Community Type**

	Standard/ Recommendation	Community Type			All Schools
		Urban	Suburban	Rural	
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	20.6	21.2 <sup>β</sup>	23.2 <sup>γ</sup>	21.6
Protein	25%	45.1	45.4 <sup>β</sup>	50.7 <sup>γ</sup>	46.8
Vitamin A <sup>a</sup>	25%	32.1	33.2	35.5 <sup>γ</sup>	33.5
Vitamin C	25%	63.8	59.9	62.6	61.8
Calcium	25%	39.3	39.8 <sup>β</sup>	43.2 <sup>γ</sup>	40.6
Iron	25%	40.1	39.8	40.0	39.9
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>β</sup>	23.6	24.6 <sup>β</sup>	26.2 <sup>γ</sup>	24.8
Saturated Fat	< 10%	8.3	8.7	9.2 <sup>γ</sup>	8.7
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	45	45 <sup>β</sup>	56 <sup>γ</sup>	48
Sodium	< 575 mg <sup>c,d</sup>	576	602 <sup>β</sup>	687 <sup>γ</sup>	618
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	7 <sup>a</sup>	6	6 <sup>γ</sup>	6
<b>Number of Schools</b>		<b>264</b>	<b>351</b>	<b>187</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. The methodology is fully described in Appendix D of this report.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between urban and suburban community types is significantly different from zero at the .05 level.

<sup>β</sup>Difference between suburban and rural community types is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between urban and rural community types is significantly different from zero at the .05 level.

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**Table G.44. Proportion of Schools *Serving* School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks, by Community Type**

	Standard/ Recommendation	Community Type			All Schools
		Urban	Suburban	Rural	
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	14.1	17.3	26.8 <sup>γ</sup>	19.0
Protein	25% of 1989 RDA	95.2~	93.2	95.6~	94.4
Vitamin A	25% of 1989 RDA <sup>a</sup>	72.1	73.3	76.8	73.9
Vitamin C	25% of 1989 RDA	95.1~	94.6	92.2	94.1
Calcium	25% of 1989 RDA	89.7	89.7	93.3~	90.7
Iron	25% of 1989 RDA	83.8	88.3	86.8	86.6
Percentage of Calories from Total Fat	≤ 30%	88.0	85.3	82.1	85.2
Percentage of Calories from Saturated Fat	< 10%	79.9	73.2	74.4	75.5
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	37.7	40.5	47.0	41.5
Cholesterol	< 75 mg <sup>b,c</sup>	91	89	79 <sup>γ</sup>	87
Sodium	< 575 mg <sup>b,c</sup>	54	54 <sup>β</sup>	27 <sup>γ</sup>	46
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		7.9	9.3	16.3	10.9
SMI Standards for all RDA Nutrients <sup>c</sup>		63.2	66.7	66.1	65.5
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		51.7	51.2	52.9	51.8
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		10.7	11.0	13.8	11.7
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		<3 <sup>α</sup>	6.8	10.9 <sup>γ</sup>	6.7
<b>Number of Schools</b>		<b>264</b>	<b>351</b>	<b>187</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

Table G.44 (continued)

Note: Estimates are based on a weighted nutrient analysis of menu data for one week. A weighted nutrient analysis takes into account the frequency with which each menu item is selected by students. One school did not provide adequate data on the number of servings selected for each menu item and was excluded from the weighted analysis. The methodology is fully described in Appendix D of this report.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between urban and suburban community types is significantly different from zero at the .05 level.

<sup>b</sup>Difference between suburban and rural community types is significantly different from zero at the .05 level.

<sup>c</sup>Difference between urban and rural community types is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.45. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Offered, Relative to SMI Nutrition Standards and Related Benchmarks**

	Standard/ Recommendation	Elementary School Students	Middle School Students	High School Students	All Students
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	23.4 <sup>α</sup>	22.3 <sup>β</sup>	21.0 <sup>γ</sup>	22.4
Protein	25%	57.0 <sup>α</sup>	39.3 <sup>β</sup>	35.7 <sup>γ</sup>	46.3
Vitamin A <sup>a</sup>	25%	42.5 <sup>α</sup>	31.2	31.1 <sup>γ</sup>	36.4
Vitamin C	25%	71.8	70.7	65.6	69.5
Calcium	25%	51.7 <sup>α</sup>	37.8	36.7 <sup>γ</sup>	43.9
Iron	25%	48.2 <sup>α</sup>	39.0	39.3 <sup>γ</sup>	43.3
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	21.9 <sup>α</sup>	23.0	23.3 <sup>γ</sup>	22.6
Saturated Fat	< 10%	8.0	8.2	8.3	8.1
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	41 <sup>α</sup>	47	49 <sup>γ</sup>	45
Sodium	< 575 mg <sup>c,d</sup>	552 <sup>α</sup>	653	667 <sup>γ</sup>	611
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	7	7	7	7
<b>Number of Schools</b>		<b>282</b>	<b>264</b>	<b>257</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between elementary and middle school students is significantly different from zero at the .05 level.

