

Indicators of Diet Quality, Nutrition, and Health for Americans by Program Participation Status, 2011–2016: WIC Report



Appendix G. Supplements



USDA is an equal opportunity provider, employer, and lender

Indicators of Diet Quality, Nutrition, and Health for Americans by Program Participation Status, 2011–2016: WIC Report

Appendix G. Supplements



October 2021

Authors

Stacy Gleason
Dani Hansen
Breanna Wakar

Submitted to

USDA Food and Nutrition Service,
Office of Policy Support
1320 Braddock Place
Alexandria, VA 22314

Project Officer

Michael Burke

Submitted by

Insight Policy Research, Inc.
1901 North Moore Street
Suite 1100
Arlington, VA 22209

Project Director

Stacy Gleason

Contents

Appendix G. Supplements	4
Table G.1. Percentage of Young Children WIC Participants and Nonparticipants Taking Dietary Supplements by Age	4
Table G.2. Mean Usual Intakes of Micronutrients From Foods and Dietary Supplements for Young Children WIC Participants and Nonparticipants	5
Table G.3. Percentage Contribution of Dietary Supplements to Total Micronutrient Intakes on a Given Day for Young Children WIC Participants and Nonparticipants	8
Table G.4. Percentage Contribution of Dietary Supplements to Recommended Micronutrient Intakes on a Given Day for Young Children WIC Participants and Nonparticipants	11

Appendix G. Supplements

Table G.1. Percentage of Young Children WIC Participants and Nonparticipants Taking Dietary Supplements by Age

Subgroup	All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Sample size	2,314	–	902	–	729	–	671	–
Children 1–4 years old	29.5	(1.88)	20.3	(1.79)	26.3	(2.59)	38.3 ***	(2.88)
1-year-olds	16.9	(2.15)	10.7	(2.19)	17.4	(4.41)	23.1 **	(4.10)
2-year-olds	31.4	(2.82)	22.5	(3.71)	30.5	(4.45)	39.8 **	(4.49)
3-year-olds	38.0	(4.06)	23.5	(3.96)	28.4	(4.69)	52.6 ***	(5.91)
4-year-olds	31.1	(3.16)	24.3	(3.54)	28.5	(5.16)	37.2	(5.72)
Any dietary supplement by Federal Poverty Guidelines	29.5	(1.88)	20.3	(1.79)	26.3	(2.59)	38.3 ***	(2.88)
< 100 percent	19.3	(2.46)	16.7	(2.15)	22.3	(3.90)	–	–
101–185 percent	28.0	(2.86)	30.0	(4.01)	28.4	(3.27)	–	–
> 185 percent	37.4	(2.61)	20.4	(4.92)	44.3 **	(5.90)	38.3 **	(2.88)

Notes: “All young children” includes children with missing WIC participation or income. A multivitamin is identified as a dietary supplement that contains three or more vitamins and at least one mineral. Estimates are weighted to account for differential probabilities of selection, nonresponse to survey instruments, and differences between the final sample and the U.S. civilian noninstitutionalized population to ensure different age distributions of NSLP participants and nonparticipants are accounted for. Significant differences in estimates are noted by * $p < .05$, ** $p < .01$, or *** $p < .001$. Differences were tested using two-sample t -tests comparing WIC participants with income-eligible nonparticipants or higher income nonparticipants. WIC participants consist of children in households that at the time of data collection reported receiving WIC benefits.

– Denotes not applicable

Source: National Health And Nutrition Examination Survey (NHANES) 2011–2016 dietary recalls. Sample includes NHANES children 1–4 years old with complete day 1 dietary recall data.

