

**Table 1a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>e</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Sample size	Total flavonoids <sup>c</sup>		Anthocyanidins (continued on next page)									
				Total		Cyanidin		Delphinidin		Malvidin		Pelargonidin	
	<i>n</i>	----- <i>mg</i> -----											
<b>Males:</b>													
2 - 5.....	455	65.08	(4.42)	9.50	(1.76)	1.40	(0.14)	1.00*	(0.30)	4.07	(0.76)	1.52*	(0.61)
6 - 11.....	550	99.04	(20.25)	8.68	(2.00)	1.67	(0.34)	0.69*	(0.25)	3.69	(1.09)	1.55*	(0.59)
12 - 19.....	607	180.59	(39.79)	3.37	(0.68)	0.99	(0.25)	0.23	(0.06)	1.02	(0.28)	0.58*	(0.18)
20 - 29.....	409	228.30	(32.01)	6.82	(1.90)	1.02	(0.15)	0.56	(0.17)	1.99	(0.52)	1.14*	(0.47)
30 - 39.....	451	258.61	(34.53)	7.88	(1.41)	1.32	(0.15)	1.05*	(0.37)	3.37	(0.97)	0.94	(0.28)
40 - 49.....	412	260.96	(34.77)	8.71	(2.08)	1.51	(0.39)	1.13*	(0.36)	3.59*	(1.08)	0.84*	(0.50)
50 - 59.....	431	347.63	(57.36)	9.39	(2.15)	1.91	(0.22)	0.96*	(0.39)	3.93	(1.10)	1.25*	(0.44)
60 - 69.....	459	261.61	(31.32)	12.69	(3.16)	1.81	(0.18)	1.41*	(0.55)	6.02	(1.73)	1.28*	(0.48)
70 and over.....	500	177.72	(15.84)	12.06	(1.85)	2.24	(0.35)	1.22	(0.24)	4.89	(1.18)	1.61	(0.42)
2 - 19.....	1,612	128.20	(24.18)	6.45	(0.95)	1.30	(0.18)	0.55	(0.12)	2.56	(0.41)	1.10	(0.28)
20 and over...	2,662	261.49	(20.38)	9.13	(0.83)	1.56	(0.10)	1.01	(0.14)	3.72	(0.48)	1.13	(0.23)
2 and over...	4,274	225.77	(18.11)	8.41	(0.77)	1.49	(0.09)	0.89	(0.13)	3.41	(0.40)	1.12	(0.23)
<b>Females:</b>													
2 - 5.....	377	58.39	(6.47)	7.96	(1.83)	1.64	(0.47)	0.80*	(0.28)	3.35	(0.88)	0.82*	(0.34)
6 - 11.....	571	70.84	(8.68)	8.73	(1.59)	1.23	(0.14)	0.72	(0.17)	4.03	(1.14)	1.61	(0.37)
12 - 19.....	549	128.53	(14.67)	5.92	(1.28)	1.28	(0.30)	0.52*	(0.19)	1.65	(0.34)	1.42*	(0.55)
20 - 29.....	409	158.89	(25.22)	7.86	(2.06)	2.20*	(1.17)	0.48	(0.14)	1.92	(0.54)	1.42	(0.30)
30 - 39.....	482	238.67	(29.29)	10.80	(2.01)	2.38*	(0.73)	1.04*	(0.36)	3.93	(0.75)	1.40	(0.31)
40 - 49.....	466	274.64	(29.29)	11.88*	(3.70)	1.54	(0.31)	4.23*	(3.62)	3.79	(0.55)	1.15*	(0.36)
50 - 59.....	413	288.58	(41.06)	12.74	(2.17)	3.32	(0.97)	1.16	(0.32)	4.48	(0.92)	1.93*	(0.63)
60 - 69.....	465	284.51	(37.69)	13.56	(2.48)	3.07	(0.83)	1.24	(0.27)	5.19	(1.12)	1.95	(0.48)
70 and over.....	523	193.96	(17.59)	11.11	(1.43)	2.06	(0.31)	1.23	(0.30)	4.04	(0.73)	1.62	(0.31)
2 - 19.....	1,497	94.47	(9.16)	7.30	(1.16)	1.34	(0.21)	0.65	(0.13)	2.81	(0.55)	1.36	(0.37)
20 and over...	2,758	239.31	(15.23)	11.17	(1.46)	2.39	(0.35)	1.64*	(0.73)	3.78	(0.48)	1.55	(0.25)
2 and over...	4,255	204.04	(12.94)	10.23	(1.22)	2.14	(0.29)	1.40*	(0.54)	3.54	(0.43)	1.50	(0.26)
<b>Males and females:</b>													
2 - 19.....	3,109	111.44	(16.01)	6.87	(0.93)	1.32	(0.14)	0.60	(0.12)	2.68	(0.44)	1.23	(0.29)
20 and over...	5,420	249.76	(16.80)	10.21	(1.04)	2.00	(0.20)	1.34*	(0.42)	3.75	(0.44)	1.35	(0.23)
2 and over...	8,529	214.45	(14.78)	9.36	(0.92)	1.83	(0.17)	1.15	(0.31)	3.48	(0.39)	1.32	(0.24)

\*, a-g Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>  
 SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>

**Table 1a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins – continued**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>e</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Anthocyanidins – continued			
	Peonidin		Petunidin	
	----- mg -----			
<b>Males:</b>				
2 - 5.....	0.69	(0.18)	0.82*	(0.26)
6 - 11.....	0.57*	(0.18)	0.52*	(0.20)
12 - 19.....	0.36*	(0.13)	0.18	(0.04)
20 - 29.....	1.78*	(1.37)	0.34	(0.08)
30 - 39.....	0.65	(0.12)	0.54	(0.16)
40 - 49.....	1.03*	(0.44)	0.61*	(0.20)
50 - 59.....	0.70	(0.16)	0.63*	(0.21)
60 - 69.....	0.98*	(0.36)	1.19*	(0.47)
70 and over.....	1.17	(0.24)	0.92	(0.21)
2 - 19.....	0.50	(0.09)	0.43	(0.10)
20 and over...	1.06	(0.29)	0.65	(0.09)
2 and over...	0.91	(0.23)	0.59	(0.08)
<b>Females:</b>				
2 - 5.....	0.70*	(0.24)	0.66*	(0.25)
6 - 11.....	0.58	(0.14)	0.56	(0.14)
12 - 19.....	0.73*	(0.33)	0.32*	(0.12)
20 - 29.....	1.49*	(1.02)	0.35	(0.09)
30 - 39.....	1.15	(0.30)	0.90*	(0.32)
40 - 49.....	0.62	(0.08)	0.55	(0.10)
50 - 59.....	1.10*	(0.42)	0.73	(0.17)
60 - 69.....	1.12	(0.25)	0.99	(0.24)
70 and over.....	1.18	(0.28)	0.97	(0.25)
2 - 19.....	0.67	(0.17)	0.47	(0.10)
20 and over...	1.10	(0.21)	0.71	(0.11)
2 and over...	1.00	(0.16)	0.65	(0.10)
<b>Males and females:</b>				
2 - 19.....	0.59	(0.10)	0.45	(0.09)
20 and over...	1.08	(0.17)	0.68	(0.09)
2 and over...	0.95	(0.14)	0.62	(0.08)

\*, a-g Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 1b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>e</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Flavan-3-ols (continued on next page)													
	Total		(-)-Epicatechin		(-)-Epicatechin 3-gallate		(-)-Epigallocatechin		(-)-Epigallocatechin 3-gallate		(+) -Catechin		(+) -Gallocatechin	
----- mg -----														
<b>Males:</b>														
2 - 5.....	33.08	(4.32)	10.39	(0.56)	1.14	(0.28)	1.91	(0.42)	3.02	(0.71)	5.63	(0.29)	0.17	(0.04)
6 - 11.....	66.18	(19.00)	8.63	(0.63)	3.55*	(1.18)	5.47*	(1.72)	9.22*	(2.79)	5.26	(0.37)	0.55*	(0.20)
12 - 19.....	147.62	(37.80)	9.17	(1.24)	8.82	(2.42)	13.14	(3.57)	22.08	(5.94)	5.64	(0.74)	1.46	(0.40)
20 - 29.....	183.07	(30.41)	10.15	(0.81)	10.99	(1.95)	16.33	(2.86)	26.90	(4.75)	7.49	(0.69)	2.08	(0.32)
30 - 39.....	206.07	(32.51)	11.36	(0.89)	12.35	(2.11)	18.48	(3.07)	30.76	(5.12)	8.34	(0.77)	2.21	(0.36)
40 - 49.....	219.07	(33.40)	12.13	(1.01)	13.26	(2.12)	19.89	(3.09)	33.62	(5.12)	8.89	(0.93)	2.33	(0.36)
50 - 59.....	294.47	(56.00)	13.05	(1.42)	18.00	(3.60)	27.00	(5.26)	45.17	(8.54)	9.58	(0.91)	3.07	(0.61)
60 - 69.....	210.52	(31.12)	10.52	(0.95)	12.63	(1.99)	19.10	(2.93)	31.81	(5.03)	8.90	(0.76)	2.13	(0.31)
70 and over.....	133.80	(14.45)	8.56	(0.97)	7.79	(0.91)	11.99	(1.33)	20.13	(2.16)	7.23	(0.65)	1.27	(0.16)
2 - 19.....	95.49	(22.80)	9.29	(0.71)	5.39	(1.44)	8.13	(2.11)	13.62	(3.50)	5.52	(0.43)	0.88	(0.24)
20 and over...	213.55	(19.25)	11.20	(0.61)	12.87	(1.22)	19.32	(1.79)	32.26	(3.01)	8.46	(0.48)	2.26	(0.21)
2 and over...	181.91	(16.89)	10.69	(0.58)	10.87	(1.06)	16.32	(1.56)	27.27	(2.59)	7.68	(0.44)	1.89	(0.18)
<b>Females:</b>														
2 - 5.....	27.89	(5.30)	8.39	(0.71)	0.99*	(0.34)	1.64*	(0.50)	2.52*	(0.81)	4.80	(0.45)	0.16*	(0.06)
6 - 11.....	43.33	(8.60)	7.61	(0.49)	2.09	(0.56)	3.25	(0.81)	5.31	(1.37)	4.41	(0.33)	0.33	(0.09)
12 - 19.....	101.27	(14.14)	7.67	(0.83)	5.83	(0.86)	8.78	(1.24)	15.12	(2.12)	4.82	(0.44)	0.90	(0.14)
20 - 29.....	123.91	(25.24)	7.81	(0.69)	7.46	(1.66)	11.25	(2.45)	18.97	(4.23)	5.48	(0.49)	1.25	(0.26)
30 - 39.....	195.85	(28.08)	9.46	(0.83)	11.81	(1.78)	17.64	(2.60)	29.91	(4.33)	6.78	(0.55)	1.92	(0.30)
40 - 49.....	233.21	(28.81)	10.49	(0.77)	14.07	(1.80)	20.91	(2.63)	35.49	(4.54)	8.01	(0.61)	2.30	(0.28)
50 - 59.....	236.41	(36.69)	11.87	(1.33)	14.06	(2.26)	21.14	(3.35)	36.13	(5.87)	9.21	(1.03)	2.22	(0.35)
60 - 69.....	238.71	(35.08)	11.50	(1.35)	14.10	(2.01)	21.26	(2.94)	36.64	(4.92)	9.10	(1.13)	2.18	(0.33)
70 and over.....	152.24	(16.72)	9.02	(0.45)	9.12	(1.05)	13.86	(1.53)	23.19	(2.50)	7.02	(0.37)	1.47	(0.18)
2 - 19.....	66.45	(9.06)	7.80	(0.56)	3.56	(0.55)	5.43	(0.80)	9.19	(1.39)	4.68	(0.33)	0.55	(0.09)
20 and over...	196.34	(14.18)	9.98	(0.49)	11.76	(0.89)	17.64	(1.32)	29.99	(2.21)	7.53	(0.44)	1.90	(0.14)
2 and over...	164.71	(12.09)	9.45	(0.42)	9.76	(0.75)	14.67	(1.11)	24.92	(1.87)	6.84	(0.38)	1.57	(0.12)
<b>Males and females:</b>														
2 - 19.....	81.06	(15.18)	8.55	(0.56)	4.48	(0.95)	6.79	(1.39)	11.42	(2.31)	5.10	(0.33)	0.72	(0.16)
20 and over...	204.45	(15.62)	10.55	(0.50)	12.29	(0.98)	18.43	(1.45)	31.06	(2.43)	7.97	(0.44)	2.07	(0.16)
2 and over...	172.95	(13.63)	10.04	(0.48)	10.29	(0.85)	15.46	(1.25)	26.05	(2.07)	7.24	(0.40)	1.72	(0.14)

\*, a-g Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>  
 SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>