<sup>β</sup>Difference between middle and high school students is significantly different from zero at the .05 level.

<sup>γ</sup>Difference between elementary and high school students is significantly different from zero at the .05 level.

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**Table G.46. Proportion of Schools Offering School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks**

	Standard/ Recommendation	Elementary School Students	Middle School Students	High School Students	All Students
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	25.6	19.1	13.4 <sup>γ</sup>	20.2
Protein	25% of 1989 RDA	>97	>97 <sup>β</sup>	>97 <sup>γ</sup>	>97
Vitamin A	25% of 1989 RDA <sup>α</sup>	>97 <sup>α</sup>	84.6	82.3 <sup>γ</sup>	90.5
Vitamin C	25% of 1989 RDA	>97	>97	>97	97.5
Calcium	25% of 1989 RDA	>97	>97	96.1~	>97
Iron	25% of 1989 RDA	93.8	91.0	90.3	92.1
Percentage of Calories from Total Fat	≤ 30%	95.6~	93.8	91.9	94.0
Percentage of Calories from Saturated Fat	< 10%	81.9	87.0	80.8	82.5
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	23.4 <sup>α</sup>	35.9	36.2 <sup>γ</sup>	30.2
Cholesterol	< 75 mg <sup>b,c</sup>	93	87	84 <sup>γ</sup>	89
Sodium	< 575 mg <sup>b,c</sup>	68 <sup>α</sup>	47	48 <sup>γ</sup>	57
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		21.0	13.0	7.1 <sup>γ</sup>	14.7
SMI Standards for all RDA Nutrients <sup>c</sup>		91.0 <sup>α</sup>	78.4	78.1 <sup>γ</sup>	84.1
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		76.1	68.9	63.9 <sup>γ</sup>	70.5
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 Dietary Guidelines Standard for Total Fat		12.5 <sup>α</sup>	20.5	16.3	15.4
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 Dietary Guidelines Standard for Total Fat		8.8 <sup>α</sup>	15.5 <sup>β</sup>	5.6	9.0
<b>Number of Schools</b>		<b>282</b>	<b>264</b>	<b>257</b>	<b>803</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>α</sup>In retinol equivalents (RE).

<sup>β</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>γ</sup>Benchmarks are one-quarter of suggested maximum daily intake.



Table G.46 (continued)

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between elementary and middle school students is significantly different from zero at the .05 level.

<sup>b</sup>Difference between middle and high school students is significantly different from zero at the .05 level.

<sup>c</sup>Difference between elementary and high school students is significantly different from zero at the .05 level.

~ Point estimate is considered less precise than estimates that are not flagged because the sample size is small or the coefficient of variation is large. The rules used in flagging estimates are described in Chapter 1. When these rules are applied, percentages close to 0 or 100 are often flagged. In this table, flagged percentages between 0 and 3 percent are displayed as <3 and flagged percentages between 97 and 100 percent are displayed as >97.

**Table G.47. Average Calorie and Nutrient Content of School Breakfast Program Breakfasts Served, Relative to SMI Nutrition Standards and Related Benchmarks**

	Standard/ Recommendation	Elementary School Students	Middle School Students	High School Students	All Students
<b>Average Percentage of 1989 REA/RDA</b>					
Calories	25%	22.0 <sup>α</sup>	20.6 <sup>β</sup>	19.1 <sup>γ</sup>	20.7
Protein	25%	53.5 <sup>α</sup>	36.5 <sup>β</sup>	32.2 <sup>γ</sup>	42.9
Vitamin A <sup>a</sup>	25%	37.2 <sup>α</sup>	25.2 <sup>β</sup>	23.4 <sup>γ</sup>	30.1
Vitamin C	25%	62.6	62.4 <sup>β</sup>	55.7 <sup>γ</sup>	60.2
Calcium	25%	45.7 <sup>α</sup>	31.5 <sup>β</sup>	28.8 <sup>γ</sup>	37.1
Iron	25%	43.3 <sup>α</sup>	32.3	32.3 <sup>γ</sup>	37.4
<b>Average Percentage of Calories from:</b>					
Total Fat	≤ 30% <sup>b</sup>	23.6 <sup>α</sup>	25.9	26.3 <sup>γ</sup>	25.0
Saturated Fat	< 10%	8.4 <sup>α</sup>	8.8	9.0 <sup>γ</sup>	8.7
<b>Average Amount</b>					
Cholesterol	< 75 mg <sup>c,d</sup>	43 <sup>α</sup>	52	54 <sup>γ</sup>	49
Sodium	< 575 mg <sup>c,d</sup>	563 <sup>α</sup>	668	679 <sup>γ</sup>	623
Dietary Fiber (g/1,000 calories)	14 <sup>c</sup>	6 <sup>α</sup>	6	6	6
<b>Number of Schools</b>		<b>282</b>	<b>263</b>	<b>257</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study-IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>The 2010 *Dietary Guidelines for Americans* recommendation for the percentage of calories from total fat is 25–35%.