Table G.2. Mean Usual Intakes of Micronutrients From Foods and Dietary Supplements for Young Children WIC Participants and Nonparticipants

Subgroup	All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Dietary Supplement Users: Intake From Food								
Sample size	578	—	167	—	179	—	231	—
Vitamin B6 (mg)	1.3	(0.05)	1.4	(0.06)	1.5	(0.08)	1.2	(0.07)
Vitamin B12 (mcg)	3.8	(0.11)	3.8	(0.17)	4.3	(0.28)	3.6	(0.12)
Vitamin C (mg)	77.8	(5.08)	95.5	(9.14)	82.3	(8.22)	69.0 *	(6.55)
Vitamin D (mcg)	6.3	(0.22)	6.2	(0.34)	7.2	(0.54)	6.0	(0.26)
Folate (mcg DFE)	377.8	(12.34)	423.3	(21.99)	396.9	(22.78)	352.0 **	(16.42)
Niacin (mg)	14.5	(0.48)	14.6	(0.52)	16.1	(0.80)	13.8	(0.70)
Riboflavin (mg)	1.7	(0.04)	1.7	(0.05)	1.8	(0.09)	1.7	(0.05)
Thiamin (mg)	1.2	(0.03)	1.2	(0.04)	1.3	(0.07)	1.1	(0.03)
Calcium (mg)	944.4	(19.82)	926.2	(48.55)	1014.0	(45.85)	925.8	(27.38)
Choline (mg)	200.2	(5.56)	207.6	(8.18)	212.5	(10.69)	193.0	(9.49)
Copper (mg)	0.7	(0.02)	0.7	(0.03)	0.7	(0.03)	0.7	(0.03)
Iron (mg)	10.3	(0.31)	11.2	(0.44)	10.7	(0.57)	9.8 *	(0.44)
Magnesium (mg)	190.5	(5.04)	191.9	(7.09)	192.7	(6.08)	190.9	(9.09)
Phosphorus (mg)	1026.9	(18.38)	1019.7	(34.43)	1078.2	(38.74)	1012.7	(32.13)
Potassium (mg)	1845.8	(44.89)	1949.9	(84.58)	1948.4	(71.40)	1772.4	(60.38)
Selenium (mcg)	69.9	(1.61)	70.4	(1.86)	71.2	(2.56)	69.6	(2.83)
Zinc (mg)	7.3	(0.15)	7.3	(0.22)	8.1 *	(0.28)	6.9	(0.25)
Dietary Supplement Users: Intake From Supplements								
Sample size	578	—	167	—	179	—	231	—
Vitamin B6 (mg)	1.1	(0.14)	1.4	(0.28)	0.9	(0.08)	1.1	(0.26)
Vitamin B12 (mcg)	3.8	(0.56)	7.0 u	(2.60)	2.8	(0.21)	3.3	(0.34)
Vitamin C (mg)	35.4	(3.30)	45.4	(6.13)	34.2	(3.66)	33.9	(5.04)
Vitamin D (mcg)	8.4	(0.48)	9.7	(0.77)	8.7	(0.61)	8.0	(0.66)

Subgroup	All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Folate (mcg DFE)	247.6	(11.61)	313.0	(29.63)	236.6 *	(21.48)	233.9 *	(15.98)
Niacin (mg)	3.7	(0.37)	5.0	(0.91)	4.4	(0.60)	3.1	(0.57)
Riboflavin (mg)	0.4	(0.08)	0.9 u	(0.28)	0.4	(0.06)	0.3 *	(0.06)
Thiamin (mg)	0.4	(0.08)	0.8 u	(0.28)	0.4	(0.07)	0.3 *	(0.05)
Calcium (mg)	27.1	(5.85)	53.7 u	(24.84)	26.0	(4.87)	19.0	(4.93)
Choline (mg)	4.8	(0.71)	6.8	(1.40)	6.1	(1.18)	3.7	(0.95)
Copper (mg)	0.3	(0.04)	0.5	(0.12)	0.3	(0.06)	0.2	(0.06)
Iron (mg)	3.2	(0.46)	5.1	(1.13)	3.5	(0.60)	2.5 *	(0.59)
Magnesium (mg)	3.1 u	(1.24)	9.3 u	(6.39)	2.3	(0.52)	1.4	(0.38)
Phosphorus (mg)	10.6	(2.79)	26.0 u	(12.88)	9.5 u	(2.87)	6.4 u	(2.24)
Potassium (mg)	0.4 u	(0.22)	1.8 u	(1.13)	0.2 u	(0.15)	0.0 u	(0.01)
Selenium (mcg)	0.2 u	(0.12)	0.6 u	(0.53)	0.4 u	(0.33)	0.0 u	(0.01)
Zinc (mg)	2.8	(0.23)	4.0	(0.64)	2.7	(0.33)	2.5 *	(0.30)
Dietary Supplement Nonusers: Intake From Food								
Sample size	1,736	–	735	–	550	–	440	–
Vitamin B6 (mg)	1.3	(0.02)	1.3	(0.04)	1.3	(0.03)	1.3	(0.03)
Vitamin B12 (mcg)	4.0	(0.07)	4.1	(0.12)	4.1	(0.13)	3.9	(0.13)
Vitamin C (mg)	76.9	(2.43)	85.7	(3.35)	78.1	(3.38)	67.3 **	(4.66)
Vitamin D (mcg)	6.8	(0.17)	6.9	(0.24)	6.8	(0.23)	6.7	(0.25)
Folate (mcg DFE)	380.3	(8.61)	387.1	(14.89)	378.6	(12.12)	380.4	(21.05)
Niacin (mg)	14.3	(0.24)	14.3	(0.36)	14.6	(0.36)	14.0	(0.44)
Riboflavin (mg)	1.7	(0.03)	1.7	(0.03)	1.7	(0.04)	1.8	(0.05)
Thiamin (mg)	1.2	(0.02)	1.1	(0.03)	1.2	(0.03)	1.2	(0.04)
Calcium (mg)	968.4	(17.90)	956.2	(24.64)	944.6	(35.63)	1012.2	(29.04)
Choline (mg)	212.2	(4.52)	215.6	(5.50)	215.4	(8.59)	206.2	(5.15)
Copper (mg)	0.7	(0.01)	0.7	(0.02)	0.7	(0.02)	0.7	(0.02)
Iron (mg)	10.5	(0.22)	10.8	(0.40)	10.2	(0.37)	10.5	(0.49)