**Table 1b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols – continued**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>e</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Flavan-3-ols – continued									
	Theaflavin		Theaflavin-3,3'- digallate		Theaflavin-3'- gallate		Theaflavin-3- gallate		Thearubigins	
	----- mg -----									
<b>Males:</b>										
2 - 5.....	0.17	(0.05)	0.18	(0.05)	0.15	(0.04)	0.14	(0.04)	10.17	(2.83)
6 - 11.....	0.55*	(0.22)	0.60*	(0.24)	0.51*	(0.21)	0.43*	(0.17)	31.40*	(11.49)
12 - 19.....	1.47	(0.42)	1.63	(0.46)	1.39	(0.40)	1.17	(0.33)	81.64	(22.07)
20 - 29.....	1.90	(0.34)	2.09	(0.37)	1.79	(0.32)	1.50	(0.27)	101.84	(18.08)
30 - 39.....	2.09	(0.37)	2.30	(0.41)	1.96	(0.35)	1.66	(0.29)	114.57	(19.39)
40 - 49.....	2.16	(0.39)	2.38	(0.43)	2.03	(0.37)	1.72	(0.31)	120.69	(20.00)
50 - 59.....	3.00	(0.65)	3.32	(0.72)	2.82	(0.62)	2.39	(0.51)	167.08	(33.37)
60 - 69.....	2.09	(0.33)	2.31	(0.36)	1.96	(0.31)	1.67	(0.26)	117.41	(18.43)
70 and over.....	1.24	(0.17)	1.37	(0.18)	1.15	(0.16)	0.99	(0.13)	72.08	(8.18)
2 - 19.....	0.88	(0.25)	0.97	(0.28)	0.83	(0.24)	0.70	(0.20)	49.29	(13.50)
20 and over...	2.15	(0.21)	2.37	(0.23)	2.02	(0.20)	1.71	(0.17)	118.94	(11.40)
2 and over...	1.81	(0.19)	2.00	(0.20)	1.70	(0.17)	1.44	(0.15)	100.27	(9.95)
<b>Females:</b>										
2 - 5.....	0.16*	(0.06)	0.17*	(0.07)	0.15*	(0.06)	0.12*	(0.05)	8.78*	(3.23)
6 - 11.....	0.33	(0.10)	0.37	(0.11)	0.31	(0.09)	0.27	(0.08)	19.06	(5.24)
12 - 19.....	0.92	(0.15)	1.02	(0.17)	0.85	(0.14)	0.74	(0.12)	54.62	(8.30)
20 - 29.....	1.21	(0.27)	1.33	(0.30)	1.14	(0.26)	0.96	(0.22)	67.05	(14.83)
30 - 39.....	1.94	(0.31)	2.15	(0.35)	1.81	(0.30)	1.56	(0.25)	110.86	(16.82)
40 - 49.....	2.33	(0.31)	2.58	(0.34)	2.17	(0.29)	1.88	(0.25)	132.97	(17.40)
50 - 59.....	2.28	(0.36)	2.52	(0.40)	2.11	(0.34)	1.84	(0.29)	133.04	(21.40)
60 - 69.....	2.25	(0.37)	2.50	(0.41)	2.07	(0.34)	1.84	(0.31)	135.27	(21.27)
70 and over.....	1.49	(0.19)	1.64	(0.21)	1.39	(0.18)	1.18	(0.15)	82.85	(10.16)
2 - 19.....	0.56	(0.10)	0.62	(0.11)	0.52	(0.09)	0.45	(0.08)	33.09	(5.39)
20 and over...	1.92	(0.15)	2.12	(0.17)	1.78	(0.14)	1.54	(0.12)	110.17	(8.37)
2 and over...	1.59	(0.13)	1.76	(0.14)	1.48	(0.12)	1.28	(0.10)	91.40	(7.17)
<b>Males and females:</b>										
2 - 19.....	0.72	(0.17)	0.80	(0.19)	0.68	(0.16)	0.58	(0.13)	41.24	(8.97)
20 and over...	2.03	(0.17)	2.24	(0.19)	1.89	(0.16)	1.62	(0.13)	114.30	(9.24)
2 and over...	1.69	(0.15)	1.87	(0.16)	1.58	(0.14)	1.35	(0.12)	95.65	(8.05)

\*, a-g Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 1c. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavanones**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>c</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Flavanones							
	Total		Eriodictyol		Hesperetin		Naringenin	
----- mg -----								
<b>Males:</b>								
2 - 5.....	14.08	(1.88)	0.17	(0.02)	11.11	(1.58)	2.79	(0.32)
6 - 11.....	14.40	(1.21)	0.18	(0.03)	11.45	(1.06)	2.78	(0.25)
12 - 19.....	14.38	(1.64)	0.23	(0.02)	11.23	(1.48)	2.92	(0.28)
20 - 29.....	12.93	(2.43)	0.17	(0.03)	10.53	(2.06)	2.23	(0.39)
30 - 39.....	19.46	(3.60)	0.28	(0.05)	14.57	(2.82)	4.61	(1.02)
40 - 49.....	9.36	(1.71)	0.23	(0.04)	5.85	(1.14)	3.28	(0.68)
50 - 59.....	16.07	(2.66)	0.26*	(0.09)	11.38	(1.96)	4.43	(1.09)
60 - 69.....	14.51	(2.06)	0.11*	(0.04)	10.25	(1.80)	4.15	(0.79)
70 and over.....	15.29	(1.07)	0.16	(0.03)	10.53	(0.82)	4.60	(0.47)
2 - 19.....	14.31	(1.06)	0.20	(0.02)	11.27	(0.94)	2.85	(0.18)
20 and over...	14.43	(1.01)	0.21	(0.03)	10.44	(0.86)	3.77	(0.26)
2 and over...	14.40	(0.78)	0.21	(0.02)	10.66	(0.66)	3.52	(0.20)
<b>Females:</b>								
2 - 5.....	15.08	(2.80)	0.17	(0.03)	11.93	(2.37)	2.99	(0.47)
6 - 11.....	10.33	(1.19)	0.19	(0.02)	8.18	(1.01)	1.96	(0.30)
12 - 19.....	9.34	(1.34)	0.23	(0.04)	7.27	(1.11)	1.84	(0.26)
20 - 29.....	11.36	(1.94)	0.20	(0.04)	8.78	(1.54)	2.37	(0.47)
30 - 39.....	11.08	(1.42)	0.17	(0.02)	7.83	(1.15)	3.09	(0.51)
40 - 49.....	8.50	(1.59)	0.23*	(0.07)	5.65	(1.01)	2.62*	(0.83)
50 - 59.....	16.15	(3.22)	0.23	(0.04)	11.29	(2.51)	4.63	(0.85)
60 - 69.....	10.32	(0.97)	0.15	(0.03)	7.31	(0.85)	2.86	(0.39)
70 and over.....	14.40	(1.48)	0.09	(0.01)	9.44	(0.99)	4.87	(0.73)
2 - 19.....	10.86	(0.88)	0.20	(0.02)	8.54	(0.75)	2.12	(0.16)
20 and over...	11.90	(1.10)	0.19	(0.02)	8.37	(0.80)	3.35	(0.37)
2 and over...	11.65	(0.88)	0.19	(0.01)	8.41	(0.65)	3.05	(0.28)
<b>Males and females:</b>								
2 - 19.....	12.60	(0.66)	0.20	(0.01)	9.91	(0.59)	2.49	(0.10)
20 and over...	13.09	(0.88)	0.20	(0.02)	9.35	(0.66)	3.55	(0.26)
2 and over...	12.97	(0.71)	0.20	(0.01)	9.49	(0.54)	3.28	(0.20)

\*, a-g Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>  
 SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>

**Table 1d. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavones**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>e</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Flavones					
	Total		Apigenin		Luteolin	
	----- mg -----					
<b>Males:</b>						
2 - 5.....	0.36	(0.04)	0.04	(0.01)	0.32	(0.04)
6 - 11.....	0.41	(0.06)	0.07	(0.01)	0.34	(0.06)
12 - 19.....	0.64	(0.08)	0.15	(0.02)	0.50	(0.06)
20 - 29.....	0.94	(0.11)	0.20	(0.01)	0.74	(0.10)
30 - 39.....	1.04	(0.11)	0.28	(0.06)	0.76	(0.07)
40 - 49.....	0.96	(0.13)	0.21	(0.02)	0.75	(0.11)
50 - 59.....	0.98	(0.11)	0.22	(0.02)	0.76	(0.11)
60 - 69.....	0.93	(0.09)	0.24	(0.03)	0.70	(0.07)
70 and over.....	0.75	(0.09)	0.16	(0.02)	0.60	(0.08)
2 - 19.....	0.50	(0.05)	0.10	(0.01)	0.41	(0.04)
20 and over...	0.95	(0.07)	0.22	(0.01)	0.73	(0.06)
2 and over...	0.83	(0.06)	0.19	(0.01)	0.64	(0.06)
<b>Females:</b>						
2 - 5.....	0.42	(0.08)	0.09*	(0.04)	0.33	(0.07)
6 - 11.....	0.37	(0.06)	0.05	(0.01)	0.32	(0.06)
12 - 19.....	0.45	(0.05)	0.09	(0.01)	0.36	(0.05)
20 - 29.....	0.60	(0.05)	0.16	(0.02)	0.44	(0.04)
30 - 39.....	0.86	(0.14)	0.29*	(0.11)	0.58	(0.06)
40 - 49.....	0.76	(0.07)	0.19	(0.02)	0.56	(0.07)
50 - 59.....	0.92	(0.12)	0.27	(0.04)	0.66	(0.11)
60 - 69.....	0.87	(0.10)	0.22	(0.03)	0.65	(0.08)
70 and over.....	0.65	(0.04)	0.17	(0.01)	0.49	(0.04)
2 - 19.....	0.42	(0.05)	0.08	(0.01)	0.34	(0.05)
20 and over...	0.78	(0.05)	0.22	(0.02)	0.56	(0.04)
2 and over...	0.69	(0.05)	0.18	(0.02)	0.51	(0.04)
<b>Males and females:</b>						
2 - 19.....	0.46	(0.05)	0.09	(0.01)	0.37	(0.04)
20 and over...	0.86	(0.06)	0.22	(0.02)	0.64	(0.05)
2 and over...	0.76	(0.06)	0.18	(0.01)	0.57	(0.05)

\*, a-g Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>  
 SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>

**Table 1e. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavonols**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>c</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Flavonols									
	Total		Isorhamnetin		Kaempferol		Myricetin		Quercetin	
----- mg -----										
<b>Males:</b>										
2 - 5.....	6.91	(0.43)	0.20	(0.03)	1.15	(0.11)	0.33	(0.04)	5.23	(0.31)
6 - 11.....	8.48	(0.70)	0.27	(0.03)	1.54	(0.26)	0.59	(0.10)	6.09	(0.37)
12 - 19.....	13.81	(1.91)	0.49	(0.06)	3.24	(0.55)	1.00	(0.19)	9.07	(1.17)
20 - 29.....	20.19	(1.31)	0.86	(0.09)	6.15	(0.48)	1.28	(0.15)	11.89	(0.77)
30 - 39.....	22.77	(1.20)	1.13	(0.08)	6.24	(0.53)	1.64	(0.17)	13.77	(0.61)
40 - 49.....	22.13	(1.77)	0.81	(0.10)	6.26	(0.66)	1.75	(0.19)	13.30	(1.02)
50 - 59.....	25.26	(2.08)	0.96	(0.06)	7.19	(0.67)	2.20	(0.26)	14.90	(1.20)
60 - 69.....	21.05	(1.38)	1.05	(0.12)	5.05	(0.34)	1.77	(0.15)	13.18	(0.88)
70 and over.....	15.26	(0.99)	0.70	(0.05)	3.45	(0.23)	1.25	(0.08)	9.87	(0.72)
2 - 19.....	10.54	(1.10)	0.35	(0.03)	2.22	(0.32)	0.72	(0.12)	7.25	(0.65)
20 and over...	21.61	(1.06)	0.93	(0.05)	5.97	(0.35)	1.67	(0.11)	13.04	(0.61)
2 and over...	18.64	(0.99)	0.77	(0.04)	4.97	(0.31)	1.42	(0.10)	11.48	(0.58)
<b>Females:</b>										
2 - 5.....	6.22	(0.44)	0.21	(0.03)	0.91	(0.09)	0.30	(0.04)	4.80	(0.35)
6 - 11.....	7.21	(0.40)	0.24	(0.02)	1.26	(0.11)	0.41	(0.05)	5.30	(0.28)
12 - 19.....	10.68	(0.79)	0.38	(0.05)	2.37	(0.21)	0.80	(0.10)	7.13	(0.52)
20 - 29.....	13.39	(1.17)	0.64	(0.06)	3.34	(0.38)	0.91	(0.14)	8.51	(0.71)
30 - 39.....	17.54	(1.28)	0.73	(0.09)	4.11	(0.40)	1.48	(0.15)	11.21	(0.78)
40 - 49.....	18.58	(1.40)	0.66	(0.06)	4.75	(0.37)	1.72	(0.19)	11.45	(0.84)
50 - 59.....	20.94	(2.62)	1.01	(0.20)	4.58	(0.55)	1.90	(0.26)	13.45	(1.71)
60 - 69.....	19.73	(1.69)	0.70	(0.05)	4.49	(0.45)	1.96	(0.24)	12.59	(1.00)
70 and over.....	14.98	(0.68)	0.76	(0.07)	3.23	(0.28)	1.22	(0.07)	9.77	(0.36)
2 - 19.....	8.58	(0.56)	0.30	(0.03)	1.69	(0.14)	0.56	(0.07)	6.03	(0.37)
20 and over...	17.50	(0.85)	0.75	(0.05)	4.11	(0.22)	1.52	(0.09)	11.13	(0.52)
2 and over...	15.33	(0.74)	0.64	(0.04)	3.52	(0.19)	1.29	(0.08)	9.89	(0.46)
<b>Males and females:</b>										
2 - 19.....	9.57	(0.79)	0.32	(0.02)	1.96	(0.22)	0.64	(0.09)	6.64	(0.49)
20 and over...	19.44	(0.91)	0.83	(0.05)	4.99	(0.27)	1.59	(0.10)	12.03	(0.53)
2 and over...	16.92	(0.83)	0.70	(0.04)	4.21	(0.24)	1.35	(0.09)	10.65	(0.49)

