

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



Appendix B. Healthy Eating Index



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NSLP Appendix B. Healthy Eating Index



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Authors

Stacy Gleason
Dani Hansen
Nicole Kline
Polina Zvavitch
Breanna Wakar

Submitted to

USDA Food and Nutrition Service
Office of Policy Support
1320 Braddock Place
Alexandria, VA 22310

Project Officer

Michael Burke

Submitted by

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

Project Director

Stacy Gleason

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Appendix B. Healthy Eating Index

Table B.1. Healthy Eating Index-2015 Scores for NSLP Participants and Nonparticipants by Age and Gender

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
All Children 5–18 Years Old													
Both genders													
Sample size	–	2,726	–	924	–	664	–	1,039	–	237	–	688	–
Total fruits	5	3.5	(0.13)	3.9	(0.24)	3.6	(0.22)	2.9 **	(0.15)	3.8	(0.34)	3.8	(0.20)
Whole fruits	5	4.5	(0.15)	4.5	(0.20)	4.3	(0.23)	3.4 **	(0.23)	4.0	(0.37)	4.8	(0.17)
Total vegetables	5	2.4	(0.07)	2.5	(0.13)	2.6	(0.11)	2.4	(0.12)	2.5	(0.26)	2.3	(0.10)
Greens and beans	5	1.8	(0.14)	2.0	(0.24)	2.5	(0.33)	1.7 *	(0.26)	1.1	(0.24)	1.5	(0.17)
Whole grains	10	3.1	(0.11)	3.0	(0.16)	3.0	(0.20)	3.1	(0.18)	3.2	(0.31)	3.4	(0.23)
Dairy	10	8.9	(0.17)	9.6	(0.22)	9.6	(0.22)	8.6 **	(0.22)	9.4	(0.35)	8.2 **	(0.31)
Total protein foods	5	4.5	(0.09)	4.4	(0.11)	4.4	(0.14)	4.4	(0.11)	4.3	(0.22)	4.4	(0.15)
Seafood and plant proteins	5	3.0	(0.16)	2.8	(0.24)	3.2	(0.29)	2.6	(0.19)	2.1	(0.30)	3.5 **	(0.29)
Fatty acids	10	3.0	(0.16)	2.6	(0.25)	2.9	(0.31)	3.5	(0.21)	2.4	(0.30)	3.1	(0.28)
Refined grains	10	4.6	(0.16)	4.8	(0.33)	4.7	(0.38)	3.8	(0.25)	5.1	(0.60)	5.0	(0.30)
Sodium	10	4.5	(0.15)	4.2	(0.26)	4.2	(0.34)	4.3	(0.19)	4.2	(0.33)	4.9	(0.28)
Added sugars	10	6.1	(0.11)	6.4	(0.17)	6.4	(0.22)	6.0	(0.18)	6.7	(0.26)	5.8 **	(0.19)
Saturated fats	10	5.3	(0.13)	5.2	(0.24)	5.1	(0.28)	5.5	(0.19)	5.3	(0.37)	5.2	(0.24)
Total HEI-2015 score	100	55.1	(0.60)	56.0	(1.02)	56.4	(1.14)	52.1 **	(0.97)	54.0	(1.56)	55.8	(1.02)
Boys													
Sample size	–	1,355	–	477	–	333	–	512	–	129	–	335	–
Total fruits	5	3.4	(0.20)	3.9	(0.39)	3.4	(0.24)	2.9	(0.22)	4.2	(0.55)	3.4	(0.31)
Whole fruits	5	4.3	(0.23)	4.2	(0.27)	3.9	(0.35)	3.3	(0.35)	4.3	(0.42)	4.6	(0.31)
Total vegetables	5	2.3	(0.09)	2.6	(0.18)	2.7	(0.17)	2.2 *	(0.10)	2.6	(0.35)	2.1	(0.13)
Greens and beans	5	1.6	(0.16)	1.9	(0.33)	2.6	(0.47)	1.5 *	(0.30)	1.0 u	(0.34)	1.3	(0.22)
Whole grains	10	3.1	(0.15)	2.6	(0.19)	2.8	(0.22)	3.2	(0.23)	2.3	(0.35)	3.6 **	(0.31)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Dairy	10	9.2	(0.25)	9.7	(0.35)	9.7	(0.27)	9.3	(0.33)	9.4	(0.62)	7.9 *	(0.41)
Total protein foods	5	4.6	(0.11)	4.7	(0.11)	4.6	(0.16)	4.2	(0.15)	4.7	(0.17)	4.7	(0.20)
Seafood and plant proteins	5	2.9	(0.23)	2.8	(0.37)	3.3	(0.38)	2.3 *	(0.24)	2.0	(0.46)	3.3 *	(0.43)
Fatty acids	10	2.8	(0.21)	2.3	(0.32)	2.2	(0.39)	3.1	(0.25)	2.3	(0.49)	3.2	(0.36)
Refined grains	10	4.6	(0.24)	4.7	(0.47)	4.2	(0.60)	3.8	(0.32)	5.7	(0.67)	5.1	(0.39)
Sodium	10	4.3	(0.23)	3.8	(0.35)	3.9	(0.48)	4.5	(0.27)	3.7	(0.47)	4.6	(0.45)
Added sugars	10	6.1	(0.14)	6.5	(0.22)	6.6	(0.28)	6.1	(0.26)	6.6	(0.35)	5.5 *	(0.25)
Saturated fats	10	5.3	(0.19)	5.3	(0.40)	4.9	(0.41)	5.4	(0.27)	5.6	(0.64)	5.3	(0.30)
Total HEI-2015 score	100	54.4	(0.85)	54.8	(1.42)	54.8	(1.59)	51.7	(1.27)	54.5	(2.07)	54.9	(1.53)