Subgroup	All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Magnesium (mg)	188.3	(2.43)	189.8	(3.89)	185.5	(3.87)	190.4	(3.93)
Phosphorus (mg)	1040.3	(14.84)	1032.4	(20.49)	1027.1	(25.01)	1066.7	(24.51)
Potassium (mg)	1902.6	(30.35)	1951.0	(38.61)	1875.1	(43.32)	1881.8	(42.49)
Selenium (mcg)	69.7	(1.14)	68.6	(1.67)	70.4	(1.90)	70.2	(2.09)
Zinc (mg)	7.6	(0.09)	7.7	(0.19)	7.7	(0.23)	7.6	(0.21)

Notes: “All young children” includes children with missing WIC participation or income. A multivitamin is identified as a dietary supplement that contains three or more vitamins and at least one mineral. Estimates are weighted to account for differential probabilities of selection, nonresponse to survey instruments, and differences between the final sample and the U.S. civilian noninstitutionalized population to ensure different age distributions of NSLP participants and nonparticipants are accounted for. Significant differences in estimates are noted by * $p < .05$, ** $p < .01$, or *** $p < .001$. Differences were tested using two-sample t -tests comparing WIC participants with income-eligible nonparticipants or higher income nonparticipants. WIC participants consist of children in households that at the time of data collection reported receiving WIC benefits.

DFE = dietary folate equivalents, mcg = micrograms, mg = milligrams

u Indicates individual estimates did not meet the standards of reliability or precision because of large coefficient of variation

– Denotes not applicable

Source: National Health And Nutrition Examination Survey (NHANES) 2011–2016 dietary recalls. Sample includes NHANES children 1–4 years old with complete day 1 dietary recall data.

Table G.3. Percentage Contribution of Dietary Supplements to Total Micronutrient Intakes on a Given Day for Young Children WIC Participants and Nonparticipants