<sup>a-g</sup> Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 1f. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – isoflavones**

Mean<sup>d</sup> intake (standard error) per individual, by gender<sup>c</sup> and age, in the United States,<sup>f</sup> What We Eat in America, NHANES 2007-2008<sup>g</sup>

Gender and age (years)	Isoflavones			
	Total	Daidzein	Genistein	Glycitein
----- mg -----				
<b>Males:</b>				
2 - 5.....	1.17* (0.41)	0.49* (0.17)	0.62* (0.21)	0.06* (0.02)
6 - 11.....	0.88* (0.44)	0.38* (0.19)	0.46* (0.23)	0.03* (0.01)
12 - 19.....	0.78 (0.21)	0.33 (0.10)	0.39 (0.10)	0.06 (0.02)
20 - 29.....	4.34* (1.98)	1.42* (0.63)	2.52* (1.18)	0.39* (0.18)
30 - 39.....	1.40* (0.52)	0.59* (0.23)	0.70* (0.25)	0.11* (0.04)
40 - 49.....	0.72* (0.29)	0.32* (0.13)	0.36* (0.14)	0.04* (0.02)
50 - 59.....	1.45* (0.49)	0.59* (0.19)	0.76* (0.26)	0.10* (0.04)
60 - 69.....	1.91* (0.73)	0.72* (0.26)	1.06* (0.41)	0.13* (0.05)
70 and over.....	0.55 (0.14)	0.24 (0.06)	0.28 (0.07)	0.03 (0.01)
2 - 19.....	0.90 (0.21)	0.38 (0.09)	0.47 (0.11)	0.05 (0.01)
20 and over...	1.83 (0.46)	0.68 (0.15)	1.01 (0.27)	0.14 (0.04)
2 and over...	1.58 (0.35)	0.60 (0.12)	0.86 (0.21)	0.12 (0.03)
<b>Females:</b>				
2 - 5.....	0.81* (0.30)	0.36* (0.13)	0.42* (0.14)	0.04* (0.02)
6 - 11.....	0.87* (0.44)	0.38* (0.20)	0.43* (0.21)	0.05* (0.03)
12 - 19.....	0.87* (0.36)	0.32* (0.13)	0.48* (0.20)	0.07* (0.03)
20 - 29.....	1.77 (0.28)	0.70 (0.11)	0.94 (0.14)	0.13 (0.02)
30 - 39.....	2.54* (1.06)	1.00* (0.44)	1.33* (0.55)	0.20* (0.08)
40 - 49.....	1.71* (0.63)	0.71* (0.25)	0.88* (0.33)	0.12* (0.05)
50 - 59.....	1.41 (0.38)	0.52 (0.14)	0.78 (0.22)	0.11 (0.03)
60 - 69.....	1.31* (0.41)	0.56* (0.18)	0.67* (0.21)	0.08 (0.02)
70 and over.....	0.58 (0.15)	0.24 (0.06)	0.30 (0.08)	0.03* (0.01)
2 - 19.....	0.86* (0.26)	0.35* (0.11)	0.45 (0.13)	0.06* (0.02)
20 and over...	1.61 (0.32)	0.65 (0.13)	0.85 (0.17)	0.12 (0.02)
2 and over...	1.43 (0.28)	0.57 (0.11)	0.75 (0.14)	0.10 (0.02)
<b>Males and females:</b>				
2 - 19.....	0.88 (0.19)	0.37 (0.08)	0.46 (0.10)	0.06 (0.01)
20 and over...	1.72 (0.30)	0.66 (0.11)	0.92 (0.17)	0.13 (0.02)
2 and over...	1.50 (0.25)	0.59 (0.10)	0.80 (0.14)	0.11 (0.02)

\*, a-g Notes are on page 9.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>  
 SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by gender and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>

**NOTES**

\* Estimates flagged with an asterisk may be less statistically reliable than estimates that are not flagged. An estimated mean is flagged when either (a) the relative standard error is greater than 30 percent or (b) the sample size is less than 30 times the variance inflation factor (VIF), a broadly calculated average design effect. The VIF used in this table is 2.16.

<sup>a</sup> Detailed information about the flavonoid data files used in creating these tables is provided in reference 1. These tables include 29 individual flavonoids categorized into 6 (sub)classes as described in reference 2. Theaflavins and thearubigins are included (grouped with flavan-3-ols), but the proanthocyanidins listed in reference 3 are excluded because their content has not yet been determined for the full range of survey foods/beverages. The flavonoids in these tables, except for flavan-3-ols, were calculated and presented as their aglycone forms (anthocyanidins, flavanones, flavones, flavonols, and isoflavones); flavan-3-ols are reported as their actual forms (*personal communication, Dr. Xianli Wu, USDA Nutrient Data Laboratory, March 31, 2016*). Procedures for standardizing analytical values of flavonoids that are present in foods/beverages in varying forms are described in reference 4.

<sup>b</sup> Estimates are based on intake of food and beverages, including water, and do not include intake from supplements or medications.

<sup>c</sup> Sum of dietary flavonoids in the 6 classes presented in tables 1a through 1f.

<sup>d</sup> For purposes of comparison with other studies that have reported median intakes, the following information on median intakes is provided:

- Flavonoids, total: males and females (M&F) age 2-19 years, 33.54 mg; M&F 20+ years, 48.95 mg; M&F 2+ years, 43.57 mg.
- Anthocyanidins, total: M&F 2-19 years, 0.79 mg; M&F 20+ years, 0.76 mg; M&F 2+ years, 0.78 mg.
- Flavan-3-ols, total: M&F 2-19 years, 10.52 mg; M&F 20+ years, 12.22 mg; M&F 2+ years, 11.72 mg.
- Flavanones, total: M&F 2-19 years, 0.14 mg; M&F 20+ years, 0.25 mg; M&F 2+ years, 0.22 mg.
- Flavones, total: M&F 2-19 years, 0.15 mg; M&F 20+ years, 0.42 mg; M&F 2+ years, 0.33 mg.
- Flavonols, total: M&F 2-19 years, 6.08 mg; M&F 20+ years, 12.69 mg; M&F 2+ years, 10.66 mg.
- Isoflavones, total: M&F 2-19 years, 0.00 mg; M&F 20+ years, 0.00 mg; M&F 2+ years, 0.00 mg. Note that fewer than 50% of individuals from any sex/age group report any foods/beverages containing isoflavones on any given day.

<sup>e</sup> Demographic data used in this table are available at <http://www.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Demographics&CycleBeginYear=2007>.

<sup>f</sup> To produce estimates that are representative of the U.S. population for the years of data collection, dietary day 1 sample weights (available from <http://www.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Dietary&CycleBeginYear=2007>) were used.

<sup>g</sup> Estimates in this table are based on 1 day of data collected in What We Eat in America, the dietary intake interview component of the National Health and Nutrition Examination Survey, in 2007 to 2008. <http://www.ars.usda.gov/Services/docs.htm?docid=13793>. Breastfed children were excluded because the amount of breast milk consumed was not quantified.

**REFERENCES**

1. Sebastian RS, Goldman JD, Martin CL, Steinfeldt LC, Wilkinson Enns C, Moshfegh AJ. 2014 (slightly revised 2015). *Flavonoid Values for USDA Survey Foods and Beverages 2007-2008: Provisional flavonoid addendum to the USDA Food and Nutrient Database for Dietary Studies, 4.1, and flavonoid intake data files from What We Eat in America (WWEIA), National Health and Nutrition Examination Survey (NHANES) 2007-2008* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. [http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB\\_doc.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB_doc.pdf). Accessed March 31, 2016.
2. Bhagwat S, Haytowitz DB, Wasswa-Kintu S. 2014 (Sep). *USDA's Expanded Flavonoid Database for the Assessment of Dietary Intakes: Documentation and user guide* [release 1]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/FDB-EXP.pdf>. Accessed March 31, 2016.
3. Bhagwat S, Haytowitz D. 2015 (Sep; slightly revised Dec). *USDA Database for the Proanthocyanidin Content of Selected Foods, release 2* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/PA/PA02.pdf>. Accessed March 31, 2016.
4. Bhagwat S, Haytowitz DB, Holden JM (ret.). 2013 (Dec). *USDA Database for the Flavonoid Content of Selected Foods, release 3.1* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/Flav3-1.pdf>. Accessed March 31, 2016.

THIS PAGE IS INTENTIONALLY BLANK

**Table 2a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Sample size	Total flavonoids <sup>c</sup>		Anthocyanidins (continued on next page)									
				Total	Cyanidin	Delphinidin	Malvidin	Pelargonidin					
	<i>n</i>	----- <i>mg</i> -----											
<b>Non-Hispanic White:</b>													
2 - 5.....	295	61.67	(6.72)	10.60	(1.91)	1.75	(0.44)	1.13*	(0.35)	4.33	(0.94)	1.59*	(0.65)
6 - 11.....	336	97.24	(22.13)	10.18	(2.45)	1.54	(0.25)	0.78*	(0.31)	4.46*	(1.56)	2.15*	(0.68)
12 - 19.....	360	190.11	(38.58)	4.64	(1.22)	1.24	(0.27)	0.42*	(0.18)	1.10*	(0.45)	1.20*	(0.43)
20 and over...	2,548	276.14	(20.62)	11.46	(1.41)	2.17	(0.26)	1.62*	(0.59)	4.14	(0.58)	1.54	(0.32)
2 and over...	3,539	243.99	(19.20)	10.60	(1.31)	2.01	(0.23)	1.41*	(0.46)	3.85	(0.54)	1.55	(0.33)
<b>Non-Hispanic Black:</b>													
2 - 5.....	182	60.74	(5.54)	5.10	(0.77)	1.04	(0.17)	0.41	(0.10)	2.70	(0.47)	0.29*	(0.14)
6 - 11.....	295	62.89	(5.59)	7.75	(1.27)	1.14	(0.12)	0.60	(0.10)	4.41	(0.85)	0.66*	(0.26)
12 - 19.....	311	94.45	(16.41)	5.17	(1.20)	0.60	(0.05)	0.28	(0.05)	2.22	(0.38)	0.48*	(0.24)
20 and over...	1,136	172.13	(10.34)	6.80	(0.81)	1.30	(0.17)	0.49	(0.10)	3.12	(0.59)	0.84	(0.16)
2 and over...	1,924	142.70	(8.08)	6.55	(0.58)	1.17	(0.12)	0.46	(0.07)	3.09	(0.43)	0.74	(0.12)
<b>Hispanic, all:</b>													
2 - 5.....	308	66.00	(5.45)	7.06	(1.08)	1.22	(0.12)	0.67	(0.16)	3.17	(0.56)	0.96*	(0.50)
6 - 11.....	437	71.01	(6.79)	5.87	(1.01)	1.42	(0.36)	0.54*	(0.20)	2.28	(0.47)	0.78*	(0.28)
12 - 19.....	431	101.06	(17.04)	4.09	(0.47)	0.99	(0.16)	0.33	(0.08)	1.53	(0.30)	0.64	(0.17)
20 and over...	1,525	133.00	(14.53)	7.72	(1.01)	1.78	(0.38)	0.74	(0.13)	2.77	(0.39)	0.95	(0.15)
2 and over...	2,701	115.64	(11.76)	6.94	(0.77)	1.58	(0.26)	0.65	(0.10)	2.57	(0.29)	0.88	(0.13)
<b>Mexican American:</b>													
2 - 5.....	217	60.14	(4.66)	5.58	(0.82)	1.02	(0.09)	0.56*	(0.18)	2.59	(0.47)	0.49	(0.12)
6 - 11.....	291	64.13	(8.08)	5.83	(1.46)	1.35	(0.34)	0.57*	(0.29)	2.40	(0.70)	0.57*	(0.23)
12 - 19.....	270	85.71	(16.62)	3.57	(0.52)	1.00	(0.23)	0.25*	(0.08)	1.32	(0.36)	0.56*	(0.18)
20 and over...	930	137.46	(22.55)	6.82	(1.08)	1.81	(0.42)	0.66	(0.14)	2.44	(0.42)	0.75	(0.15)
2 and over...	1,708	114.31	(16.66)	6.14	(0.88)	1.57	(0.29)	0.58	(0.13)	2.30	(0.35)	0.68	(0.13)

\*, a-f Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 2a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins – continued**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Anthocyanidins – continued			
	Peonidin		Petunidin	
	----- mg -----			
<b>Non-Hispanic White:</b>				
2 - 5.....	0.86*	(0.27)	0.95*	(0.31)
6 - 11.....	0.65*	(0.23)	0.61*	(0.26)
12 - 19.....	0.41*	(0.12)	0.26*	(0.12)
20 and over...	1.19	(0.23)	0.80	(0.12)
2 and over...	1.05	(0.20)	0.73	(0.12)
<b>Non-Hispanic Black:</b>				
2 - 5.....	0.38	(0.08)	0.28	(0.07)
6 - 11.....	0.55	(0.09)	0.39	(0.06)
12 - 19.....	1.40*	(1.07)	0.20	(0.03)
20 and over...	0.70	(0.09)	0.35	(0.07)
2 and over...	0.76	(0.18)	0.33	(0.05)
<b>Hispanic, all:</b>				
2 - 5.....	0.51	(0.09)	0.53	(0.13)
6 - 11.....	0.43	(0.11)	0.41*	(0.18)
12 - 19.....	0.36	(0.05)	0.25	(0.06)
20 and over...	0.95*	(0.30)	0.53	(0.07)
2 and over...	0.77	(0.21)	0.48	(0.07)
<b>Mexican American:</b>				
2 - 5.....	0.44	(0.10)	0.46*	(0.15)
6 - 11.....	0.48*	(0.17)	0.44*	(0.25)
12 - 19.....	0.27	(0.06)	0.19*	(0.06)
20 and over...	0.63	(0.11)	0.52	(0.11)
2 and over...	0.55	(0.09)	0.46	(0.10)