Girls

Sample size	—	1,371	—	447	—	331	—	527	—	108	—	353	—
Total fruits	5	3.6	(0.16)	3.9	(0.28)	3.9	(0.37)	2.9 *	(0.20)	3.4	(0.38)	4.1	(0.27)
Whole fruits	5	4.7	(0.18)	4.7	(0.29)	4.7	(0.29)	3.5 **	(0.30)	3.8	(0.62)	4.9	(0.14)
Total vegetables	5	2.5	(0.11)	2.5	(0.19)	2.6	(0.16)	2.5	(0.22)	2.3	(0.40)	2.5	(0.15)
Greens and beans	5	1.9	(0.22)	2.1	(0.33)	2.4	(0.46)	1.8	(0.42)	1.3	(0.33)	1.8	(0.26)
Whole grains	10	3.2	(0.17)	3.5	(0.27)	3.2	(0.34)	2.9	(0.27)	4.1	(0.53)	3.2	(0.35)
Dairy	10	8.7	(0.24)	9.5	(0.25)	9.4	(0.35)	7.9 ***	(0.28)	9.4	(0.29)	8.4	(0.46)
Total protein foods	5	4.3	(0.14)	4.1	(0.19)	4.3	(0.25)	4.6	(0.17)	3.8	(0.42)	4.1	(0.24)
Seafood and plant proteins	5	3.1	(0.21)	2.8	(0.31)	3.0	(0.43)	3.0	(0.30)	2.2	(0.39)	3.6 *	(0.40)
Fatty acids	10	3.3	(0.25)	3.1	(0.40)	3.6	(0.48)	4.0	(0.33)	2.5	(0.33)	2.9	(0.42)
Refined grains	10	4.5	(0.22)	4.9	(0.46)	5.2	(0.46)	3.9 *	(0.40)	4.4	(1.01)	4.9	(0.46)
Sodium	10	4.7	(0.19)	4.7	(0.38)	4.5	(0.48)	4.0	(0.27)	4.7	(0.47)	5.2	(0.34)
Added sugars	10	6.1	(0.17)	6.4	(0.27)	6.2	(0.34)	5.8	(0.24)	6.7	(0.37)	6.0	(0.29)
Saturated fats	10	5.4	(0.17)	5.1	(0.24)	5.2	(0.37)	5.7	(0.26)	4.9	(0.35)	5.2	(0.37)
Total HEI-2015 score	100	55.9	(0.84)	57.2	(1.48)	58.2	(1.64)	52.5 *	(1.48)	53.5	(2.35)	56.7	(1.32)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
5–8 Years Old													
Both genders													
<i>Sample size</i>	–	853	–	339	–	254	–	298	–	78	–	198	–
Total fruits	5	3.9	(0.19)	4.1	(0.25)	4.2	(0.27)	3.5	(0.27)	3.6	(0.36)	4.0	(0.35)
Whole fruits	5	4.8	(0.20)	4.9	(0.14)	4.9	(0.11)	3.8 *	(0.45)	4.2	(0.35)	4.8	(0.27)
Total vegetables	5	2.2	(0.10)	2.3	(0.13)	2.4	(0.16)	2.3	(0.18)	2.0	(0.23)	1.9	(0.19)
Greens and beans	5	1.6	(0.21)	1.8	(0.30)	2.1	(0.40)	1.6	(0.44)	1.1	(0.32)	1.1	(0.30)
Whole grains	10	3.2	(0.18)	3.2	(0.24)	3.1	(0.28)	2.8	(0.33)	3.2	(0.54)	3.4	(0.39)
Dairy	10	9.7	(0.20)	9.9	(0.10)	10.0	(0.08)	9.0 *	(0.39)	9.7	(0.32)	9.4	(0.50)
Total protein foods	5	4.1	(0.17)	4.1	(0.20)	4.2	(0.23)	4.2	(0.20)	3.8	(0.33)	3.9	(0.33)
Seafood and plant proteins	5	3.1	(0.31)	2.5	(0.35)	2.6	(0.44)	2.8	(0.32)	2.3	(0.49)	3.6	(0.56)
Fatty acids	10	2.6	(0.21)	2.4	(0.30)	2.4	(0.37)	3.6 *	(0.35)	2.6	(0.46)	2.0	(0.45)
Refined grains	10	4.3	(0.28)	4.6	(0.39)	5.1	(0.36)	3.8 *	(0.49)	3.3	(0.83)	4.5	(0.57)
Sodium	10	4.9	(0.19)	4.6	(0.27)	4.9	(0.30)	5.0	(0.29)	4.0	(0.41)	5.2 *	(0.45)
Added sugars	10	6.2	(0.16)	6.6	(0.24)	6.6	(0.27)	5.8 *	(0.30)	6.6	(0.46)	6.2	(0.27)
Saturated fats	10	5.3	(0.22)	5.3	(0.29)	5.2	(0.37)	6.2 *	(0.33)	5.4	(0.45)	4.5	(0.55)
<i>Total HEI-2015 score</i>	100	55.9	(0.95)	56.2	(1.33)	57.7	(1.50)	54.4	(1.58)	51.8	(2.07)	54.5	(1.90)
Boys													
<i>Sample size</i>	–	434	–	162	–	119	–	158	–	39	–	109	–
Total fruits	5	4.0	(0.30)	4.4	(0.38)	4.3	(0.39)	3.7	(0.37)	4.4	(0.62)	3.9	(0.58)
Whole fruits	5	4.8	(0.31)	4.9	(0.16)	4.9	(0.18)	3.7	(0.70)	4.6	(0.58)	4.7	(0.51)
Total vegetables	5	2.2	(0.11)	2.3	(0.17)	2.3	(0.20)	2.4	(0.19)	2.1	(0.28)	1.9	(0.24)
Greens and beans	5	1.6	(0.33)	1.6	(0.37)	2.0	(0.50)	1.8 u	(0.83)	0.8 u	(0.45)	1.3 u	(0.50)
Whole grains	10	3.3	(0.29)	3.1	(0.38)	3.0	(0.42)	3.0	(0.44)	3.1	(0.71)	3.9	(0.48)
Dairy	10	10.0	(0.09)	10.0	(0.01)	10.0	(0.02)	9.2	(0.59)	10.0	(0.08)	9.6	(0.50)
Total protein foods	5	4.2	(0.25)	4.1	(0.27)	4.1	(0.33)	3.9	(0.22)	4.0	(0.47)	4.5	(0.48)
Seafood and plant proteins	5	3.1	(0.53)	2.1	(0.32)	2.2	(0.36)	2.5	(0.45)	1.7 u	(0.53)	4.2 *	(0.92)
Fatty acids	10	2.5	(0.26)	2.1	(0.48)	2.3	(0.64)	3.5	(0.43)	1.7 u	(0.69)	2.0	(0.42)
Refined grains	10	4.7	(0.37)	4.7	(0.53)	4.9	(0.61)	3.9	(0.57)	4.3	(0.93)	5.3	(0.55)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Sodium	10	4.9	(0.28)	4.6	(0.38)	4.9	(0.42)	5.3	(0.39)	4.0	(0.61)	4.9	(0.64)
Added sugars	10	6.2	(0.21)	6.8	(0.32)	6.7	(0.40)	5.5 *	(0.42)	6.9	(0.50)	6.0	(0.40)
Saturated fats	10	5.3	(0.26)	5.5	(0.49)	5.4	(0.64)	6.5	(0.37)	5.6	(0.66)	4.1	(0.55)
Total HEI-2015 score	100	56.8	(1.50)	56.2	(1.55)	57.1	(2.00)	55.2	(2.10)	53.4	(2.21)	56.2	(2.94)

Girls

Sample size	–	419	–	177	–	135	–	140	–	39	–	89	–
Total fruits	5	3.8	(0.22)	3.8	(0.32)	4.2	(0.38)	3.4	(0.40)	2.7	(0.34)	4.2 **	(0.37)
Whole fruits	5	4.8	(0.24)	4.8	(0.24)	4.9	(0.14)	3.9	(0.55)	3.7	(0.39)	5.0 **	(0.17)
Total vegetables	5	2.2	(0.17)	2.3	(0.20)	2.6	(0.26)	2.2	(0.32)	1.9	(0.36)	2.0	(0.29)
Greens and beans	5	1.5	(0.24)	1.9	(0.49)	2.2	(0.62)	1.3	(0.26)	1.3 u	(0.45)	0.8 u	(0.30)
Whole grains	10	3.0	(0.23)	3.3	(0.31)	3.3	(0.38)	2.6	(0.50)	3.3	(0.82)	2.9	(0.63)
Dairy	10	9.5	(0.40)	9.9	(0.20)	9.9	(0.16)	8.8 *	(0.52)	9.5	(0.64)	9.2	(0.87)
Total protein foods	5	4.0	(0.23)	4.1	(0.28)	4.3	(0.32)	4.5	(0.35)	3.6	(0.47)	3.3	(0.44)
Seafood and plant proteins	5	3.0	(0.33)	2.9	(0.64)	3.0	(0.83)	3.1	(0.47)	2.9	(0.82)	2.9	(0.63)
Fatty acids	10	2.8	(0.35)	2.7	(0.36)	2.4	(0.36)	3.6	(0.55)	3.5	(0.62)	2.0 u	(0.82)
Refined grains	10	4.0	(0.43)	4.4	(0.58)	5.4	(0.39)	3.6 *	(0.80)	2.2 u	(1.39)	3.7	(1.02)
Sodium	10	4.9	(0.26)	4.6	(0.38)	4.9	(0.44)	4.6	(0.44)	4.0	(0.54)	5.5	(0.63)
Added sugars	10	6.3	(0.25)	6.4	(0.37)	6.4	(0.36)	6.1	(0.43)	6.3	(0.78)	6.4	(0.35)
Saturated fats	10	5.3	(0.37)	5.0	(0.31)	4.9	(0.35)	5.8	(0.56)	5.3	(0.60)	4.8	(0.97)
Total HEI-2015 score	100	54.9	(1.14)	56.2	(2.18)	58.4	(2.25)	53.6	(2.38)	50.1	(3.53)	52.8	(2.40)