Subgroup	All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
All Young Children								
Sample size	2,314	–	902	–	729	–	671	–
Vitamin B6 (mg)	11.1	(0.86)	7.7	(0.85)	9.1	(1.05)	14.9 ***	(1.45)
Vitamin B12 (mcg)	12.4	(0.94)	9.3	(1.07)	10.2	(1.14)	16.3 ***	(1.45)
Vitamin C (mg)	9.1	(0.77)	5.9	(0.72)	8.4 *	(1.08)	12.0 ***	(1.16)
Vitamin D (mcg)	15.6	(1.16)	11.2	(1.17)	13.9	(1.52)	20.0 ***	(1.75)
Folate (mcg DFE)	11.0	(0.84)	7.7	(0.84)	9.2	(1.14)	14.5 ***	(1.39)
Niacin (mg)	3.8	(0.41)	3.4	(0.67)	3.8	(0.50)	4.3	(0.89)
Riboflavin (mg)	3.6	(0.41)	3.5	(0.72)	3.6	(0.48)	3.9	(0.83)
Thiamin (mg)	3.9	(0.42)	3.7	(0.72)	4.0	(0.52)	4.1	(0.84)
Calcium (mg)	0.8	(0.13)	1.1 u	(0.33)	0.7	(0.10)	0.8	(0.21)
Choline (mg)	0.7	(0.13)	0.5	(0.12)	0.8	(0.17)	0.9 u	(0.29)
Copper (mg)	3.4	(0.44)	3.6	(0.86)	3.2	(0.51)	3.6	(0.95)
Iron (mg)	3.3	(0.37)	3.4	(0.75)	3.4	(0.52)	3.3	(0.69)
Magnesium (mg)	0.4	(0.08)	0.5 u	(0.22)	0.3	(0.07)	0.3 u	(0.14)
Phosphorus (mg)	0.3	(0.06)	0.4 u	(0.19)	0.2	(0.05)	0.3 u	(0.11)
Potassium (mg)	0.0 u	(0.00)	0.0 u	(0.02)	0.0 u	(0.00)	0.0 u	(0.00)
Selenium (mcg)	0.1 u	(0.04)	0.2 u	(0.12)	0.1 u	(0.08)	0.0 u	(0.01)
Zinc (mg)	6.8	(0.52)	5.5	(0.73)	5.7	(0.63)	8.5 *	(0.94)
Dietary Supplement Users								
Sample size	578	–	167	–	179	–	231	–
Vitamin B6 (mg)	36.7	(1.57)	36.5	(2.10)	33.8	(2.17)	38.9	(2.33)
Vitamin B12 (mcg)	40.8	(1.40)	43.3	(2.09)	37.7	(2.39)	41.9	(1.98)
Vitamin C (mg)	30.7	(1.62)	27.9	(2.18)	32.3	(2.32)	31.6	(2.50)
Vitamin D (mcg)	52.1	(1.70)	54.2	(2.03)	52.3	(2.73)	51.6	(2.45)
Folate (mcg DFE)	35.8	(1.42)	36.2	(1.87)	33.3	(3.01)	37.0	(1.97)