\*, a-f Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 2b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Flavan-3-ols (continued on next page)													
	Total		(-)-Epicatechin		(-)-Epicatechin 3-gallate		(-)-Epigallocatechin		(-)-Epigallocatechin 3-gallate		(+) -Catechin		(+) -Gallocatechin	
	----- mg -----													
<b>Non-Hispanic White:</b>														
2 - 5.....	31.61	(5.83)	9.06	(0.62)	1.17*	(0.37)	1.95	(0.55)	3.06*	(0.97)	5.06	(0.49)	0.18*	(0.06)
6 - 11.....	66.92*	(21.11)	8.27	(0.84)	3.60*	(1.31)	5.48*	(1.90)	9.00*	(3.12)	5.01	(0.46)	0.58*	(0.22)
12 - 19.....	161.88	(36.76)	9.40	(1.41)	9.66	(2.33)	14.42	(3.43)	24.53	(5.69)	5.86	(0.78)	1.55	(0.39)
20 and over...	229.58	(18.71)	11.36	(0.63)	13.85	(1.17)	20.79	(1.73)	35.09	(2.91)	8.59	(0.61)	2.31	(0.19)
2 and over...	201.33	(17.26)	10.82	(0.65)	12.07	(1.06)	18.12	(1.56)	30.58	(2.62)	7.88	(0.57)	2.00	(0.18)
<b>Non-Hispanic Black:</b>														
2 - 5.....	32.43	(5.83)	8.78	(0.67)	1.30	(0.38)	2.01	(0.55)	3.20	(0.91)	4.18	(0.31)	0.21*	(0.07)
6 - 11.....	32.86	(5.22)	7.66	(0.65)	1.44	(0.34)	2.31	(0.50)	3.83	(0.89)	3.97	(0.28)	0.21	(0.05)
12 - 19.....	63.61	(16.45)	6.61	(0.77)	3.59	(1.03)	5.43	(1.51)	9.19	(2.60)	3.44	(0.36)	0.57	(0.17)
20 and over...	133.36	(9.90)	7.84	(0.40)	7.97	(0.63)	11.87	(0.93)	19.80	(1.56)	5.61	(0.25)	1.40	(0.11)
2 and over...	106.63	(7.66)	7.71	(0.31)	6.25	(0.48)	9.34	(0.72)	15.59	(1.20)	5.04	(0.18)	1.08	(0.08)
<b>Hispanic, all:</b>														
2 - 5.....	31.45	(5.52)	10.41	(0.88)	1.01*	(0.34)	1.68*	(0.51)	2.69*	(0.85)	6.25	(0.56)	0.15*	(0.06)
6 - 11.....	39.80	(6.02)	8.05	(0.61)	1.86	(0.37)	3.00	(0.56)	5.37	(1.02)	5.03	(0.38)	0.26	(0.06)
12 - 19.....	66.95	(14.67)	6.89	(0.91)	3.72	(0.90)	5.64	(1.31)	9.52	(2.08)	4.56	(0.57)	0.62	(0.16)
20 and over...	91.45	(14.53)	7.23	(0.56)	5.16	(0.93)	7.89	(1.36)	13.49	(2.24)	6.24	(0.37)	0.91	(0.16)
2 and over...	76.92	(11.43)	7.55	(0.51)	4.22	(0.72)	6.48	(1.05)	11.08	(1.70)	5.86	(0.33)	0.73	(0.13)
<b>Mexican American:</b>														
2 - 5.....	25.74	(3.50)	8.83	(0.73)	0.79*	(0.24)	1.34	(0.36)	2.14*	(0.66)	5.57	(0.40)	0.12*	(0.04)
6 - 11.....	33.59	(8.09)	7.94	(0.67)	1.52*	(0.52)	2.53*	(0.80)	4.69*	(1.53)	4.53	(0.34)	0.19*	(0.08)
12 - 19.....	56.70	(13.83)	6.93	(1.14)	3.05	(0.88)	4.65	(1.29)	7.88	(2.15)	4.25	(0.71)	0.51	(0.15)
20 and over...	97.88	(22.06)	7.34	(0.91)	5.57	(1.39)	8.52	(2.05)	14.63	(3.34)	6.09	(0.59)	0.99	(0.24)
2 and over...	77.75	(16.15)	7.49	(0.75)	4.29	(1.02)	6.60	(1.49)	11.34	(2.41)	5.60	(0.47)	0.75	(0.18)

\*, a-f Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 2b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols – continued**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Flavan-3-ols – continued									
	Theaflavin		Theaflavin-3,3'-digallate		Theaflavin-3'-gallate		Theaflavin-3-gallate		Thearubigins	
	----- mg -----									
<b>Non-Hispanic White:</b>										
2 - 5.....	0.18*	(0.06)	0.20*	(0.07)	0.16*	(0.06)	0.14*	(0.05)	10.45*	(3.82)
6 - 11.....	0.59*	(0.24)	0.65*	(0.26)	0.56*	(0.22)	0.47*	(0.19)	32.71*	(12.56)
12 - 19.....	1.58	(0.41)	1.75	(0.45)	1.48	(0.39)	1.27	(0.32)	90.37	(21.39)
20 and over...	2.28	(0.20)	2.52	(0.22)	2.12	(0.19)	1.82	(0.16)	128.86	(11.00)
2 and over...	1.98	(0.18)	2.19	(0.20)	1.85	(0.17)	1.59	(0.15)	112.26	(10.11)
<b>Non-Hispanic Black:</b>										
2 - 5.....	0.22*	(0.07)	0.24*	(0.08)	0.20*	(0.07)	0.17*	(0.05)	11.92	(3.57)
6 - 11.....	0.21	(0.06)	0.23	(0.06)	0.19	(0.05)	0.16	(0.04)	12.65	(3.05)
12 - 19.....	0.57*	(0.17)	0.63*	(0.19)	0.54*	(0.16)	0.45*	(0.14)	32.58	(9.58)
20 and over...	1.34	(0.11)	1.48	(0.12)	1.26	(0.11)	1.06	(0.09)	73.74	(5.87)
2 and over...	1.04	(0.08)	1.15	(0.09)	0.98	(0.08)	0.83	(0.07)	57.64	(4.53)
<b>Hispanic, all:</b>										
2 - 5.....	0.15*	(0.06)	0.16*	(0.07)	0.14*	(0.06)	0.12*	(0.05)	8.69*	(3.20)
6 - 11.....	0.22*	(0.07)	0.25*	(0.08)	0.21*	(0.07)	0.18*	(0.05)	15.38	(3.45)
12 - 19.....	0.59	(0.17)	0.66	(0.19)	0.56	(0.16)	0.47	(0.14)	33.72	(8.60)
20 and over...	0.80	(0.17)	0.89	(0.18)	0.74	(0.16)	0.64	(0.13)	47.45	(8.50)
2 and over...	0.65	(0.13)	0.72	(0.15)	0.60	(0.13)	0.52	(0.10)	38.51	(6.68)
<b>Mexican American:</b>										
2 - 5.....	0.11*	(0.04)	0.12*	(0.05)	0.10*	(0.04)	0.08*	(0.03)	6.56*	(2.17)
6 - 11.....	0.15*	(0.08)	0.16*	(0.09)	0.14*	(0.07)	0.12*	(0.06)	11.62*	(4.47)
12 - 19.....	0.48*	(0.16)	0.53*	(0.17)	0.45*	(0.15)	0.38*	(0.12)	27.59	(8.21)
20 and over...	0.86	(0.25)	0.96	(0.28)	0.80	(0.24)	0.69	(0.20)	51.42	(12.83)
2 and over...	0.65	(0.19)	0.72	(0.21)	0.61	(0.18)	0.53	(0.15)	39.17	(9.44)

\*, a-f Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 2c. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavanones**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Flavanones							
	Total		Eriodictyol		Hesperetin		Naringenin	
----- mg -----								
<b>Non-Hispanic White:</b>								
2 - 5.....	12.19	(1.82)	0.14	(0.02)	9.91	(1.60)	2.14	(0.32)
6 - 11.....	10.60	(1.78)	0.15	(0.02)	8.54	(1.53)	1.92	(0.32)
12 - 19.....	7.90	(1.06)	0.14	(0.03)	6.14	(0.98)	1.62	(0.19)
20 and over...	11.95	(0.92)	0.18	(0.02)	8.55	(0.72)	3.22	(0.24)
2 and over...	11.43	(0.71)	0.17	(0.02)	8.36	(0.56)	2.90	(0.20)
<b>Non-Hispanic Black:</b>								
2 - 5.....	15.43	(1.55)	0.29*	(0.10)	12.15	(1.35)	2.99	(0.40)
6 - 11.....	13.37	(1.77)	0.31	(0.05)	10.11	(1.24)	2.95	(0.67)
12 - 19.....	16.33	(3.47)	0.43	(0.06)	12.57	(2.53)	3.34*	(1.03)
20 and over...	15.32	(1.49)	0.28	(0.03)	11.01	(1.33)	4.04	(0.34)
2 and over...	15.28	(0.75)	0.30	(0.02)	11.22	(0.66)	3.76	(0.28)
<b>Hispanic, all:</b>								
2 - 5.....	19.49	(1.86)	0.19	(0.04)	14.73	(1.44)	4.58	(0.48)
6 - 11.....	17.13	(2.07)	0.20	(0.05)	13.60	(1.60)	3.34	(0.49)
12 - 19.....	19.25	(2.18)	0.34	(0.08)	14.93	(1.88)	3.98	(0.55)
20 and over...	16.14	(1.55)	0.26	(0.02)	11.66	(1.04)	4.22	(0.68)
2 and over...	16.98	(1.20)	0.26	(0.02)	12.61	(0.80)	4.12	(0.50)
<b>Mexican American:</b>								
2 - 5.....	21.14	(1.62)	0.15	(0.04)	15.75	(1.23)	5.23	(0.49)
6 - 11.....	16.90	(2.27)	0.17*	(0.05)	13.31	(1.80)	3.42	(0.52)
12 - 19.....	14.58	(2.67)	0.34*	(0.11)	10.97	(1.80)	3.26	(0.82)
20 and over...	14.66	(1.95)	0.25	(0.02)	10.57	(1.23)	3.84	(0.88)
2 and over...	15.52	(1.52)	0.25	(0.02)	11.44	(1.03)	3.84	(0.60)

\*, a-f Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 2d. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavones**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Flavones					
	Total		Apigenin		Luteolin	
	----- mg -----					
<b>Non-Hispanic White:</b>						
2 - 5.....	0.36	(0.06)	0.03	(0.01)	0.33	(0.06)
6 - 11.....	0.39	(0.08)	0.06	(0.01)	0.33	(0.08)
12 - 19.....	0.59	(0.08)	0.13	(0.02)	0.47	(0.07)
20 and over...	0.88	(0.08)	0.23	(0.03)	0.65	(0.06)
2 and over...	0.79	(0.08)	0.20	(0.02)	0.59	(0.06)
<b>Non-Hispanic Black:</b>						
2 - 5.....	0.24	(0.03)	0.03	(#)	0.20	(0.03)
6 - 11.....	0.40	(0.08)	0.07	(0.02)	0.33	(0.08)
12 - 19.....	0.39	(0.06)	0.09	(0.02)	0.30	(0.05)
20 and over...	0.60	(0.04)	0.15	(0.01)	0.45	(0.04)
2 and over...	0.52	(0.03)	0.12	(0.01)	0.40	(0.03)
<b>Hispanic, all:</b>						
2 - 5.....	0.38	(0.04)	0.07	(0.01)	0.31	(0.04)
6 - 11.....	0.39	(0.05)	0.07	(0.01)	0.32	(0.05)
12 - 19.....	0.49	(0.06)	0.10	(0.01)	0.39	(0.05)
20 and over...	0.89	(0.06)	0.21	(0.02)	0.68	(0.05)
2 and over...	0.74	(0.04)	0.17	(0.01)	0.57	(0.03)
<b>Mexican American:</b>						
2 - 5.....	0.43	(0.05)	0.08	(0.01)	0.34	(0.04)
6 - 11.....	0.42	(0.07)	0.07	(0.01)	0.35	(0.07)
12 - 19.....	0.57	(0.07)	0.09	(0.01)	0.48	(0.07)
20 and over...	0.94	(0.07)	0.20	(0.02)	0.74	(0.05)
2 and over...	0.78	(0.05)	0.16	(0.01)	0.62	(0.04)