9–13 Years Old

Both genders

Sample size	–	1,071	–	388	–	285	–	380	–	94	–	276	–
Total fruits	5	3.6	(0.22)	3.8	(0.29)	3.7	(0.33)	2.7 *	(0.29)	4.0	(0.55)	3.9	(0.35)
Whole fruits	5	4.7	(0.25)	4.7	(0.31)	4.6	(0.35)	3.2 *	(0.44)	4.6	(0.56)	4.8	(0.27)
Total vegetables	5	2.4	(0.11)	2.9	(0.23)	2.6	(0.17)	2.3	(0.14)	3.5	(0.62)	2.0 *	(0.14)
Greens and beans	5	1.9	(0.18)	2.1	(0.33)	2.6	(0.41)	1.6 *	(0.30)	0.9 u	(0.42)	2.0 *	(0.31)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Whole grains	10	3.2	(0.20)	3.0	(0.25)	2.9	(0.27)	3.6	(0.35)	3.2	(0.68)	3.2	(0.41)
Dairy	10	9.1	(0.26)	9.9	(0.14)	9.7	(0.23)	9.0	(0.34)	9.9	(0.22)	7.8 ***	(0.45)
Total protein foods	5	4.5	(0.15)	4.6	(0.16)	4.6	(0.21)	4.3	(0.19)	4.5	(0.28)	4.3	(0.31)
Seafood and plant proteins	5	2.8	(0.24)	2.8	(0.37)	3.2	(0.46)	2.6	(0.34)	1.9	(0.54)	3.0	(0.47)
Fatty acids	10	2.9	(0.20)	2.7	(0.31)	2.8	(0.37)	3.2	(0.30)	2.5	(0.49)	3.0	(0.41)
Refined grains	10	4.3	(0.22)	4.4	(0.45)	3.9	(0.44)	4.0	(0.35)	5.7	(1.15)	4.7	(0.46)
Sodium	10	4.3	(0.27)	3.9	(0.28)	4.0	(0.36)	4.2	(0.32)	3.8	(0.37)	4.8	(0.61)
Added sugars	10	6.2	(0.21)	7.0	(0.26)	6.7	(0.34)	6.0	(0.33)	7.8	(0.31)	5.5 ***	(0.40)
Saturated fats	10	5.3	(0.19)	5.2	(0.32)	5.2	(0.40)	5.5	(0.28)	5.3	(0.46)	5.2	(0.35)
Total HEI-2015 score	100	55.2	(0.99)	57.1	(1.55)	56.4	(1.89)	52.2	(1.57)	57.5	(2.43)	54.1	(1.78)
Boys													
Sample size	–	515	–	200	–	143	–	181	–	51	–	122	–
Total fruits	5	3.5	(0.28)	4.0	(0.38)	3.8	(0.47)	2.6	(0.41)	4.4	(0.63)	3.4	(0.46)
Whole fruits	5	4.6	(0.37)	4.8	(0.33)	4.6	(0.48)	3.1 *	(0.62)	4.8	(0.55)	4.6	(0.51)
Total vegetables	5	2.3	(0.19)	3.0	(0.37)	2.6	(0.29)	2.2	(0.18)	4.0	(0.89)	1.7 *	(0.18)
Greens and beans	5	1.9	(0.26)	2.3	(0.49)	2.6	(0.54)	1.7	(0.49)	1.5 u	(0.81)	1.8	(0.43)
Whole grains	10	3.2	(0.25)	2.8	(0.33)	3.0	(0.35)	4.0	(0.53)	2.2 u	(0.68)	3.2	(0.50)
Dairy	10	9.1	(0.32)	9.9	(0.16)	9.9	(0.17)	9.5	(0.48)	9.8	(0.41)	7.1 ***	(0.46)
Total protein foods	5	4.7	(0.21)	4.9	(0.19)	4.6	(0.32)	4.0	(0.28)	5.0	(0.09)	4.6	(0.39)
Seafood and plant proteins	5	2.5	(0.31)	2.8	(0.50)	3.0	(0.57)	2.2	(0.33)	2.2 u	(0.84)	2.5	(0.66)
Fatty acids	10	2.7	(0.32)	2.6	(0.52)	2.6	(0.60)	3.2	(0.38)	2.7	(0.79)	2.9	(0.56)
Refined grains	10	4.5	(0.31)	4.4	(0.58)	3.5	(0.65)	3.8	(0.50)	6.7	(0.86)	5.3	(0.60)
Sodium	10	4.2	(0.45)	3.6	(0.40)	3.6	(0.54)	4.4	(0.54)	3.8	(0.41)	4.5	(1.07)
Added sugars	10	6.1	(0.26)	7.2	(0.34)	6.9	(0.41)	6.1	(0.55)	8.1	(0.40)	4.8 ***	(0.47)
Saturated fats	10	5.3	(0.31)	5.3	(0.50)	5.1	(0.59)	5.8	(0.43)	5.7	(0.55)	5.0	(0.50)
Total HEI-2015 score	100	54.6	(1.52)	57.6	(2.11)	55.9	(2.77)	52.6	(2.24)	60.8	(2.29)	51.6 **	(2.68)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Girls													
Sample size	–	556	–	188	–	142	–	199	–	43	–	154	–
Total fruits	5	3.7	(0.35)	3.6	(0.43)	3.5	(0.45)	2.8	(0.42)	3.7	(0.92)	4.4	(0.53)
Whole fruits	5	4.8	(0.31)	4.6	(0.53)	4.5	(0.51)	3.4	(0.63)	4.5	(1.00)	5.0	(0.17)
Total vegetables	5	2.5	(0.12)	2.7	(0.27)	2.6	(0.18)	2.4	(0.23)	3.0	(0.87)	2.3	(0.23)
Greens and beans	5	1.9	(0.23)	1.9	(0.44)	2.6	(0.62)	1.5	(0.35)	0.2 u	(0.14)	2.3 ***	(0.45)
Whole grains	10	3.2	(0.32)	3.2	(0.37)	2.8	(0.41)	3.1	(0.45)	4.3	(1.20)	3.2	(0.66)
Dairy	10	9.1	(0.41)	9.9	(0.23)	9.5	(0.44)	8.5	(0.48)	10.0	(0.16)	8.4	(0.78)
Total protein foods	5	4.3	(0.23)	4.4	(0.26)	4.6	(0.29)	4.6	(0.26)	3.9	(0.56)	3.9	(0.49)
Seafood and plant proteins	5	3.1	(0.37)	2.9	(0.56)	3.4	(0.74)	3.0	(0.60)	1.5 u	(0.67)	3.5 *	(0.68)
Fatty acids	10	3.0	(0.24)	2.8	(0.34)	3.1	(0.41)	3.2	(0.46)	2.2	(0.55)	3.1	(0.60)
Refined grains	10	4.2	(0.32)	4.3	(0.70)	4.2	(0.59)	4.2	(0.48)	4.6 u	(2.18)	4.0	(0.70)
Sodium	10	4.5	(0.27)	4.3	(0.38)	4.4	(0.47)	3.9	(0.35)	3.7	(0.61)	5.2	(0.53)
Added sugars	10	6.3	(0.33)	6.8	(0.41)	6.5	(0.55)	5.8	(0.37)	7.5	(0.48)	6.1	(0.65)
Saturated fats	10	5.3	(0.23)	5.2	(0.41)	5.3	(0.52)	5.3	(0.37)	4.9	(0.74)	5.4	(0.47)
Total HEI-2015 score	100	55.9	(1.26)	56.5	(2.28)	57.0	(2.57)	51.7	(2.19)	54.0	(4.35)	56.8	(2.32)
14–18 Years Old													
Both genders													
Sample size	–	802	–	197	–	125	–	361	–	65	–	214	–
Total fruits	5	3.2	(0.24)	3.8	(0.56)	3.1	(0.45)	2.6	(0.21)	3.8	(0.70)	3.5	(0.35)
Whole fruits	5	4.1	(0.29)	3.9	(0.43)	3.6	(0.51)	3.2	(0.33)	3.4	(0.80)	4.7	(0.33)