<sup>c</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>d</sup>Benchmarks are one-quarter of suggested maximum daily intake.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>α</sup>Difference between elementary and middle school students is significantly different from zero at the .05 level.

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<sup>γ</sup>Difference between elementary and high school students is significantly different from zero at the .05 level.

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**Table G.48. Proportion of Schools *Serving* School Breakfast Program Breakfasts that Satisfied Each of the SMI Nutrition Standards and Related Benchmarks and Different Combinations of the Standards and Benchmarks**

	Standard/ Recommendation	Elementary School Students	Middle School Students	High School Students	All Students
<b>SMI Nutrition Standards</b>					
Calories	25% of 1989 REA	21.7 <sup>α</sup>	12.2 <sup>β</sup>	5.1 <sup>γ</sup>	14.2
Protein	25% of 1989 RDA	>97 <sup>α</sup>	93.3 <sup>β</sup>	79.2 <sup>γ</sup>	91.2
Vitamin A	25% of 1989 RDA <sup>a</sup>	89.2 <sup>α</sup>	42.4	38.0 <sup>γ</sup>	62.5
Vitamin C	25% of 1989 RDA	95.3	92.3	93.5	94.1
Calcium	25% of 1989 RDA	>97 <sup>α</sup>	78.2	67.2 <sup>γ</sup>	83.8
Iron	25% of 1989 RDA	92.9 <sup>α</sup>	73.4	75.9 <sup>γ</sup>	83.2
Percentage of Calories from Total Fat	≤ 30%	89.2 <sup>α</sup>	79.8	76.5 <sup>γ</sup>	83.0
Percentage of Calories from Saturated Fat	< 10%	79.9	76.6	72.8	76.8
<b>Other Nutrition Benchmarks</b>					
Percentage of Calories from Total Fat	25% – 35% <sup>b</sup>	32.8 <sup>α</sup>	53.3	53.4 <sup>γ</sup>	43.9
Cholesterol	< 75 mg <sup>b,c</sup>	93 <sup>α</sup>	82	81 <sup>γ</sup>	87
Sodium	< 575 mg <sup>b,c</sup>	54 <sup>α</sup>	37	44	47
Dietary Fiber (g/1,000 calories)	14 <sup>b</sup>	<3	<3	<3	<3
<b>Combinations of Standards</b>					
All SMI Standards		14.1 <sup>α</sup>	5.7 <sup>β</sup>	<3 <sup>γ</sup>	8.1
SMI Standards for all RDA Nutrients <sup>c</sup>		82.1 <sup>α</sup>	35.9	28.0 <sup>γ</sup>	54.5
SMI Standards for all RDA Nutrients <sup>d</sup> and SMI Standard for Saturated Fat		66.8 <sup>α</sup>	29.1 <sup>β</sup>	19.6 <sup>γ</sup>	43.3
SMI Standards for all RDA Nutrients <sup>d</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		12.4	11.1	7.6	10.5
Updated Standards for all RDA Nutrients <sup>e</sup> SMI Standard for Saturated Fat, and 2010 <i>Dietary Guidelines</i> Standard for Total Fat		6.1	9.6 <sup>β</sup>	<3	5.7
<b>Number of Schools</b>		<b>282</b>	<b>263</b>	<b>257</b>	<b>802</b>

Source: School Nutrition Dietary Assessment Study–IV, Menu Survey, school year 2009–2010. Tabulations prepared by Mathematica Policy Research are weighted to be representative of all public schools offering the National School Lunch Program.

<sup>a</sup>In retinol equivalents (RE).

<sup>b</sup>Based on the 2010 *Dietary Guidelines for Americans*.

<sup>c</sup>Benchmarks are one-quarter of suggested maximum daily intake.

Table G.48 (continued)

<sup>d</sup>Includes protein, vitamin A, vitamin C, calcium and iron.

<sup>e</sup>Updated to reflect RDA values included in the Dietary Reference Intakes.

RDA = Recommended Dietary Allowance; REA = Recommended Energy Allowance; SMI = School Meals Initiative for Healthy Children.

<sup>a</sup>Difference between elementary and middle school students is significantly different from zero at the .05 level.

<sup>b</sup>Difference between middle and high school students is significantly different from zero at the .05 level.

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