#, a-f Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 2e. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavonols**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Flavonols									
	Total		Isorhamnetin		Kaempferol		Myricetin		Quercetin	
----- mg -----										
<b>Non-Hispanic White:</b>										
2 - 5.....	6.15	(0.46)	0.15	(0.03)	1.00	(0.11)	0.31	(0.06)	4.69	(0.35)
6 - 11.....	7.93	(0.84)	0.21	(0.02)	1.55	(0.28)	0.52	(0.11)	5.64	(0.48)
12 - 19.....	14.13	(1.89)	0.47	(0.05)	3.36	(0.49)	1.12	(0.20)	9.19	(1.20)
20 and over...	20.56	(1.17)	0.85	(0.07)	5.27	(0.33)	1.76	(0.12)	12.67	(0.70)
2 and over...	18.29	(1.10)	0.73	(0.05)	4.60	(0.29)	1.54	(0.11)	11.42	(0.68)
<b>Non-Hispanic Black:</b>										
2 - 5.....	6.36	(0.35)	0.15	(0.03)	0.97	(0.15)	0.34	(0.02)	4.89	(0.38)
6 - 11.....	7.92	(0.38)	0.26	(0.02)	1.27	(0.13)	0.48	(0.05)	5.91	(0.28)
12 - 19.....	8.50	(0.86)	0.31	(0.04)	1.97	(0.32)	0.54	(0.09)	5.69	(0.49)
20 and over...	14.96	(0.47)	0.58	(0.04)	4.15	(0.16)	1.03	(0.05)	9.20	(0.35)
2 and over...	12.76	(0.34)	0.48	(0.03)	3.34	(0.12)	0.86	(0.04)	8.08	(0.25)
<b>Hispanic, all:</b>										
2 - 5.....	7.23	(0.51)	0.28	(0.05)	1.00	(0.11)	0.33	(0.03)	5.61	(0.43)
6 - 11.....	7.59	(0.40)	0.33	(0.03)	1.20	(0.10)	0.46	(0.04)	5.61	(0.30)
12 - 19.....	9.75	(0.96)	0.41	(0.04)	1.96	(0.27)	0.60	(0.09)	6.78	(0.60)
20 and over...	15.28	(0.79)	0.86	(0.05)	3.56	(0.28)	1.00	(0.07)	9.86	(0.46)
2 and over...	12.93	(0.67)	0.68	(0.04)	2.84	(0.22)	0.82	(0.05)	8.57	(0.40)
<b>Mexican American:</b>										
2 - 5.....	6.83	(0.55)	0.32	(0.05)	0.87	(0.09)	0.29	(0.03)	5.35	(0.48)
6 - 11.....	7.16	(0.48)	0.28	(0.04)	1.18	(0.15)	0.44	(0.06)	5.26	(0.34)
12 - 19.....	9.62	(0.86)	0.45	(0.05)	1.89	(0.24)	0.53	(0.09)	6.75	(0.56)
20 and over...	15.87	(1.09)	0.90	(0.06)	3.78	(0.40)	1.03	(0.10)	10.16	(0.62)
2 and over...	13.12	(0.83)	0.71	(0.04)	2.93	(0.29)	0.82	(0.08)	8.65	(0.48)

<sup>a-f</sup> Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 2f. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – isoflavones**

Mean intake (standard error) per individual, by race/ethnicity<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Race/ethnicity and age (years)	Isoflavones			
	Total	Daidzein	Genistein	Glycitein
----- mg -----				
<b>Non-Hispanic White:</b>				
2 - 5.....	0.76* (0.29)	0.33* (0.13)	0.40* (0.16)	0.03* (0.01)
6 - 11.....	1.21* (0.51)	0.54* (0.23)	0.61* (0.26)	0.06* (0.02)
12 - 19.....	0.96* (0.39)	0.38* (0.15)	0.51* (0.21)	0.08* (0.03)
20 and over...	1.71 (0.36)	0.64 (0.13)	0.93 (0.21)	0.14 (0.03)
2 and over...	1.55 (0.32)	0.59 (0.12)	0.84 (0.18)	0.12 (0.03)
<b>Non-Hispanic Black:</b>				
2 - 5.....	1.18* (0.64)	0.50* (0.28)	0.63* (0.35)	0.05* (0.02)
6 - 11.....	0.59* (0.24)	0.24* (0.10)	0.32* (0.13)	0.03* (0.01)
12 - 19.....	0.45 (0.09)	0.17 (0.03)	0.24 (0.05)	0.03 (0.01)
20 and over...	1.09 (0.21)	0.44 (0.08)	0.58 (0.12)	0.07 (0.01)
2 and over...	0.95 (0.13)	0.39 (0.05)	0.51 (0.07)	0.06 (0.01)
<b>Hispanic, all:</b>				
2 - 5.....	0.38* (0.21)	0.16* (0.09)	0.20* (0.11)	0.02* (0.01)
6 - 11.....	0.23 (0.05)	0.09 (0.02)	0.12 (0.03)	0.01 (#)
12 - 19.....	0.52* (0.17)	0.21* (0.07)	0.27* (0.09)	0.04* (0.02)
20 and over...	1.52 (0.32)	0.64 (0.13)	0.78 (0.17)	0.11 (0.03)
2 and over...	1.14 (0.22)	0.47 (0.09)	0.58 (0.12)	0.08 (0.02)
<b>Mexican American:</b>				
2 - 5.....	0.43* (0.29)	0.18* (0.13)	0.23* (0.15)	0.02* (0.01)
6 - 11.....	0.23 (0.05)	0.09 (0.02)	0.12 (0.02)	0.01 (#)
12 - 19.....	0.68* (0.27)	0.26* (0.11)	0.36* (0.14)	0.06* (0.02)
20 and over...	1.29 (0.30)	0.55 (0.09)	0.65 (0.18)	0.10 (0.03)
2 and over...	1.00 (0.18)	0.42 (0.06)	0.51 (0.11)	0.07 (0.02)

\*, #, a-f Notes are on page 19.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by race/ethnicity and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**NOTES**

\* Estimates flagged with an asterisk may be less statistically reliable than estimates that are not flagged. An estimated mean is flagged when either (a) the relative standard error is greater than 30 percent or (b) the sample size is less than 30 times the variance inflation factor (VIF), a broadly calculated average design effect. The VIF used in this table is 2.16.

# Indicates a non-zero value too small to report.

<sup>a</sup> Detailed information about the flavonoid data files used in creating these tables is provided in reference 1. These tables include 29 individual flavonoids categorized into 6 (sub)classes as described in reference 2. Theaflavins and thearubigins are included (grouped with flavan-3-ols), but the proanthocyanidins listed in reference 3 are excluded because their content has not yet been determined for the full range of survey foods/beverages. The flavonoids in these tables, except for flavan-3-ols, were calculated and presented as their aglycone forms (anthocyanidins, flavanones, flavones, flavonols, and isoflavones); flavan-3-ols are reported as their actual forms (*personal communication, Dr. Xianli Wu, USDA Nutrient Data Laboratory, March 31, 2016*). Procedures for standardizing analytical values of flavonoids that are present in foods/beverages in varying forms are described in reference 4.

<sup>b</sup> Estimates are based on intake of food and beverages, including water, and do not include intake from supplements or medications.

<sup>c</sup> Sum of dietary flavonoids in the 6 classes presented in tables 2a through 2f.

<sup>d</sup> Excludes individuals missing race/ethnicity data and those whose race/ethnicity is not among the categories listed in the table. "Hispanic, all" includes "Mexican American." Demographic data used in this table are available at <http://wwwn.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Demographics&CycleBeginYear=2007>.

<sup>e</sup> To produce estimates that are representative of the U.S. population for the years of data collection, dietary day 1 sample weights (available from <http://wwwn.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Dietary&CycleBeginYear=2007>) were used.

<sup>f</sup> Estimates in this table are based on 1 day of data collected in What We Eat in America, the dietary intake interview component of the National Health and Nutrition Examination Survey, in 2007 to 2008. <http://www.ars.usda.gov/Services/docs.htm?docid=13793>. Breastfed children were excluded because the amount of breast milk consumed was not quantified.

**REFERENCES**

1. Sebastian RS, Goldman JD, Martin CL, Steinfeldt LC, Wilkinson Enns C, Moshfegh AJ. 2014 (slightly revised 2015). *Flavonoid Values for USDA Survey Foods and Beverages 2007-2008: Provisional flavonoid addendum to the USDA Food and Nutrient Database for Dietary Studies, 4.1, and flavonoid intake data files from What We Eat in America (WWEIA), National Health and Nutrition Examination Survey (NHANES) 2007-2008* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. [http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB\\_doc.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB_doc.pdf). Accessed March 31, 2016.
2. Bhagwat S, Haytowitz DB, Wasswa-Kintu S. 2014 (Sep). *USDA's Expanded Flavonoid Database for the Assessment of Dietary Intakes: Documentation and user guide* [release 1]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/FDB-EXP.pdf>. Accessed March 31, 2016.
3. Bhagwat S, Haytowitz D. 2015 (Sep; slightly revised Dec). *USDA Database for the Proanthocyanidin Content of Selected Foods, release 2* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/PA/PA02.pdf>. Accessed March 31, 2016.
4. Bhagwat S, Haytowitz DB, Holden JM (ret.). 2013 (Dec). *USDA Database for the Flavonoid Content of Selected Foods, release 3.1* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/Flav3-1.pdf>. Accessed March 31, 2016.

THIS PAGE IS INTENTIONALLY BLANK

**Table 3a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Sample size	Total flavonoids <sup>c</sup>		Anthocyanidins (continued on next page)									
				Total	Cyanidin	Delphinidin	Malvidin	Pelargonidin					
	<i>n</i>	----- <i>mg</i> -----											
<b>\$0 - \$24,999:</b>													
2 - 5.....	295	69.24	(7.21)	5.46	(0.98)	0.99	(0.13)	0.48	(0.13)	2.31	(0.44)	0.93*	(0.34)
6 - 11.....	378	71.09	(6.80)	5.63	(0.82)	1.14	(0.23)	0.50	(0.11)	2.49	(0.51)	0.73	(0.17)
12 - 19.....	379	172.65	(32.32)	3.96	(0.63)	0.90	(0.15)	0.51*	(0.27)	1.07	(0.19)	0.68*	(0.28)
20 and over...	1,830	213.99	(18.63)	9.01	(2.06)	1.94	(0.49)	2.25*	(1.49)	2.35	(0.41)	1.02	(0.15)
2 and over...	2,882	189.84	(14.64)	7.96	(1.53)	1.70	(0.37)	1.81*	(1.09)	2.21	(0.32)	0.95	(0.13)
<b>\$25,000 - \$74,999:</b>													
2 - 5.....	335	65.71	(8.96)	8.54	(2.09)	1.36	(0.15)	0.89*	(0.40)	3.95	(1.01)	0.84*	(0.31)
6 - 11.....	462	97.29	(21.17)	6.32	(1.03)	1.33	(0.34)	0.49	(0.07)	2.62	(0.57)	1.13*	(0.44)
12 - 19.....	439	169.94*	(56.64)	4.33	(0.90)	0.93	(0.20)	0.21	(0.04)	1.06	(0.24)	1.25*	(0.59)
20 and over...	2,112	254.10	(24.49)	9.03	(0.81)	1.60	(0.17)	0.84	(0.10)	3.52	(0.43)	1.24	(0.33)
2 and over...	3,348	221.15	(23.73)	8.28	(0.81)	1.49	(0.15)	0.75	(0.09)	3.22	(0.37)	1.21	(0.33)
<b>\$75,000 and higher:</b>													
2 - 5.....	152	50.51	(2.89)	12.28	(1.87)	2.16*	(0.68)	1.29*	(0.41)	4.83	(1.03)	2.03*	(1.17)
6 - 11.....	221	87.48	(17.30)	13.90	(3.71)	1.79	(0.27)	1.22*	(0.56)	6.90*	(2.45)	2.01	(0.49)
12 - 19.....	246	136.71	(23.07)	4.14	(0.96)	1.59	(0.43)	0.19	(0.04)	0.89	(0.15)	1.11*	(0.64)
20 and over...	1,055	281.76	(21.63)	12.47	(1.58)	2.30	(0.23)	1.26	(0.28)	5.43	(0.89)	1.54	(0.37)
2 and over...	1,674	233.02	(15.42)	11.51	(1.37)	2.15	(0.20)	1.12	(0.26)	4.94	(0.73)	1.56	(0.37)
<b>All individuals:</b>													
2 - 5.....	832	61.98	(4.30)	8.78	(1.19)	1.51	(0.23)	0.90	(0.21)	3.74	(0.58)	1.20*	(0.40)
6 - 11.....	1,121	84.33	(13.56)	8.71	(1.60)	1.44	(0.17)	0.70	(0.19)	3.87	(1.00)	1.58	(0.42)
12 - 19.....	1,156	154.78	(24.57)	4.63	(0.78)	1.14	(0.18)	0.38*	(0.12)	1.33	(0.28)	1.00	(0.28)
20 and over...	5,420	249.76	(16.80)	10.21	(1.04)	2.00	(0.20)	1.34*	(0.42)	3.75	(0.44)	1.35	(0.23)
2 and over...	8,529	214.45	(14.78)	9.36	(0.92)	1.83	(0.17)	1.15	(0.31)	3.48	(0.39)	1.32	(0.24)