Total vegetables	5	2.5	(0.14)	2.3	(0.25)	2.8	(0.23)	2.5	(0.26)	1.9	(0.36)	2.8 *	(0.18)
Greens and beans	5	1.7	(0.29)	2.1	(0.50)	2.8	(0.74)	1.8 u	(0.54)	1.5 u	(0.44)	1.5	(0.27)
Whole grains	10	3.0	(0.19)	2.9	(0.32)	3.0	(0.43)	2.8	(0.24)	3.0	(0.36)	3.5	(0.40)
Dairy	10	8.2	(0.36)	9.0	(0.57)	9.1	(0.54)	8.0	(0.39)	8.7	(0.88)	7.6	(0.61)
Total protein foods	5	4.7	(0.13)	4.5	(0.21)	4.5	(0.28)	4.6	(0.19)	4.4	(0.48)	4.8	(0.17)
Seafood and plant proteins	5	3.1	(0.27)	3.0	(0.47)	3.6	(0.54)	2.5	(0.32)	2.2	(0.52)	3.8 *	(0.50)
Fatty acids	10	3.5	(0.37)	2.8	(0.58)	3.3	(0.71)	3.8	(0.41)	2.2	(0.56)	4.0 *	(0.54)
Refined grains	10	4.9	(0.32)	5.4	(0.73)	5.0	(0.90)	3.8	(0.47)	5.8	(1.03)	5.7	(0.53)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Sodium	10	4.3	(0.28)	4.2	(0.61)	3.9	(0.82)	3.9	(0.35)	4.7	(0.77)	4.8	(0.37)
Added sugars	10	5.8	(0.18)	5.7	(0.35)	6.0	(0.46)	6.1	(0.29)	5.6	(0.52)	5.8	(0.30)
Saturated fats	10	5.4	(0.24)	5.1	(0.52)	4.9	(0.58)	5.0	(0.35)	5.1	(0.84)	5.9	(0.36)
Total HEI-2015 score	100	54.6	(1.10)	54.8	(2.12)	55.5	(2.24)	50.4	(1.80)	52.4	(3.17)	58.4	(1.63)
Boys													
Sample size	–	406	–	115	–	71	–	173	–	39	–	104	–
Total fruits	5	3.0	(0.40)	3.4	(0.95)	2.2	(0.37)	2.6	(0.35)	4.0 u	(1.28)	3.1	(0.55)
Whole fruits	5	3.7	(0.47)	3.2	(0.63)	2.5 u	(0.82)	3.1	(0.54)	3.7	(0.91)	4.6	(0.57)
Total vegetables	5	2.4	(0.14)	2.3	(0.29)	3.0	(0.32)	2.1 *	(0.15)	1.8	(0.34)	2.7 *	(0.25)
Greens and beans	5	1.3	(0.26)	1.8 u	(0.72)	3.2 u	(1.11)	1.2	(0.23)	0.6 u	(0.35)	0.9	(0.24)
Whole grains	10	2.8	(0.23)	2.0	(0.28)	2.4	(0.38)	2.5	(0.19)	1.7	(0.41)	3.7 **	(0.60)
Dairy	10	8.6	(0.59)	9.1	(0.94)	9.3	(0.70)	9.1	(0.63)	8.7	(1.62)	7.5	(0.96)
Total protein foods	5	4.9	(0.11)	5.0	(0.13)	4.9	(0.16)	4.6	(0.26)	4.9	(0.28)	4.9	(0.16)
Seafood and plant proteins	5	3.0	(0.40)	3.4	(0.83)	4.4	(0.82)	2.2 *	(0.47)	2.1 u	(0.86)	3.5	(0.69)
Fatty acids	10	3.0	(0.45)	2.0 u	(0.62)	1.8 u	(0.75)	2.6	(0.48)	2.3 u	(0.96)	4.5	(0.75)
Refined grains	10	4.6	(0.51)	5.0	(1.08)	4.2 u	(1.42)	3.7	(0.56)	5.8	(1.47)	4.9	(0.78)
Sodium	10	4.0	(0.38)	3.3	(0.81)	3.4 u	(1.13)	4.1	(0.44)	3.2 u	(1.10)	4.6	(0.46)
Added sugars	10	5.9	(0.24)	5.5	(0.45)	6.1	(0.59)	6.5	(0.38)	5.0	(0.79)	5.9	(0.42)
Saturated fats	10	5.2	(0.37)	5.0	(0.91)	4.4	(0.82)	4.1	(0.53)	5.6	(1.58)	6.4	(0.50)
Total HEI-2015 score	100	52.5	(1.36)	51.2	(3.03)	52.0	(3.05)	48.3	(2.16)	49.3	(4.86)	57.2	(2.42)
Girls													
Sample size	–	396	–	82	–	54	–	188	–	26	–	110	–
Total fruits	5	3.4	(0.24)	4.2	(0.57)	4.1	(0.85)	2.6	(0.23)	3.7	(0.50)	3.8	(0.44)
Whole fruits	5	4.5	(0.35)	4.7	(0.57)	4.8	(0.60)	3.3 *	(0.37)	3.1 u	(1.34)	4.8	(0.33)
Total vegetables	5	2.7	(0.24)	2.3	(0.43)	2.6	(0.33)	2.9	(0.51)	2.1 u	(0.65)	2.9	(0.26)
Greens and beans	5	2.2	(0.52)	2.3 u	(0.71)	2.3 u	(0.97)	2.4 u	(1.08)	2.4 u	(0.82)	2.0	(0.49)
Whole grains	10	3.3	(0.31)	3.9	(0.59)	3.5	(0.78)	3.0	(0.46)	4.5	(0.59)	3.3	(0.53)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Dairy	10	7.7	(0.41)	8.9	(0.61)	8.9	(0.83)	6.8 *	(0.45)	8.8	(0.59)	7.7	(0.75)
Total protein foods	5	4.5	(0.24)	4.0	(0.41)	4.0	(0.55)	4.6	(0.27)	3.9	(0.94)	4.7	(0.30)
Seafood and plant proteins	5	3.3	(0.36)	2.6	(0.42)	2.7	(0.69)	2.8	(0.43)	2.4	(0.57)	4.2 *	(0.72)
Fatty acids	10	4.0	(0.58)	3.6	(0.99)	4.9	(1.22)	5.0	(0.67)	2.0	(0.54)	3.4	(0.78)
Refined grains	10	5.3	(0.38)	5.9	(0.96)	6.0	(1.07)	3.8	(0.77)	5.8	(1.45)	6.5	(0.71)
Sodium	10	4.6	(0.41)	5.2	(0.93)	4.3	(1.19)	3.7	(0.55)	6.2	(1.06)	5.1	(0.59)
Added sugars	10	5.7	(0.27)	5.9	(0.53)	5.8	(0.70)	5.6	(0.45)	6.2	(0.68)	5.7	(0.42)
Saturated fats	10	5.5	(0.31)	5.1	(0.45)	5.4	(0.83)	6.0	(0.45)	4.7	(0.42)	5.2	(0.53)
Total HEI-2015 score	100	56.7	(1.75)	58.5	(2.95)	59.2	(3.30)	52.6	(2.92)	55.6	(4.03)	59.6	(2.16)

Notes: "All school children" includes children with missing NSLP participation or income. "All NSLP participants" includes children with missing income. Estimates are based on the day 1 dietary recall. Mean component scores may not sum to total score because of rounding. 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 NSLP participants with nonparticipants within income and age groups. NSLP participants are identified as school children likely to have received a reimbursable school lunch on the intake day (see appendix A).