Subgroup	All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Niacin (mg)	13.0	(1.10)	16.1	(2.71)	15.0	(1.69)	11.4	(2.03)
Riboflavin (mg)	12.1	(1.12)	15.9	(2.70)	13.9	(1.68)	10.1	(1.88)
Thiamin (mg)	13.1	(1.20)	16.9	(2.79)	15.4	(1.75)	11.0	(1.98)
Calcium (mg)	2.6	(0.41)	4.7	(1.22)	2.4	(0.43)	2.0 *	(0.49)
Choline (mg)	2.5	(0.45)	2.6	(0.53)	2.9	(0.58)	2.4 u	(0.78)
Copper (mg)	10.9	(1.36)	16.7	(3.59)	11.7	(2.06)	9.2	(2.30)
Iron (mg)	11.0	(1.33)	16.3	(3.23)	13.1	(2.12)	8.7 *	(1.75)
Magnesium (mg)	1.1	(0.22)	2.1 u	(0.88)	1.2	(0.25)	0.9 u	(0.32)
Phosphorus (mg)	0.9	(0.20)	1.9 u	(0.77)	0.8 u	(0.24)	0.8 u	(0.27)
Potassium (mg)	0.0 u	(0.01)	0.1 u	(0.07)	0.0 u	(0.01)	0.0 u	(0.00)
Selenium (mcg)	0.2 u	(0.11)	0.6 u	(0.50)	0.3 u	(0.27)	0.0 u	(0.01)
Zinc (mg)	21.9	(1.15)	25.7	(2.45)	20.6	(1.78)	21.8	(1.63)
Multivitamin Users								
Sample size	466	—	126	—	148	—	191	—
Vitamin B6 (mg)	43.3	(1.56)	43.3	(2.53)	38.6	(2.02)	45.9	(2.17)
Vitamin B12 (mcg)	47.5	(1.37)	51.0	(2.36)	41.5 **	(2.22)	49.4	(1.96)
Vitamin C (mg)	33.2	(1.67)	29.0	(2.73)	33.9	(2.10)	34.8	(2.49)
Vitamin D (mcg)	58.2	(1.51)	60.1	(2.08)	55.8	(2.25)	58.6	(1.95)
Folate (mcg DFE)	43.6	(1.51)	44.0	(2.10)	39.2	(3.54)	45.3	(2.07)
Niacin (mg)	13.4	(1.20)	16.9	(3.21)	15.2	(2.17)	11.7	(2.10)
Riboflavin (mg)	12.7	(1.23)	17.2	(3.20)	14.2	(1.92)	10.7	(1.99)
Thiamin (mg)	13.8	(1.31)	18.4	(3.32)	16.1	(2.12)	11.4	(2.06)
Calcium (mg)	2.7	(0.43)	5.4	(1.39)	2.2 *	(0.41)	2.2 *	(0.51)
Choline (mg)	3.0	(0.58)	2.9	(0.70)	3.4	(0.70)	3.0 u	(0.97)
Copper (mg)	13.3	(1.76)	20.6	(4.35)	14.2	(2.79)	10.9	(2.79)
Iron (mg)	13.3	(1.68)	18.6	(3.81)	16.5	(3.17)	10.7	(2.13)
Magnesium (mg)	1.3	(0.25)	2.6 u	(1.03)	1.4	(0.33)	1.0 u	(0.36)
Phosphorus (mg)	1.1	(0.22)	2.1 u	(0.91)	0.8 u	(0.28)	0.8 u	(0.29)

Subgroup	All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Potassium (mg)	0.0 u	(0.01)	0.1 u	(0.08)	0.0 u	(0.01)	0.0 u	(0.00)
Selenium (mcg)	0.2 u	(0.12)	0.7 u	(0.58)	0.4 u	(0.32)	0.0 u	(0.01)
Zinc (mg)	26.8	(1.45)	31.6	(2.96)	24.7	(2.22)	26.6	(2.02)

Notes: “All young children” includes children with missing WIC participation or income. A multivitamin is identified as a dietary supplement that contains three or more vitamins and at least one mineral. Estimates are weighted to account for differential probabilities of selection, nonresponse to survey instruments, and differences between the final sample and the U.S. civilian noninstitutionalized population to ensure different age distributions of NSLP participants and nonparticipants are accounted for. Significant differences in estimates are noted by * $p < .05$, ** $p < .01$, or *** $p < .001$. Differences were tested using two-sample *t*-tests comparing WIC participants with income-eligible nonparticipants or higher income nonparticipants. WIC participants consist of children in households that at the time of data collection reported receiving WIC benefits.

DFE = dietary folate equivalents, mcg = micrograms, mg = milligrams

u Indicates individual estimates did not meet the standards of reliability or precision because of large coefficient of variation

– Denotes not applicable

Source: National Health And Nutrition Examination Survey (NHANES) 2011–2016 dietary recalls. Sample includes NHANES children 1–4 years old with complete day 1 dietary recall data.

Table G.4. Percentage Contribution of Dietary Supplements to Recommended Micronutrient Intakes on a Given Day for Young Children WIC Participants and Nonparticipants