\*, a-f Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 3a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins – continued**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Anthocyanidins – continued			
	Peonidin		Petunidin	
	----- mg -----			
<b>\$0 - \$24,999:</b>				
2 - 5.....	0.39	(0.09)	0.36	(0.10)
6 - 11.....	0.39	(0.07)	0.37	(0.11)
12 - 19.....	0.57*	(0.25)	0.23	(0.06)
20 and over...	0.99*	(0.41)	0.45	(0.08)
2 and over...	0.86*	(0.31)	0.41	(0.06)
<b>\$25,000 - \$74,999:</b>				
2 - 5.....	0.77*	(0.28)	0.74*	(0.35)
6 - 11.....	0.39	(0.06)	0.37	(0.06)
12 - 19.....	0.72*	(0.46)	0.16	(0.03)
20 and over...	1.17	(0.34)	0.65	(0.08)
2 and over...	1.04	(0.25)	0.58	(0.07)
<b>\$75,000 and higher:</b>				
2 - 5.....	0.87	(0.25)	1.09*	(0.37)
6 - 11.....	1.03*	(0.37)	0.95*	(0.46)
12 - 19.....	0.22	(0.04)	0.14	(0.03)
20 and over...	1.02	(0.14)	0.91	(0.18)
2 and over...	0.91	(0.13)	0.83	(0.18)
<b>All individuals:</b>				
2 - 5.....	0.69	(0.15)	0.74	(0.18)
6 - 11.....	0.58	(0.15)	0.54*	(0.17)
12 - 19.....	0.54*	(0.17)	0.25*	(0.08)
20 and over...	1.08	(0.17)	0.68	(0.09)
2 and over...	0.95	(0.14)	0.62	(0.08)

\*, a-f Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 3b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Flavan-3-ols (continued on next page)													
	Total	(-)-Epicatechin	(-)-Epicatechin 3-gallate	(-)-Epigallocatechin	(-)-Epigallocatechin 3-gallate	(+)-Catechin	(+)-Gallocatechin							
	----- mg -----													
<b>\$0 - \$24,999:</b>														
2 - 5.....	35.14	(5.90)	8.96	(0.42)	1.44	(0.38)	2.25	(0.56)	3.66	(0.91)	4.74	(0.31)	0.23	(0.06)
6 - 11.....	41.71	(6.48)	8.59	(0.78)	1.96	(0.39)	3.11	(0.59)	5.39	(1.03)	4.77	(0.36)	0.29	(0.06)
12 - 19.....	142.11	(31.28)	9.10	(1.19)	8.46	(1.98)	12.70	(2.94)	21.56	(5.02)	5.77	(0.73)	1.40	(0.32)
20 and over...	174.41	(18.93)	9.32	(0.55)	10.51	(1.22)	15.74	(1.81)	26.39	(3.01)	6.71	(0.30)	1.80	(0.21)
2 and over...	152.42	(14.62)	9.21	(0.48)	9.09	(0.94)	13.64	(1.38)	22.91	(2.27)	6.33	(0.29)	1.54	(0.16)
<b>\$25,000 - \$74,999:</b>														
2 - 5.....	37.11	(7.38)	9.36	(0.61)	1.50*	(0.46)	2.39	(0.69)	3.93*	(1.26)	5.26	(0.42)	0.23	(0.07)
6 - 11.....	72.34	(20.43)	7.41	(0.69)	4.00*	(1.29)	6.04*	(1.88)	10.18*	(3.20)	4.57	(0.45)	0.63*	(0.21)
12 - 19.....	140.59*	(54.20)	8.78	(1.57)	8.44*	(3.46)	12.54*	(5.07)	20.86*	(8.27)	5.36	(0.84)	1.39*	(0.59)
20 and over...	209.99	(22.72)	10.26	(0.67)	12.68	(1.40)	19.05	(2.06)	32.30	(3.40)	7.79	(0.57)	2.11	(0.24)
2 and over...	181.08	(22.04)	9.82	(0.67)	10.85	(1.36)	16.31	(2.00)	27.59	(3.31)	7.12	(0.54)	1.80	(0.23)
<b>\$75,000 and higher:</b>														
2 - 5.....	17.11	(1.49)	9.32	(0.69)	0.17*	(0.07)	0.53	(0.12)	0.49*	(0.22)	5.56	(0.51)	0.02*	(0.01)
6 - 11.....	50.17*	(15.11)	8.41	(0.74)	2.53*	(0.92)	3.94*	(1.34)	6.37*	(2.10)	4.99	(0.41)	0.40*	(0.16)
12 - 19.....	107.14	(20.76)	7.88	(0.85)	6.14	(1.30)	9.22	(1.94)	16.08	(3.54)	4.88	(0.55)	0.93	(0.20)
20 and over...	229.64	(19.91)	12.19	(0.55)	13.75	(1.28)	20.59	(1.89)	34.46	(3.23)	9.30	(0.56)	2.32	(0.21)
2 and over...	186.15	(14.10)	11.14	(0.40)	11.02	(0.91)	16.53	(1.33)	27.71	(2.26)	8.15	(0.42)	1.85	(0.15)
<b>All individuals:</b>														
2 - 5.....	30.67	(3.80)	9.46	(0.37)	1.07	(0.25)	1.79	(0.37)	2.79	(0.63)	5.24	(0.30)	0.17	(0.04)
6 - 11.....	54.26	(12.95)	8.10	(0.51)	2.79	(0.81)	4.31	(1.17)	7.18	(1.92)	4.82	(0.31)	0.44*	(0.14)
12 - 19.....	124.63	(23.36)	8.42	(0.91)	7.34	(1.48)	10.98	(2.18)	18.63	(3.60)	5.23	(0.50)	1.19	(0.25)
20 and over...	204.45	(15.62)	10.55	(0.50)	12.29	(0.98)	18.43	(1.45)	31.06	(2.43)	7.97	(0.44)	2.07	(0.16)
2 and over...	172.95	(13.63)	10.04	(0.48)	10.29	(0.85)	15.46	(1.25)	26.05	(2.07)	7.24	(0.40)	1.72	(0.14)

\*, a-f Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 3b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols – continued**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Flavan-3-ols – continued									
	Theaflavin		Theaflavin-3,3'-digallate		Theaflavin-3'-gallate		Theaflavin-3-gallate		Thearubigins	
	----- mg -----									
<b>\$0 - \$24,999:</b>										
2 - 5.....	0.23	(0.07)	0.25	(0.07)	0.21	(0.06)	0.18	(0.05)	12.98	(3.58)
6 - 11.....	0.27	(0.07)	0.29	(0.08)	0.25	(0.06)	0.21	(0.05)	16.59	(3.59)
12 - 19.....	1.37	(0.33)	1.51	(0.36)	1.29	(0.31)	1.09	(0.26)	77.84	(18.35)
20 and over...	1.75	(0.21)	1.93	(0.23)	1.64	(0.20)	1.39	(0.17)	97.23	(11.33)
2 and over...	1.50	(0.17)	1.66	(0.18)	1.41	(0.16)	1.20	(0.13)	83.91	(8.76)
<b>\$25,000 - \$74,999:</b>										
2 - 5.....	0.23*	(0.07)	0.25*	(0.08)	0.21*	(0.06)	0.18*	(0.06)	13.56*	(4.66)
6 - 11.....	0.65*	(0.22)	0.72*	(0.25)	0.60*	(0.21)	0.52*	(0.18)	37.02*	(12.10)
12 - 19.....	1.43*	(0.62)	1.58*	(0.69)	1.35*	(0.59)	1.13*	(0.49)	77.72*	(32.17)
20 and over...	2.07	(0.25)	2.29	(0.28)	1.93	(0.24)	1.65	(0.20)	117.86	(13.57)
2 and over...	1.77	(0.24)	1.96	(0.27)	1.66	(0.22)	1.42	(0.19)	100.78	(13.11)
<b>\$75,000 and higher:</b>										
2 - 5.....	0.01*	(0.01)	0.01*	(0.01)	0.01*	(0.01)	0.01*	(0.01)	0.97*	(0.52)
6 - 11.....	0.40*	(0.18)	0.44*	(0.20)	0.38*	(0.17)	0.32*	(0.14)	22.01*	(9.14)
12 - 19.....	0.96	(0.19)	1.06	(0.21)	0.88	(0.18)	0.78	(0.16)	58.34	(12.19)
20 and over...	2.30	(0.21)	2.54	(0.24)	2.15	(0.20)	1.83	(0.17)	128.21	(11.89)
2 and over...	1.83	(0.16)	2.02	(0.17)	1.71	(0.15)	1.46	(0.12)	102.73	(8.49)
<b>All individuals:</b>										
2 - 5.....	0.16	(0.04)	0.18	(0.05)	0.15	(0.04)	0.13	(0.03)	9.53	(2.45)
6 - 11.....	0.43*	(0.15)	0.48*	(0.16)	0.41*	(0.14)	0.35*	(0.12)	24.96*	(7.77)
12 - 19.....	1.20	(0.26)	1.33	(0.29)	1.12	(0.25)	0.96	(0.20)	68.24	(13.60)
20 and over...	2.03	(0.17)	2.24	(0.19)	1.89	(0.16)	1.62	(0.13)	114.30	(9.24)
2 and over...	1.69	(0.15)	1.87	(0.16)	1.58	(0.14)	1.35	(0.12)	95.65	(8.05)

\*, a-f Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 3c. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavanones**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Flavanones							
	Total		Eriodictyol		Hesperetin		Naringenin	
	----- mg -----							
<b>\$0 - \$24,999:</b>								
2 - 5.....	20.94	(2.60)	0.24	(0.05)	16.12	(1.98)	4.58	(0.79)
6 - 11.....	15.51	(1.80)	0.23	(0.04)	12.68	(1.61)	2.61	(0.28)
12 - 19.....	11.54	(1.42)	0.20	(0.03)	8.39	(1.18)	2.94	(0.37)
20 and over...	12.15	(1.53)	0.14	(0.02)	8.81	(1.20)	3.20	(0.41)
2 and over...	12.83	(1.26)	0.16	(0.02)	9.47	(0.99)	3.20	(0.34)
<b>\$25,000 - \$74,999:</b>								
2 - 5.....	12.05	(2.11)	0.16	(0.02)	9.56	(1.73)	2.32	(0.41)
6 - 11.....	9.69	(1.21)	0.19	(0.02)	7.56	(1.01)	1.95	(0.28)
12 - 19.....	11.74	(2.12)	0.22	(0.06)	9.23	(1.88)	2.29	(0.31)
20 and over...	12.88	(1.19)	0.24	(0.03)	9.45	(0.86)	3.19	(0.39)
2 and over...	12.45	(0.98)	0.23	(0.02)	9.28	(0.73)	2.95	(0.31)
<b>\$75,000 and higher:</b>								
2 - 5.....	12.95	(1.98)	0.12	(0.02)	10.53	(1.83)	2.29	(0.22)
6 - 11.....	13.23	(2.68)	0.16	(0.04)	10.34	(2.30)	2.73	(0.55)
12 - 19.....	12.04	(1.92)	0.20	(0.03)	9.71	(1.58)	2.14	(0.42)
20 and over...	14.47	(1.08)	0.19	(0.03)	9.76	(0.78)	4.53	(0.49)
2 and over...	13.97	(0.88)	0.18	(0.02)	9.85	(0.67)	3.94	(0.38)
<b>All individuals:</b>								
2 - 5.....	14.54	(1.46)	0.17	(0.02)	11.49	(1.27)	2.88	(0.23)
6 - 11.....	12.28	(1.05)	0.18	(0.02)	9.74	(0.91)	2.35	(0.22)
12 - 19.....	11.88	(1.02)	0.23	(0.02)	9.27	(0.91)	2.39	(0.18)
20 and over...	13.09	(0.88)	0.20	(0.02)	9.35	(0.66)	3.55	(0.26)
2 and over...	12.97	(0.71)	0.20	(0.01)	9.49	(0.54)	3.28	(0.20)

<sup>a-f</sup> Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 3d. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavones**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Flavones					
	Total		Apigenin		Luteolin	
	----- mg -----					
<b>\$0 - \$24,999:</b>						
2 - 5.....	0.30	(0.06)	0.05	(0.01)	0.24	(0.06)
6 - 11.....	0.30	(0.05)	0.07	(0.01)	0.23	(0.05)
12 - 19.....	0.57	(0.10)	0.14	(0.03)	0.43	(0.09)
20 and over...	0.73	(0.07)	0.17	(0.02)	0.55	(0.07)
2 and over...	0.65	(0.07)	0.16	(0.01)	0.50	(0.06)
<b>\$25,000 - \$74,999:</b>						
2 - 5.....	0.35	(0.05)	0.03	(#)	0.32	(0.05)
6 - 11.....	0.36	(0.08)	0.06	(0.01)	0.31	(0.06)
12 - 19.....	0.44	(0.09)	0.11	(0.02)	0.33	(0.07)
20 and over...	0.83	(0.07)	0.22	(0.02)	0.61	(0.06)
2 and over...	0.72	(0.07)	0.19	(0.02)	0.54	(0.05)
<b>\$75,000 and higher:</b>						
2 - 5.....	0.53	(0.13)	0.12*	(0.07)	0.41	(0.10)
6 - 11.....	0.52	(0.09)	0.07*	(0.02)	0.46	(0.09)
12 - 19.....	0.60	(0.06)	0.13	(0.02)	0.48	(0.06)
20 and over...	1.02	(0.08)	0.26	(0.04)	0.76	(0.06)
2 and over...	0.89	(0.06)	0.22	(0.03)	0.68	(0.05)
<b>All individuals:</b>						
2 - 5.....	0.39	(0.05)	0.06*	(0.02)	0.32	(0.04)
6 - 11.....	0.39	(0.06)	0.06	(0.01)	0.33	(0.05)
12 - 19.....	0.55	(0.06)	0.12	(0.02)	0.43	(0.05)
20 and over...	0.86	(0.06)	0.22	(0.02)	0.64	(0.05)
2 and over...	0.76	(0.06)	0.18	(0.01)	0.57	(0.05)