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

– Denotes not applicable

HEI = Healthy Eating Index

Sources: National Health and Nutrition Examination Survey (NHANES) 2011–2016 dietary recalls; Food Pattern Equivalents Database 2011–2012, 2013–2014, and 2015–2016. Sample includes NHANES children aged 5–18 years with complete day 1 dietary recall data, where day 1 recall was on a weekday, who attend a school that serves lunch, and who did not eat all lunch foods at home on the day of dietary recall.

Table B.2. Healthy Eating Index-2010 Scores for NSLP Participants and Nonparticipants by Age and Gender

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
All Children 5–18 Years Old													
Both genders													
Sample size	–	2,726	–	924	–	664	–	1,039	–	237	–	688	–
Total fruits	5	3.5	(0.13)	3.9	(0.24)	3.6	(0.22)	2.9 **	(0.15)	3.8	(0.34)	3.8	(0.20)
Whole fruits	5	4.5	(0.15)	4.5	(0.20)	4.3	(0.23)	3.4 **	(0.23)	4.0	(0.37)	4.8	(0.18)
Total vegetables	5	2.2	(0.07)	2.4	(0.14)	2.4	(0.11)	2.2	(0.12)	2.4	(0.27)	2.2	(0.10)
Greens and beans	5	0.9	(0.13)	1.2	(0.25)	1.2	(0.28)	0.8 u	(0.25)	0.8 u	(0.25)	1.0	(0.17)
Whole grains	10	3.1	(0.11)	3.0	(0.16)	3.0	(0.20)	3.1	(0.18)	3.2	(0.32)	3.4	(0.24)
Dairy	10	8.9	(0.17)	9.6	(0.22)	9.6	(0.22)	8.6 **	(0.21)	9.4	(0.35)	8.2 **	(0.31)
Total protein foods	5	4.5	(0.09)	4.4	(0.11)	4.4	(0.14)	4.4	(0.11)	4.3	(0.22)	4.4	(0.15)
Seafood and plant proteins	5	2.9	(0.16)	2.5	(0.24)	3.0	(0.31)	2.6	(0.19)	2.0	(0.29)	3.4 ***	(0.29)
Fatty acids	10	3.0	(0.16)	2.6	(0.25)	2.9	(0.31)	3.5	(0.21)	2.4	(0.30)	3.1	(0.28)
Refined grains	10	4.5	(0.16)	4.8	(0.33)	4.6	(0.38)	3.8	(0.25)	5.0	(0.61)	5.0	(0.30)
Sodium	10	4.5	(0.15)	4.2	(0.26)	4.2	(0.34)	4.3	(0.19)	4.2	(0.33)	4.9	(0.28)
Empty calories	20	12.7	(0.19)	13.0	(0.32)	12.9	(0.38)	12.9	(0.30)	13.5	(0.50)	12.3	(0.35)
Total HEI-2010 score	100	55.4	(0.60)	56.0	(1.10)	56.1	(1.26)	52.5 *	(1.01)	54.9	(1.67)	56.3	(1.04)
Boys													
Sample size	–	1,355	–	477	–	333	–	512	–	129	–	335	–
Total fruits	5	3.4	(0.20)	3.9	(0.40)	3.4	(0.24)	2.9	(0.22)	4.2	(0.56)	3.4	(0.31)
Whole fruits	5	4.3	(0.23)	4.2	(0.27)	3.9	(0.35)	3.3	(0.35)	4.3	(0.42)	4.6	(0.31)
Total vegetables	5	2.2	(0.09)	2.4	(0.19)	2.4	(0.15)	2.1	(0.10)	2.6	(0.35)	2.0	(0.13)
Greens and beans	5	0.9	(0.19)	1.3	(0.37)	1.1 u	(0.41)	0.8 u	(0.27)	0.9 u	(0.33)	1.0	(0.24)
Whole grains	10	3.1	(0.15)	2.6	(0.19)	2.8	(0.22)	3.2	(0.23)	2.3	(0.35)	3.6 **	(0.32)
Dairy	10	9.2	(0.25)	9.7	(0.36)	9.7	(0.27)	9.3	(0.33)	9.4	(0.62)	7.9 *	(0.41)
Total protein foods	5	4.6	(0.11)	4.7	(0.11)	4.6	(0.15)	4.2	(0.15)	4.7	(0.17)	4.7	(0.20)
Seafood and plant proteins	5	2.7	(0.24)	2.2	(0.35)	3.0	(0.45)	2.3	(0.24)	1.7	(0.43)	3.2 *	(0.43)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Fatty acids	10	2.8	(0.21)	2.3	(0.32)	2.2	(0.39)	3.1	(0.25)	2.3	(0.50)	3.2	(0.36)
Refined grains	10	4.5	(0.24)	4.7	(0.47)	4.2	(0.60)	3.8	(0.32)	5.7	(0.69)	5.1	(0.39)
Sodium	10	4.3	(0.23)	3.8	(0.34)	3.9	(0.48)	4.5	(0.27)	3.7	(0.46)	4.6	(0.45)
Empty calories	20	12.6	(0.26)	13.0	(0.48)	12.9	(0.48)	12.9	(0.42)	13.4	(0.78)	11.8	(0.51)
Total HEI-2010 score	100	54.7	(0.86)	54.7	(1.54)	54.1	(1.90)	52.3	(1.29)	55.2	(2.13)	55.4	(1.55)
Girls													
Sample size	—	1,371	—	447	—	331	—	527	—	108	—	353	—
Total fruits	5	3.6	(0.16)	3.9	(0.28)	3.9	(0.37)	2.9 *	(0.20)	3.4	(0.38)	4.1	(0.27)
Whole fruits	5	4.7	(0.18)	4.7	(0.29)	4.7	(0.30)	3.5 **	(0.30)	3.8	(0.62)	4.9	(0.14)
Total vegetables	5	2.3	(0.11)	2.3	(0.21)	2.4	(0.16)	2.3	(0.22)	2.2	(0.42)	2.3	(0.16)
Greens and beans	5	0.9	(0.17)	1.1 u	(0.32)	1.3 u	(0.39)	0.8 u	(0.41)	0.7 u	(0.38)	0.9	(0.23)
Whole grains	10	3.2	(0.18)	3.5	(0.27)	3.2	(0.34)	2.9	(0.27)	4.1	(0.53)	3.2	(0.35)
Dairy	10	8.7	(0.23)	9.5	(0.24)	9.4	(0.35)	7.9 ***	(0.27)	9.4	(0.28)	8.4	(0.46)
Total protein foods	5	4.3	(0.14)	4.1	(0.19)	4.3	(0.25)	4.6	(0.16)	3.8	(0.42)	4.1	(0.24)
Seafood and plant proteins	5	3.1	(0.21)	2.8	(0.31)	3.0	(0.42)	2.9	(0.29)	2.3	(0.39)	3.5 *	(0.40)
Fatty acids	10	3.3	(0.25)	3.1	(0.39)	3.6	(0.48)	4.0	(0.33)	2.5	(0.33)	2.9	(0.42)
Refined grains	10	4.5	(0.22)	4.9	(0.46)	5.2	(0.46)	3.9 *	(0.40)	4.4	(1.01)	4.9	(0.45)
Sodium	10	4.7	(0.19)	4.7	(0.38)	4.5	(0.49)	4.0	(0.27)	4.7	(0.47)	5.2	(0.34)
Empty calories	20	12.9	(0.27)	13.0	(0.41)	12.8	(0.58)	12.9	(0.45)	13.5	(0.62)	12.8	(0.48)
Total HEI-2010 score	100	56.1	(0.85)	57.5	(1.56)	58.2	(1.63)	52.7 *	(1.56)	54.6	(2.58)	57.2	(1.38)
5–8 Years Old													
Both genders													
Sample size	—	853	—	339	—	254	—	298	—	78	—	198	—
Total fruits	5	3.9	(0.19)	4.1	(0.25)	4.2	(0.27)	3.5	(0.27)	3.6	(0.35)	4.0	(0.35)
Whole fruits	5	4.8	(0.20)	4.9	(0.15)	4.9	(0.12)	3.8 *	(0.45)	4.2	(0.35)	4.8	(0.28)
Greens and beans	5	2.0	(0.11)	2.1	(0.13)	2.2	(0.16)	2.1	(0.19)	1.9	(0.21)	1.9	(0.19)
Whole grains	10	3.2	(0.19)	3.2	(0.25)	3.1	(0.29)	2.8	(0.33)	3.2	(0.54)	3.4	(0.39)
Dairy	10	9.7	(0.20)	9.9	(0.10)	10.0	(0.08)	9.0 *	(0.39)	9.7	(0.32)	9.4	(0.49)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Total protein foods	5	4.1	(0.17)	4.1	(0.20)	4.2	(0.23)	4.2	(0.20)	3.8	(0.33)	3.9	(0.33)
Seafood and plant proteins	5	3.1	(0.31)	2.5	(0.35)	2.6	(0.44)	2.8	(0.32)	2.3	(0.48)	3.5	(0.56)
Fatty acids	10	2.6	(0.21)	2.4	(0.30)	2.4	(0.37)	3.6 *	(0.35)	2.6	(0.47)	2.0	(0.45)
Refined grains	10	4.3	(0.28)	4.6	(0.39)	5.1	(0.36)	3.8 *	(0.48)	3.3	(0.83)	4.5	(0.57)
Sodium	10	4.9	(0.19)	4.6	(0.27)	4.9	(0.30)	5.0	(0.29)	4.0	(0.41)	5.2 *	(0.45)
Empty calories	20	12.5	(0.26)	12.9	(0.43)	13.1	(0.47)	12.9	(0.54)	12.5	(0.78)	11.7	(0.46)
Total HEI-2010 score	100	55.9	(0.92)	56.1	(1.27)	57.8	(1.41)	54.3	(1.67)	51.3	(2.05)	55.2	(1.93)