Subgroup	Dietary Reference Intakes		All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Ages 1-3 Years	Age 4 Years	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
All Young Children										
Sample size	–	–	2,314	–	902	–	729	–	671	–
Vitamin B6 (mg)	0.4	0.5	78.4	(11.51)	70.8	(16.82)	55.6	(6.47)	104.5	(26.83)
Vitamin B12 (mcg)	0.7	1	146.9	(20.87)	186.4 u	(69.19)	100.7	(11.22)	163.5	(18.32)
Vitamin C (mg)	13	22	68.0	(6.96)	63.4	(10.39)	62.0	(8.65)	80.1	(11.54)
Vitamin D (mcg)	10	10	24.8	(2.05)	20.1	(2.54)	22.8	(2.73)	30.0 *	(3.01)
Folate (mcg DFE)	120	160	58.3	(4.14)	51.1	(6.77)	50.3	(5.36)	70.0 *	(6.79)
Niacin (mg)	5	6	20.9	(2.19)	20.6	(4.26)	22.0	(3.29)	21.4	(4.17)
Riboflavin (mg)	0.4	0.5	31.6	(5.46)	45.4 u	(16.03)	27.5	(3.97)	26.1	(5.19)
Thiamin (mg)	0.4	0.5	29.0	(5.38)	42.4 u	(15.83)	26.0	(4.72)	22.8	(4.54)
Calcium (mg)	500	800	1.4	(0.26)	1.8 u	(0.80)	1.2	(0.25)	1.3	(0.36)
Choline (mg)	200	250	0.7	(0.10)	0.6	(0.14)	0.8	(0.15)	0.6	(0.16)
Copper (mg)	0.26	0.34	31.3	(4.12)	37.2	(9.50)	29.1	(5.07)	30.9	(7.39)
Iron (mg)	3	4.1	28.6	(3.55)	33.2	(7.77)	29.8	(5.21)	27.1	(5.69)
Magnesium (mg)	65	110	1.1 u	(0.36)	2.2 u	(1.45)	0.9	(0.19)	0.7	(0.19)
Phosphorus (mg)	380	405	0.8	(0.22)	1.5 u	(0.79)	0.6	(0.16)	0.6 u	(0.23)
Potassium (mg)	2,000	2,300	0.0 u	(0.00)	0.0 u	(0.01)	0.0 u	(0.00)	0.0 u	(0.00)
Selenium (mcg)	17	23	0.4 u	(0.21)	0.7 u	(0.58)	0.6 u	(0.54)	0.0 u	(0.04)
Zinc (mg)	2.5	4	29.5	(2.52)	29.3	(5.11)	27.0	(3.39)	32.9	(4.22)

Subgroup	Dietary Reference Intakes		All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Ages 1–3 Years	Age 4 Years	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Dietary Supplement Users										
Sample size	–	–	578	–	167	–	179	–	231	–
Vitamin B6 (mg)	0.4	0.5	256.5	(34.31)	324.8	(66.85)	205.1	(18.22)	268.8	(63.80)
Vitamin B12 (mcg)	0.7	1	478.1	(58.79)	829.6 u	(264.11)	372.9	(29.35)	419.4	(38.23)
Vitamin C (mg)	13	22	237.0	(20.77)	292.1	(34.36)	239.4	(26.72)	226.4	(33.37)
Vitamin D (mcg)	10	10	84.5	(4.77)	96.9	(7.68)	87.0	(6.11)	80.2	(6.63)
Folate (mcg DFE)	120	160	187.7	(8.71)	236.4	(20.93)	182.0 *	(17.31)	176.4 *	(12.07)
Niacin (mg)	5	6	70.8	(6.85)	94.1	(16.60)	85.4	(11.74)	58.3	(10.61)
Riboflavin (mg)	0.4	0.5	104.7	(18.15)	203.0 u	(66.85)	105.4	(14.62)	70.0	(12.56)
Thiamin (mg)	0.4	0.5	95.5	(17.82)	189.3 u	(66.28)	99.1	(17.35)	61.0	(10.92)
Calcium (mg)	500	800	4.5	(0.82)	8.0 u	(3.12)	4.8	(0.99)	3.2	(0.80)
Choline (mg)	200	250	2.3	(0.32)	3.2	(0.66)	2.9	(0.56)	1.7 *	(0.42)
Copper (mg)	0.26	0.34	100.7	(13.35)	170.5	(39.44)	107.0	(20.63)	79.7 *	(18.58)
Iron (mg)	3	4.1	96.8	(13.61)	154.6	(32.35)	112.2	(19.01)	75.8 *	(18.12)
Magnesium (mg)	65	110	3.5 u	(1.14)	9.8 u	(5.83)	3.2	(0.75)	1.7	(0.41)
Phosphorus (mg)	380	405	2.7	(0.70)	6.6 u	(3.19)	2.5 u	(0.75)	1.6 u	(0.56)
Potassium (mg)	2,000	2,300	0.0 u	(0.01)	0.1 u	(0.05)	0.0 u	(0.01)	0.0 u	(0.00)
Selenium (mcg)	17	23	1.0 u	(0.60)	2.9 u	(2.32)	2.1 u	(1.92)	0.1 u	(0.07)
Zinc (mg)	2.5	4	95.8	(7.36)	136.3	(19.95)	98.6	(12.49)	84.2 *	(9.47)