\*, #, a-f Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 3e. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavonols**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Flavonols									
	Total		Isorhamnetin		Kaempferol		Myricetin		Quercetin	
----- mg -----										
<b>\$0 - \$24,999:</b>										
2 - 5.....	6.98	(0.52)	0.25	(0.05)	1.01	(0.12)	0.35	(0.05)	5.36	(0.40)
6 - 11.....	7.76	(0.34)	0.33	(0.03)	1.09	(0.10)	0.43	(0.05)	5.90	(0.23)
12 - 19.....	13.75	(1.40)	0.52	(0.06)	3.29	(0.44)	0.98	(0.17)	8.95	(0.88)
20 and over...	16.75	(0.86)	0.69	(0.04)	4.42	(0.28)	1.34	(0.10)	10.31	(0.49)
2 and over...	15.15	(0.72)	0.61	(0.03)	3.84	(0.24)	1.17	(0.08)	9.53	(0.42)
<b>\$25,000 - \$74,999:</b>										
2 - 5.....	6.96	(0.64)	0.21	(0.03)	1.21	(0.18)	0.39	(0.09)	5.15	(0.40)
6 - 11.....	7.96	(1.00)	0.23	(0.03)	1.64	(0.27)	0.57	(0.12)	5.52	(0.62)
12 - 19.....	12.39	(2.61)	0.43	(0.07)	2.89	(0.73)	0.95	(0.26)	8.12	(1.59)
20 and over...	19.74	(1.17)	0.85	(0.08)	5.03	(0.34)	1.63	(0.13)	12.23	(0.68)
2 and over...	17.24	(1.18)	0.72	(0.06)	4.30	(0.32)	1.40	(0.13)	10.82	(0.70)
<b>\$75,000 and higher:</b>										
2 - 5.....	5.56	(0.26)	0.15	(0.03)	0.81	(0.12)	0.20	(0.03)	4.40	(0.23)
6 - 11.....	7.74	(0.64)	0.23	(0.04)	1.35	(0.23)	0.51	(0.09)	5.64	(0.40)
12 - 19.....	11.31	(1.12)	0.39	(0.05)	2.50	(0.32)	0.83	(0.17)	7.59	(0.68)
20 and over...	21.43	(0.87)	0.94	(0.06)	5.47	(0.29)	1.77	(0.12)	13.27	(0.49)
2 and over...	18.04	(0.63)	0.76	(0.04)	4.46	(0.23)	1.45	(0.09)	11.37	(0.35)
<b>All individuals:</b>										
2 - 5.....	6.59	(0.32)	0.20	(0.02)	1.04	(0.09)	0.32	(0.04)	5.03	(0.23)
6 - 11.....	7.82	(0.52)	0.25	(0.01)	1.40	(0.17)	0.50	(0.07)	5.68	(0.30)
12 - 19.....	12.26	(1.25)	0.43	(0.04)	2.81	(0.33)	0.90	(0.12)	8.11	(0.80)
20 and over...	19.44	(0.91)	0.83	(0.05)	4.99	(0.27)	1.59	(0.10)	12.03	(0.53)
2 and over...	16.92	(0.83)	0.70	(0.04)	4.21	(0.24)	1.35	(0.09)	10.65	(0.49)

<sup>a-f</sup> Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 3f. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – isoflavones**

Mean intake (standard error) per individual, by family income in dollars<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income in dollars and age (years)	Isoflavones							
	Total		Daidzein		Genistein		Glycitein	
	----- mg -----							
<b>\$0 - \$24,999:</b>								
2 - 5.....	0.43*	(0.15)	0.18*	(0.07)	0.23*	(0.08)	0.02*	(0.01)
6 - 11.....	0.18	(0.04)	0.08	(0.02)	0.10	(0.02)	0.01	(#)
12 - 19.....	0.72*	(0.30)	0.32*	(0.16)	0.34*	(0.13)	0.05*	(0.02)
20 and over...	0.94	(0.19)	0.37	(0.08)	0.50	(0.10)	0.07	(0.02)
2 and over...	0.83	(0.15)	0.33	(0.06)	0.44	(0.08)	0.06	(0.01)
<b>\$25,000 - \$74,999:</b>								
2 - 5.....	0.69*	(0.24)	0.29*	(0.10)	0.36*	(0.13)	0.04*	(0.02)
6 - 11.....	0.61*	(0.30)	0.25*	(0.14)	0.33*	(0.16)	0.03*	(0.01)
12 - 19.....	0.44	(0.11)	0.17	(0.05)	0.24	(0.06)	0.03	(0.01)
20 and over...	1.63	(0.36)	0.64	(0.14)	0.87	(0.20)	0.12	(0.03)
2 and over...	1.37	(0.27)	0.54	(0.10)	0.73	(0.15)	0.10	(0.02)
<b>\$75,000 and higher:</b>								
2 - 5.....	2.08*	(0.64)	0.90*	(0.28)	1.09	(0.32)	0.10*	(0.03)
6 - 11.....	1.92*	(0.91)	0.87*	(0.41)	0.96*	(0.45)	0.10*	(0.05)
12 - 19.....	1.47*	(0.63)	0.54*	(0.23)	0.80*	(0.35)	0.12*	(0.05)
20 and over...	2.73*	(0.84)	1.03	(0.30)	1.49*	(0.48)	0.22*	(0.07)
2 and over...	2.46	(0.68)	0.94	(0.25)	1.33	(0.38)	0.19	(0.05)
<b>All individuals:</b>								
2 - 5.....	1.00	(0.23)	0.43	(0.10)	0.53	(0.12)	0.05	(0.01)
6 - 11.....	0.87*	(0.32)	0.38*	(0.14)	0.44*	(0.16)	0.04*	(0.02)
12 - 19.....	0.82*	(0.25)	0.32	(0.10)	0.43*	(0.13)	0.07*	(0.02)
20 and over...	1.72	(0.30)	0.66	(0.11)	0.92	(0.17)	0.13	(0.02)
2 and over...	1.50	(0.25)	0.59	(0.10)	0.80	(0.14)	0.11	(0.02)

\*, #, a-f Notes are on page 29.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income in dollars and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**NOTES**

- \* Estimates flagged with an asterisk may be less statistically reliable than estimates that are not flagged. An estimated mean is flagged when either (a) the relative standard error is greater than 30 percent or (b) the sample size is less than 30 times the variance inflation factor (VIF), a broadly calculated average design effect. The VIF used in this table is 2.16.
- # Indicates a non-zero value too small to report.
- <sup>a</sup> Detailed information about the flavonoid data files used in creating these tables is provided in reference 1. These tables include 29 individual flavonoids categorized into 6 (sub)classes as described in reference 2. Theaflavins and thearubigins are included (grouped with flavan-3-ols), but the proanthocyanidins listed in reference 3 are excluded because their content has not yet been determined for the full range of survey foods/beverages. The flavonoids in these tables, except for flavan-3-ols, were calculated and presented as their aglycone forms (anthocyanidins, flavanones, flavones, flavonols, and isoflavones); flavan-3-ols are reported as their actual forms (*personal communication, Dr. Xianli Wu, USDA Nutrient Data Laboratory, March 31, 2016*). Procedures for standardizing analytical values of flavonoids that are present in foods/beverages in varying forms are described in reference 4.
- <sup>b</sup> Estimates are based on intake of food and beverages, including water, and do not include intake from supplements or medications.
- <sup>c</sup> Sum of dietary flavonoids in the 6 classes presented in tables 3a through 3f.
- <sup>d</sup> Individuals with missing income data are included only in the "all individuals" category. Demographic data used in this table are available at <http://wwwn.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Demographics&CycleBeginYear=2007>.
- <sup>e</sup> To produce estimates that are representative of the U.S. population for the years of data collection, dietary day 1 sample weights (available from <http://wwwn.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Dietary&CycleBeginYear=2007>) were used.
- <sup>f</sup> Estimates in this table are based on 1 day of data collected in What We Eat in America, the dietary intake interview component of the National Health and Nutrition Examination Survey, in 2007 to 2008. <http://www.ars.usda.gov/Services/docs.htm?docid=13793>. Breastfed children were excluded because the amount of breast milk consumed was not quantified.

**REFERENCES**

1. Sebastian RS, Goldman JD, Martin CL, Steinfeldt LC, Wilkinson Enns C, Moshfegh AJ. 2014 (slightly revised 2015). *Flavonoid Values for USDA Survey Foods and Beverages 2007-2008: Provisional flavonoid addendum to the USDA Food and Nutrient Database for Dietary Studies, 4.1, and flavonoid intake data files from What We Eat in America (WWEIA), National Health and Nutrition Examination Survey (NHANES) 2007-2008* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. [http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB\\_doc.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB_doc.pdf). Accessed March 31, 2016.
2. Bhagwat S, Haytowitz DB, Wasswa-Kintu S. 2014 (Sep). *USDA's Expanded Flavonoid Database for the Assessment of Dietary Intakes: Documentation and user guide* [release 1]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/FDB-EXP.pdf>. Accessed March 31, 2016.
3. Bhagwat S, Haytowitz D. 2015 (Sep; slightly revised Dec). *USDA Database for the Proanthocyanidin Content of Selected Foods, release 2* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/PA/PA02.pdf>. Accessed March 31, 2016.
4. Bhagwat S, Haytowitz DB, Holden JM (ret.). 2013 (Dec). *USDA Database for the Flavonoid Content of Selected Foods, release 3.1* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/Flav3-1.pdf>. Accessed March 31, 2016.

THIS PAGE IS INTENTIONALLY BLANK

**Table 4a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Sample size	Total flavonoids <sup>c</sup>		Anthocyanidins (continued on next page)									
				Total	Cyanidin	Delphinidin	Malvidin	Pelargonidin					
	<i>n</i>	----- <i>mg</i> -----											
<b>Under 131% poverty:</b>													
2 - 5.....	386	67.04	(5.96)	5.96	(1.06)	1.07	(0.11)	0.51	(0.12)	2.60	(0.46)	1.00*	(0.35)
6 - 11.....	468	69.25	(7.73)	5.48	(0.65)	1.21	(0.22)	0.48	(0.09)	2.43	(0.40)	0.65	(0.13)
12 - 19.....	450	159.02	(27.19)	4.85	(1.01)	1.11	(0.28)	0.48*	(0.23)	1.22	(0.22)	0.73*	(0.33)
20 and over...	1,506	219.71	(22.99)	9.12	(2.67)	1.95*	(0.63)	2.72*	(1.98)	2.08	(0.38)	1.00	(0.17)
2 and over...	2,810	181.19	(15.91)	7.79	(1.73)	1.67	(0.42)	1.94*	(1.26)	2.03	(0.26)	0.92	(0.16)
<b>131-350% poverty:</b>													
2 - 5.....	255	66.82	(9.92)	9.28	(2.20)	1.43	(0.18)	1.04*	(0.46)	4.32	(1.07)	0.78*	(0.35)
6 - 11.....	386	101.54	(22.09)	6.84	(1.27)	1.30	(0.39)	0.52	(0.07)	2.85	(0.72)	1.35*	(0.53)
12 - 19.....	361	183.24*	(67.09)	3.25	(0.96)	0.75	(0.15)	0.19	(0.06)	0.90*	(0.28)	1.04*	(0.71)
20 and over...	1,915	213.40	(14.39)	7.91	(0.74)	1.49	(0.17)	0.75	(0.10)	2.95	(0.31)	0.96	(0.23)
2 and over...	2,917	191.62	(16.25)	7.41	(0.77)	1.39	(0.14)	0.69	(0.10)	2.81	(0.30)	0.99	(0.29)
<b>Over 350% poverty:</b>													
2 - 5.....	133	51.08	(3.60)	11.83	(1.93)	2.11*	(0.69)	1.22*	(0.42)	4.60	(1.04)	2.01*	(1.17)
6 - 11.....	198	89.74	(19.26)	14.15	(3.95)	1.85	(0.31)	1.27*	(0.60)	7.05*	(2.51)	1.95	(0.47)
12 - 19.....	241	141.42	(25.62)	4.32	(0.82)	1.52	(0.41)	0.20	(0.03)	0.88	(0.13)	1.34*	(0.48)
20 and over...	1,514	295.16	(24.62)	12.23	(1.38)	2.20	(0.20)	1.19	(0.23)	5.24	(0.81)	1.65	(0.30)
2 and over...	2,086	256.68	(21.06)	11.53	(1.30)	2.11	(0.18)	1.10	(0.23)	4.88	(0.73)	1.65	(0.29)
<b>All individuals:</b>													
2 - 5.....	832	61.98	(4.30)	8.78	(1.19)	1.51	(0.23)	0.90	(0.21)	3.74	(0.58)	1.20*	(0.40)
6 - 11.....	1,121	84.33	(13.56)	8.71	(1.60)	1.44	(0.17)	0.70	(0.19)	3.87	(1.00)	1.58	(0.42)
12 - 19.....	1,156	154.78	(24.57)	4.63	(0.78)	1.14	(0.18)	0.38*	(0.12)	1.33	(0.28)	1.00	(0.28)
20 and over...	5,420	249.76	(16.80)	10.21	(1.04)	2.00	(0.20)	1.34*	(0.42)	3.75	(0.44)	1.35	(0.23)
2 and over...	8,529	214.45	(14.78)	9.36	(0.92)	1.83	(0.17)	1.15	(0.31)	3.48	(0.39)	1.32	(0.24)