Boys

Sample size	—	434	—	162	—	119	—	158	—	39	—	109	—
Total fruits	5	4.0	(0.31)	4.4	(0.38)	4.3	(0.39)	3.7	(0.37)	4.4	(0.61)	3.9	(0.58)
Whole fruits	5	4.8	(0.31)	4.9	(0.17)	4.9	(0.18)	3.7	(0.70)	4.6	(0.57)	4.7	(0.51)
Total vegetables	5	2.0	(0.12)	2.1	(0.16)	2.2	(0.19)	2.2	(0.22)	2.1	(0.27)	1.8	(0.24)
Greens and beans	5	0.9	(0.28)	0.9 u	(0.31)	1.1 u	(0.43)	1.1 u	(0.81)	0.6 u	(0.42)	1.0 u	(0.54)
Whole grains	10	3.3	(0.29)	3.1	(0.38)	3.0	(0.42)	3.0	(0.44)	3.1	(0.70)	3.9	(0.48)
Dairy	10	10.0	(0.08)	10.0	(0.00)	10.0	(0.02)	9.2	(0.58)	10.0	(0.08)	9.6	(0.50)
Total protein foods	5	4.2	(0.25)	4.1	(0.27)	4.1	(0.33)	3.9	(0.21)	4.0	(0.47)	4.5	(0.48)
Seafood and plant proteins	5	3.1	(0.52)	2.1	(0.32)	2.2	(0.35)	2.5	(0.45)	1.7 u	(0.53)	4.2 *	(0.92)
Fatty acids	10	2.5	(0.26)	2.1	(0.47)	2.3	(0.63)	3.5	(0.44)	1.7 u	(0.69)	2.0	(0.42)
Refined grains	10	4.7	(0.37)	4.7	(0.53)	4.9	(0.61)	3.9	(0.56)	4.3	(0.93)	5.3	(0.55)
Sodium	10	4.9	(0.28)	4.6	(0.38)	4.9	(0.42)	5.3	(0.38)	4.0	(0.61)	4.9	(0.64)
Empty calories	20	12.5	(0.35)	13.2	(0.60)	13.5	(0.65)	12.9	(0.82)	12.8	(1.02)	11.3	(0.65)
Total HEI-2010 score	100	57.0	(1.47)	56.2	(1.60)	57.4	(2.04)	55.1	(2.27)	53.3	(2.17)	57.0	(2.97)