Subgroup	Dietary Reference Intakes		All Young Children		WIC Participants		Income-Eligible Nonparticipants		Higher Income Nonparticipants	
	Ages 1–3 Years	Age 4 Years	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error	Percent	Standard Error
Multivitamin Users										
Sample size	–	–	466	–	126	–	148	–	191	–
Vitamin B6 (mg)	0.4	0.5	255.2	(16.02)	321.1	(42.02)	233.4	(19.11)	247.4	(18.42)
Vitamin B12 (mcg)	0.7	1	551.0	(61.71)	940.1 u	(300.17)	423.9	(32.11)	494.4	(43.98)
Vitamin C (mg)	13	22	239.0	(22.58)	263.6	(34.97)	232.5	(25.08)	238.4	(30.62)
Vitamin D (mcg)	10	10	92.6	(5.11)	102.4	(7.63)	91.3	(4.37)	91.3	(7.75)
Folate (mcg DFE)	120	160	227.4	(10.90)	284.7	(25.49)	214.2 *	(21.42)	215.5 *	(14.76)
Niacin (mg)	5	6	74.1	(7.87)	97.3	(18.87)	84.5	(12.90)	63.3	(12.91)
Riboflavin (mg)	0.4	0.5	99.8	(11.22)	164.4	(39.35)	107.1	(16.21)	77.8 *	(14.77)
Thiamin (mg)	0.4	0.5	88.3	(10.26)	149.3	(38.01)	93.8	(14.13)	68.0 *	(12.80)
Calcium (mg)	500	800	4.4	(0.79)	9.2 u	(3.58)	3.9	(0.74)	3.2	(0.66)
Choline (mg)	200	250	2.6	(0.38)	3.4	(0.76)	3.5	(0.72)	2.0	(0.51)
Copper (mg)	0.26	0.34	123.3	(17.50)	209.3	(47.96)	131.9	(28.40)	95.6 *	(23.40)
Iron (mg)	3	4.1	116.9	(17.67)	165.3	(36.20)	135.5	(26.02)	98.4	(24.52)
Magnesium (mg)	65	110	4.1 u	(1.26)	11.7 u	(6.70)	3.8	(1.02)	1.9	(0.46)
Phosphorus (mg)	380	405	3.0	(0.76)	7.5 u	(3.68)	2.5 u	(0.84)	1.8 u	(0.62)
Potassium (mg)	2,000	2,300	0.0 u	(0.01)	0.1 u	(0.06)	0.0 u	(0.01)	0.0 u	(0.00)
Selenium (mcg)	17	23	1.2 u	(0.68)	3.3 u	(2.66)	2.6 u	(2.23)	0.1 u	(0.09)
Zinc (mg)	2.5	4	118.3	(9.89)	167.9	(24.37)	121.3	(16.84)	103.1 *	(12.19)

Notes: “All young children” includes children with missing WIC participation or income. A multivitamin is identified as a dietary supplement that contains three or more vitamins and at least one mineral. Estimates are weighted to account for differential probabilities of selection, nonresponse to survey instruments, and differences between the final sample and the U.S. civilian noninstitutionalized population to ensure different age distributions of NSLP participants and nonparticipants are accounted for. Significant differences in estimates are noted by * $p < .05$, ** $p < .01$, or *** $p < .001$. Differences were tested using two-sample *t*-tests comparing WIC participants with income-eligible nonparticipants or higher income nonparticipants. WIC participants consist of children in households that at the time of data collection reported receiving WIC benefits.

DFE = dietary folate equivalents, mcg = micrograms, mg = milligrams

u Indicates individual estimates did not meet the standards of reliability or precision because of large coefficient of variation

– Denotes not applicable

Source: National Health And Nutrition Examination Survey (NHANES) 2011–2016 dietary recalls. Sample includes NHANES children 1–4 years old with complete day 1 dietary recall data.