Girls

Sample size	—	419	—	177	—	135	—	140	—	39	—	89	—
Total fruits	5	3.8	(0.22)	3.8	(0.32)	4.2	(0.38)	3.4	(0.40)	2.7	(0.34)	4.2 **	(0.37)
Whole fruits	5	4.8	(0.23)	4.8	(0.24)	5.0	(0.14)	3.9	(0.55)	3.7	(0.39)	5.0 **	(0.18)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Total vegetables	5	2.0	(0.17)	2.1	(0.20)	2.3	(0.27)	2.0	(0.32)	1.7	(0.33)	2.0	(0.28)
Greens and beans	5	0.6	(0.13)	0.7 u	(0.28)	1.0 u	(0.39)	0.5 u	(0.24)	0.2 u	(0.14)	0.4 u	(0.15)
Whole grains	10	3.0	(0.24)	3.3	(0.31)	3.3	(0.38)	2.6	(0.50)	3.3	(0.82)	2.9	(0.63)
Dairy	10	9.5	(0.40)	9.9	(0.21)	9.9	(0.16)	8.7 *	(0.52)	9.5	(0.64)	9.2	(0.87)
Total protein foods	5	4.0	(0.23)	4.1	(0.28)	4.3	(0.32)	4.5	(0.35)	3.6	(0.47)	3.3	(0.44)
Seafood and plant proteins	5	3.0	(0.33)	2.9	(0.64)	3.0	(0.82)	3.1	(0.46)	2.9	(0.82)	2.9	(0.62)
Fatty acids	10	2.8	(0.35)	2.7	(0.36)	2.4	(0.36)	3.6	(0.55)	3.5	(0.62)	2.0 u	(0.80)
Refined grains	10	4.0	(0.43)	4.4	(0.58)	5.4	(0.39)	3.6 *	(0.79)	2.2 u	(1.39)	3.7	(1.01)
Sodium	10	4.9	(0.26)	4.6	(0.37)	4.9	(0.44)	4.6	(0.44)	4.0	(0.54)	5.5	(0.64)
Empty calories	20	12.5	(0.40)	12.5	(0.63)	12.7	(0.69)	12.8	(0.70)	12.1	(1.19)	12.1	(0.65)
Total HEI-2010 score	100	54.9	(1.10)	55.9	(1.98)	58.3	(1.95)	53.5	(2.45)	49.3	(3.52)	53.2	(2.45)
9–13 Years Old													
Both genders													
Sample size	—	1,071	—	388	—	285	—	380	—	94	—	276	—
Total fruits	5	3.6	(0.22)	3.8	(0.29)	3.7	(0.33)	2.7 *	(0.29)	4.0	(0.55)	3.9	(0.35)
Whole fruits	5	4.7	(0.25)	4.7	(0.31)	4.6	(0.35)	3.2 *	(0.44)	4.6	(0.56)	4.8	(0.28)
Total vegetables	5	2.2	(0.11)	2.7	(0.25)	2.3	(0.18)	2.1	(0.14)	3.4	(0.63)	1.9 *	(0.14)
Greens and beans	5	0.6	(0.13)	0.7 u	(0.28)	1.0 u	(0.39)	0.5 u	(0.24)	0.2 u	(0.14)	0.4 u	(0.15)
Whole grains	10	3.0	(0.24)	3.3	(0.31)	3.3	(0.38)	2.6	(0.50)	3.3	(0.82)	2.9	(0.63)
Dairy	10	9.5	(0.40)	9.9	(0.21)	9.9	(0.16)	8.7 *	(0.52)	9.5	(0.64)	9.2	(0.87)
Total protein foods	5	4.0	(0.23)	4.1	(0.28)	4.3	(0.32)	4.5	(0.35)	3.6	(0.47)	3.3	(0.44)
Seafood and plant proteins	5	2.8	(0.24)	2.6	(0.43)	3.1	(0.45)	2.5	(0.33)	1.6 u	(0.51)	3.0 *	(0.47)
Fatty acids	10	2.9	(0.20)	2.7	(0.31)	2.8	(0.36)	3.2	(0.30)	2.5	(0.48)	3.0	(0.41)
Refined grains	10	4.3	(0.22)	4.4	(0.45)	3.9	(0.44)	4.0	(0.35)	5.6	(1.15)	4.7	(0.46)
Sodium	10	4.3	(0.27)	3.9	(0.27)	4.0	(0.36)	4.2	(0.32)	3.8	(0.36)	4.8	(0.61)
Empty calories	20	13.0	(0.31)	13.9	(0.45)	13.3	(0.53)	13.1	(0.53)	15.6	(0.65)	11.9 ***	(0.66)
Total HEI-2010 score	100	55.5	(0.96)	57.3	(1.49)	55.9	(1.82)	52.6	(1.57)	59.5	(2.37)	54.5	(1.79)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Boys													
Sample size	–	515	–	200	–	143	–	181	–	51	–	122	–
Total fruits	5	3.5	(0.28)	4.0	(0.38)	3.8	(0.47)	2.6	(0.41)	4.3	(0.63)	3.4	(0.46)
Whole fruits	5	4.6	(0.38)	4.8	(0.33)	4.6	(0.48)	3.1 *	(0.61)	4.8	(0.56)	4.6	(0.52)
Total vegetables	5	2.2	(0.19)	2.9	(0.41)	2.4	(0.29)	2.1	(0.18)	3.9	(0.91)	1.6 *	(0.18)
Greens and beans	5	1.1	(0.27)	1.5 u	(0.65)	1.2 u	(0.60)	0.9 u	(0.41)	1.4 u	(0.81)	1.6	(0.47)
Whole grains	10	3.2	(0.25)	2.8	(0.33)	3.0	(0.36)	4.0	(0.53)	2.2 u	(0.70)	3.2	(0.50)
Dairy	10	9.1	(0.31)	9.9	(0.16)	9.9	(0.17)	9.5	(0.48)	9.8	(0.41)	7.1 ***	(0.45)
Total protein foods	5	4.7	(0.20)	4.9	(0.19)	4.7	(0.31)	4.0	(0.28)	5.0	(0.09)	4.6	(0.38)
Seafood and plant proteins	5	2.5	(0.30)	2.2	(0.64)	2.8	(0.54)	2.2	(0.33)	1.7 u	(0.77)	2.4	(0.67)
Fatty acids	10	2.8	(0.31)	2.6	(0.52)	2.6	(0.60)	3.2	(0.38)	2.7	(0.78)	2.9	(0.56)
Refined grains	10	4.5	(0.31)	4.4	(0.58)	3.5	(0.65)	3.8	(0.51)	6.7	(0.88)	5.3	(0.60)
Sodium	10	4.2	(0.45)	3.6	(0.40)	3.6	(0.54)	4.4	(0.53)	3.8	(0.41)	4.5	(1.08)
Empty calories	20	12.8	(0.42)	14.3	(0.63)	13.7	(0.70)	13.2	(0.78)	16.2	(0.74)	10.6 ***	(0.99)
Total HEI-2010 score	100	54.9	(1.48)	58.0	(2.13)	55.8	(2.78)	53.0	(2.13)	62.6	(2.24)	51.9 **	(2.72)
Girls													
Sample size	–	556	–	188	–	142	–	199	–	43	–	154	–
Total fruits	5	3.7	(0.35)	3.6	(0.43)	3.5	(0.45)	2.8	(0.42)	3.7	(0.92)	4.4	(0.53)
Whole fruits	5	4.8	(0.31)	4.6	(0.53)	4.5	(0.51)	3.4	(0.63)	4.5	(1.00)	5.0	(0.18)
Total vegetables	5	2.3	(0.12)	2.4	(0.29)	2.3	(0.20)	2.2	(0.21)	2.9 u	(0.88)	2.1	(0.22)
Greens and beans	5	0.7	(0.12)	0.6 u	(0.20)	0.8 u	(0.32)	0.3 u	(0.22)	0.1 u	(0.08)	1.2 ***	(0.32)
Whole grains	10	3.2	(0.32)	3.2	(0.38)	2.8	(0.41)	3.1	(0.45)	4.3	(1.21)	3.2	(0.67)
Dairy	10	9.1	(0.40)	9.9	(0.23)	9.5	(0.44)	8.5	(0.48)	10.0	(0.16)	8.4	(0.78)
Total protein foods	5	4.3	(0.23)	4.4	(0.26)	4.6	(0.28)	4.6	(0.25)	3.9	(0.56)	3.9	(0.49)
Seafood and plant proteins	5	3.1	(0.37)	2.9	(0.56)	3.4	(0.72)	2.9	(0.58)	1.5 u	(0.67)	3.5 *	(0.67)
Fatty acids	10	3.0	(0.24)	2.8	(0.34)	3.1	(0.40)	3.2	(0.46)	2.2	(0.56)	3.1	(0.59)
Refined grains	10	4.2	(0.32)	4.3	(0.70)	4.2	(0.59)	4.2	(0.48)	4.5 u	(2.17)	4.0	(0.70)
Sodium	10	4.5	(0.26)	4.2	(0.37)	4.4	(0.47)	3.9	(0.35)	3.7	(0.61)	5.2	(0.52)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Empty calories	20	13.3	(0.45)	13.5	(0.64)	13.0	(0.79)	13.0	(0.70)	14.9	(1.07)	13.3	(0.86)
Total HEI-2010 score	100	56.1	(1.19)	56.4	(2.07)	56.0	(2.32)	52.1	(2.31)	56.2	(4.26)	57.2	(2.31)
14–18 Years Old													
Both genders													
Sample size	–	802	–	197	–	125	–	361	–	65	–	214	–
Total fruits	5	3.2	(0.24)	3.8	(0.57)	3.1	(0.46)	2.6	(0.21)	3.8	(0.72)	3.5	(0.35)
Whole fruits	5	4.1	(0.29)	3.9	(0.43)	3.6	(0.52)	3.2	(0.33)	3.4	(0.81)	4.7	(0.33)
Total vegetables	5	2.4	(0.14)	2.2	(0.28)	2.5	(0.21)	2.3	(0.26)	1.8	(0.40)	2.7	(0.20)
Greens and beans	5	1.0 u	(0.30)	1.6 u	(0.55)	1.5 u	(0.66)	0.9 u	(0.53)	1.0 u	(0.52)	0.8 u	(0.29)
Whole grains	10	3.0	(0.19)	2.9	(0.32)	3.0	(0.43)	2.7	(0.24)	3.0	(0.36)	3.5	(0.40)
Dairy	10	8.2	(0.36)	9.0	(0.57)	9.1	(0.54)	8.0	(0.38)	8.7	(0.88)	7.6	(0.61)
Total protein foods	5	4.7	(0.13)	4.5	(0.21)	4.5	(0.28)	4.6	(0.19)	4.4	(0.48)	4.8	(0.17)
Seafood and plant proteins	5	2.9	(0.28)	2.4	(0.41)	3.3	(0.64)	2.5	(0.31)	2.1	(0.50)	3.6 *	(0.49)
Fatty acids	10	3.5	(0.37)	2.8	(0.58)	3.3	(0.71)	3.8	(0.41)	2.2	(0.57)	4.0 *	(0.55)
Refined grains	10	4.9	(0.32)	5.4	(0.73)	5.0	(0.90)	3.8	(0.48)	5.8	(1.05)	5.7	(0.53)
Sodium	10	4.3	(0.28)	4.2	(0.61)	3.9	(0.82)	3.9	(0.35)	4.7	(0.75)	4.8	(0.37)
Empty calories	20	12.6	(0.36)	12.2	(0.68)	12.2	(0.81)	12.8	(0.51)	12.2	(1.05)	13.0	(0.63)
Total HEI-2010 score	100	54.9	(1.16)	54.9	(2.42)	55.0	(2.72)	51.0	(1.91)	53.1	(3.58)	58.8	(1.70)
Boys													
Sample size	–	406	–	115	–	71	–	173	–	39	–	104	–
Total fruits	5	3.0	(0.41)	3.4	(0.97)	2.2	(0.37)	2.5	(0.35)	4.0 u	(1.32)	3.1	(0.55)
Whole fruits	5	3.7	(0.46)	3.2	(0.63)	2.5 u	(0.82)	3.1	(0.53)	3.7	(0.91)	4.6	(0.57)
Total vegetables	5	2.3	(0.16)	2.3	(0.30)	2.5	(0.25)	2.0	(0.14)	1.8	(0.34)	2.6 *	(0.26)
Greens and beans	5	0.7 u	(0.40)	1.4 u	(0.75)	1.0 u	(0.88)	0.4 u	(0.18)	0.5 u	(0.34)	0.5 u	(0.25)
Whole grains	10	2.8	(0.23)	2.0	(0.28)	2.4	(0.38)	2.5	(0.19)	1.7	(0.42)	3.7 **	(0.60)
Dairy	10	8.6	(0.60)	9.1	(0.95)	9.3	(0.70)	9.1	(0.61)	8.7	(1.63)	7.5	(0.96)
Total protein foods	5	4.9	(0.11)	5.0	(0.13)	4.9	(0.16)	4.6	(0.26)	4.9	(0.29)	4.9	(0.15)
Seafood and plant proteins	5	2.6	(0.43)	2.2 u	(0.69)	3.8	(1.07)	2.2	(0.45)	1.7 u	(0.81)	3.3	(0.67)
Fatty acids	10	3.0	(0.45)	2.0 u	(0.63)	1.8 u	(0.75)	2.6	(0.47)	2.3 u	(0.98)	4.5	(0.75)

Subgroup	Maximum Possible HEI Score	All School Children		All NSLP Participants		Income-Eligible NSLP Participants		Income-Eligible Nonparticipants		Higher Income NSLP Participants		Higher Income Nonparticipants	
		Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error	Mean Score	Standard Error
Refined grains	10	4.5	(0.51)	5.0	(1.09)	4.2 u	(1.42)	3.7	(0.56)	5.8	(1.51)	4.8	(0.78)
Sodium	10	4.0	(0.38)	3.4	(0.80)	3.5 u	(1.13)	4.1	(0.43)	3.3 u	(1.09)	4.6	(0.46)
Empty calories	20	12.4	(0.50)	11.5	(1.07)	11.8	(1.01)	12.6	(0.58)	11.3	(1.83)	13.3	(0.88)
Total HEI-2010 score	100	52.7	(1.48)	50.4	(3.42)	50.0	(4.10)	49.4	(2.28)	49.5	(5.08)	57.5	(2.40)

Girls

Sample size	–	396	–	82	–	54	–	188	–	26	–	110	–
Total fruits	5	3.4	(0.24)	4.2	(0.57)	4.1	(0.86)	2.6	(0.23)	3.7	(0.49)	3.8	(0.44)
Whole fruits	5	4.5	(0.34)	4.7	(0.57)	4.8	(0.62)	3.3 *	(0.37)	3.1 u	(1.34)	4.8	(0.33)
Total vegetables	5	2.5	(0.24)	2.2	(0.48)	2.5	(0.34)	2.7	(0.51)	1.9 u	(0.74)	2.7	(0.30)
Greens and beans	5	1.2 u	(0.45)	1.8 u	(0.82)	2.0 u	(0.98)	1.4 u	(1.08)	1.6 u	(1.02)	1.1 u	(0.54)
Whole grains	10	3.3	(0.32)	3.9	(0.59)	3.5	(0.78)	3.0	(0.46)	4.5	(0.59)	3.3	(0.54)
Dairy	10	7.7	(0.40)	8.9	(0.60)	8.9	(0.84)	6.8 *	(0.44)	8.8	(0.58)	7.7	(0.75)
Total protein foods	5	4.5	(0.24)	4.0	(0.41)	4.0	(0.56)	4.6	(0.27)	3.9	(0.94)	4.7	(0.30)
Seafood and plant proteins	5	3.3	(0.35)	2.6	(0.43)	2.7	(0.68)	2.8	(0.42)	2.5	(0.57)	4.0	(0.73)
Fatty acids	10	4.0	(0.58)	3.6	(0.98)	4.9	(1.22)	5.0	(0.67)	2.0	(0.53)	3.4	(0.79)
Refined grains	10	5.3	(0.38)	5.9	(0.96)	5.9	(1.07)	3.8	(0.78)	5.8	(1.45)	6.5	(0.71)
Sodium	10	4.6	(0.41)	5.2	(0.93)	4.3	(1.20)	3.7	(0.55)	6.2	(1.05)	5.1	(0.59)
Empty calories	20	12.8	(0.51)	12.8	(0.81)	12.7	(1.27)	12.9	(0.86)	13.1	(0.96)	12.8	(0.90)
Total HEI-2010 score	100	57.1	(1.81)	59.7	(3.44)	60.3	(3.53)	52.6	(3.09)	56.9	(5.04)	60.1	(2.41)

Notes: “All school children” includes children with missing NSLP participation or income. “All NSLP participants” includes children with missing income. Estimates are based on the day 1 dietary recall. Mean component scores may not sum to total score because of rounding. 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 NSLP participants with nonparticipants within income and age groups. NSLP participants are identified as school children likely to have received a reimbursable school lunch on the intake day (see appendix A).

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

– Denotes not applicable

HEI = Healthy Eating Index

Source: National Health and Nutrition Examination Survey (NHANES) 2011–2016 dietary recalls; Food Pattern Equivalents Database 2011–2012, 2013–2014, and 2015–2016. Sample includes NHANES children aged 5–18 years with complete day 1 dietary recall data, where day 1 recall was on a weekday, who attend a school that serves lunch, and who did not eat all lunch foods at home on the day of dietary recall.