\*, a-f Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 4a. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – overall total<sup>c</sup> and anthocyanidins – continued**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Anthocyanidins – continued			
	Peonidin		Petunidin	
	----- mg -----			
<b>Under 131% poverty:</b>				
2 - 5.....	0.41	(0.08)	0.38	(0.09)
6 - 11.....	0.37	(0.06)	0.35	(0.09)
12 - 19.....	1.08*	(0.55)	0.23	(0.05)
20 and over...	0.99*	(0.52)	0.38	(0.07)
2 and over...	0.89*	(0.34)	0.35	(0.05)
<b>131-350% poverty:</b>				
2 - 5.....	0.86*	(0.32)	0.85*	(0.41)
6 - 11.....	0.43	(0.08)	0.39	(0.07)
12 - 19.....	0.23	(0.05)	0.14	(0.04)
20 and over...	1.16*	(0.40)	0.61	(0.09)
2 and over...	0.98*	(0.30)	0.56	(0.08)
<b>Over 350% poverty:</b>				
2 - 5.....	0.85	(0.25)	1.05*	(0.38)
6 - 11.....	1.05*	(0.39)	0.99*	(0.49)
12 - 19.....	0.23	(0.04)	0.15	(0.03)
20 and over...	1.06	(0.16)	0.88	(0.16)
2 and over...	0.97	(0.15)	0.82	(0.16)
<b>All individuals:</b>				
2 - 5.....	0.69	(0.15)	0.74	(0.18)
6 - 11.....	0.58	(0.15)	0.54*	(0.17)
12 - 19.....	0.54*	(0.17)	0.25*	(0.08)
20 and over...	1.08	(0.17)	0.68	(0.09)
2 and over...	0.95	(0.14)	0.62	(0.08)

\*, a-f Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 4b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Flavan-3-ols (continued on next page)													
	Total	(-)-Epicatechin	(-)-Epicatechin 3-gallate	(-)-Epigallocatechin	(-)-Epigallocatechin 3-gallate	(+)-Catechin	(+)-Gallocatechin							
----- mg -----														
<b>Under 131% poverty:</b>														
2 - 5.....	34.07	(5.07)	8.99	(0.38)	1.36	(0.33)	2.16	(0.48)	3.45	(0.79)	4.85	(0.24)	0.22	(0.06)
6 - 11.....	40.75	(7.14)	8.61	(0.90)	1.89	(0.43)	3.02	(0.65)	5.24	(1.15)	4.70	(0.33)	0.28	(0.07)
12 - 19.....	126.13	(25.09)	9.32	(1.36)	7.40	(1.55)	11.13	(2.29)	18.94	(3.88)	5.73	(0.78)	1.22	(0.26)
20 and over...	181.05	(23.10)	9.12	(0.65)	10.98	(1.47)	16.38	(2.17)	27.39	(3.61)	6.48	(0.30)	1.89	(0.25)
2 and over...	145.02	(15.82)	9.08	(0.57)	8.63	(1.00)	12.93	(1.47)	21.67	(2.42)	6.03	(0.29)	1.47	(0.17)
<b>131-350% poverty:</b>														
2 - 5.....	37.74	(8.35)	9.30	(0.69)	1.53*	(0.52)	2.44*	(0.78)	4.07*	(1.42)	5.41	(0.53)	0.23*	(0.08)
6 - 11.....	76.85	(21.89)	6.95	(0.52)	4.32*	(1.40)	6.50*	(2.04)	10.91*	(3.46)	4.57	(0.43)	0.69*	(0.23)
12 - 19.....	156.57*	(64.62)	8.62	(1.72)	9.54*	(4.14)	14.15*	(6.06)	23.45*	(9.93)	5.24	(0.90)	1.59*	(0.70)
20 and over...	172.01	(13.17)	9.25	(0.47)	10.30	(0.83)	15.53	(1.21)	26.44	(2.05)	7.00	(0.31)	1.72	(0.14)
2 and over...	153.97	(14.93)	8.98	(0.51)	9.17	(0.94)	13.80	(1.38)	23.42	(2.33)	6.51	(0.33)	1.53	(0.16)
<b>Over 350% poverty:</b>														
2 - 5.....	18.53	(2.55)	9.31	(0.73)	0.27*	(0.12)	0.67*	(0.23)	0.73*	(0.34)	5.41	(0.56)	0.04*	(0.02)
6 - 11.....	51.62*	(16.55)	8.63	(0.72)	2.61*	(1.01)	4.06*	(1.47)	6.57*	(2.32)	5.06	(0.43)	0.41*	(0.18)
12 - 19.....	111.87	(23.55)	7.92	(0.88)	6.42	(1.48)	9.64	(2.18)	16.77	(3.85)	5.05	(0.65)	0.98	(0.24)
20 and over...	243.69	(22.68)	12.30	(0.64)	14.68	(1.44)	21.99	(2.12)	36.87	(3.55)	9.39	(0.68)	2.47	(0.24)
2 and over...	209.04	(19.32)	11.51	(0.52)	12.49	(1.23)	18.73	(1.80)	31.45	(2.99)	8.52	(0.58)	2.09	(0.21)
<b>All individuals:</b>														
2 - 5.....	30.67	(3.80)	9.46	(0.37)	1.07	(0.25)	1.79	(0.37)	2.79	(0.63)	5.24	(0.30)	0.17	(0.04)
6 - 11.....	54.26	(12.95)	8.10	(0.51)	2.79	(0.81)	4.31	(1.17)	7.18	(1.92)	4.82	(0.31)	0.44*	(0.14)
12 - 19.....	124.63	(23.36)	8.42	(0.91)	7.34	(1.48)	10.98	(2.18)	18.63	(3.60)	5.23	(0.50)	1.19	(0.25)
20 and over...	204.45	(15.62)	10.55	(0.50)	12.29	(0.98)	18.43	(1.45)	31.06	(2.43)	7.97	(0.44)	2.07	(0.16)
2 and over...	172.95	(13.63)	10.04	(0.48)	10.29	(0.85)	15.46	(1.25)	26.05	(2.07)	7.24	(0.40)	1.72	(0.14)

\*, a-f Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.  
 SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 4b. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavan-3-ols – continued**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Flavan-3-ols – continued									
	Theaflavin		Theaflavin-3,3'-digallate		Theaflavin-3'-gallate		Theaflavin-3-gallate		Thearubigins	
	----- mg -----									
<b>Under 131% poverty:</b>										
2 - 5.....	0.22	(0.06)	0.24	(0.07)	0.20	(0.06)	0.17	(0.05)	12.22	(3.13)
6 - 11.....	0.26	(0.07)	0.28	(0.08)	0.24	(0.07)	0.20	(0.06)	16.02	(3.81)
12 - 19.....	1.19	(0.26)	1.31	(0.29)	1.12	(0.25)	0.95	(0.21)	67.82	(14.50)
20 and over...	1.85	(0.26)	2.04	(0.28)	1.73	(0.24)	1.47	(0.20)	101.74	(13.86)
2 and over...	1.43	(0.18)	1.59	(0.20)	1.35	(0.17)	1.14	(0.14)	79.69	(9.51)
<b>131-350% poverty:</b>										
2 - 5.....	0.23*	(0.08)	0.25*	(0.09)	0.21*	(0.07)	0.19*	(0.07)	13.89*	(5.35)
6 - 11.....	0.71*	(0.24)	0.78*	(0.27)	0.66*	(0.23)	0.57*	(0.19)	40.20*	(13.21)
12 - 19.....	1.63*	(0.74)	1.80*	(0.81)	1.54*	(0.70)	1.29*	(0.58)	87.73*	(38.43)
20 and over...	1.66	(0.15)	1.83	(0.16)	1.54	(0.14)	1.33	(0.12)	95.42	(7.87)
2 and over...	1.49	(0.16)	1.64	(0.18)	1.39	(0.15)	1.19	(0.13)	84.86	(8.82)
<b>Over 350% poverty:</b>										
2 - 5.....	0.03*	(0.02)	0.04*	(0.02)	0.03*	(0.02)	0.03*	(0.02)	1.95*	(1.08)
6 - 11.....	0.41*	(0.19)	0.45*	(0.21)	0.39*	(0.18)	0.33*	(0.15)	22.70*	(10.01)
12 - 19.....	1.01	(0.24)	1.12	(0.26)	0.92	(0.23)	0.82	(0.19)	61.22	(13.84)
20 and over...	2.44	(0.25)	2.70	(0.27)	2.28	(0.24)	1.95	(0.20)	136.63	(13.43)
2 and over...	2.07	(0.21)	2.29	(0.24)	1.94	(0.20)	1.65	(0.17)	116.31	(11.48)
<b>All individuals:</b>										
2 - 5.....	0.16	(0.04)	0.18	(0.05)	0.15	(0.04)	0.13	(0.03)	9.53	(2.45)
6 - 11.....	0.43*	(0.15)	0.48*	(0.16)	0.41*	(0.14)	0.35*	(0.12)	24.96*	(7.77)
12 - 19.....	1.20	(0.26)	1.33	(0.29)	1.12	(0.25)	0.96	(0.20)	68.24	(13.60)
20 and over...	2.03	(0.17)	2.24	(0.19)	1.89	(0.16)	1.62	(0.13)	114.30	(9.24)
2 and over...	1.69	(0.15)	1.87	(0.16)	1.58	(0.14)	1.35	(0.12)	95.65	(8.05)

\*, a-f Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 4c. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavanones**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Flavanones							
	Total		Eriodictyol		Hesperetin		Naringenin	
	----- mg -----							
<b>Under 131% poverty:</b>								
2 - 5.....	19.39	(2.19)	0.22	(0.05)	15.00	(1.72)	4.17	(0.61)
6 - 11.....	14.30	(1.58)	0.21	(0.03)	11.38	(1.36)	2.71	(0.35)
12 - 19.....	14.27	(2.57)	0.19	(0.03)	10.81	(2.26)	3.26	(0.42)
20 and over...	11.29	(1.10)	0.13	(0.02)	8.23	(0.80)	2.93	(0.39)
2 and over...	12.74	(0.96)	0.16	(0.02)	9.53	(0.76)	3.06	(0.26)
<b>131-350% poverty:</b>								
2 - 5.....	11.63	(2.44)	0.18	(0.02)	9.22	(2.00)	2.23	(0.47)
6 - 11.....	9.34	(1.45)	0.20	(0.03)	7.48	(1.17)	1.67	(0.29)
12 - 19.....	9.27	(1.57)	0.24	(0.06)	7.21	(1.26)	1.83	(0.36)
20 and over...	13.41	(1.51)	0.18	(0.03)	9.76	(1.18)	3.47	(0.45)
2 and over...	12.52	(1.26)	0.19	(0.02)	9.26	(0.97)	3.07	(0.37)
<b>Over 350% poverty:</b>								
2 - 5.....	12.56	(1.95)	0.12	(0.02)	10.29	(1.81)	2.16	(0.22)
6 - 11.....	13.49	(3.02)	0.16	(0.03)	10.59	(2.56)	2.75	(0.64)
12 - 19.....	11.52	(1.53)	0.19	(0.03)	9.18	(1.27)	2.15	(0.38)
20 and over...	13.84	(0.98)	0.24	(0.02)	9.57	(0.74)	4.04	(0.39)
2 and over...	13.53	(0.80)	0.22	(0.02)	9.62	(0.60)	3.69	(0.33)
<b>All individuals:</b>								
2 - 5.....	14.54	(1.46)	0.17	(0.02)	11.49	(1.27)	2.88	(0.23)
6 - 11.....	12.28	(1.05)	0.18	(0.02)	9.74	(0.91)	2.35	(0.22)
12 - 19.....	11.88	(1.02)	0.23	(0.02)	9.27	(0.91)	2.39	(0.18)
20 and over...	13.09	(0.88)	0.20	(0.02)	9.35	(0.66)	3.55	(0.26)
2 and over...	12.97	(0.71)	0.20	(0.01)	9.49	(0.54)	3.28	(0.20)

<sup>a-f</sup> Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 4d. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavones**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Flavones					
	Total		Apigenin		Luteolin	
	----- mg -----					
<b>Under 131% poverty:</b>						
2 - 5.....	0.34	(0.06)	0.05	(0.01)	0.29	(0.06)
6 - 11.....	0.35	(0.07)	0.06	(0.01)	0.28	(0.07)
12 - 19.....	0.56	(0.10)	0.13	(0.02)	0.43	(0.08)
20 and over...	0.72	(0.06)	0.16	(0.01)	0.56	(0.06)
2 and over...	0.62	(0.06)	0.13	(0.01)	0.49	(0.05)
<b>131-350% poverty:</b>						
2 - 5.....	0.32	(0.06)	0.03	(0.01)	0.29	(0.06)
6 - 11.....	0.34	(0.05)	0.06	(0.02)	0.28	(0.05)
12 - 19.....	0.45	(0.09)	0.13	(0.03)	0.32	(0.06)
20 and over...	0.75	(0.06)	0.20	(0.02)	0.55	(0.04)
2 and over...	0.66	(0.05)	0.17	(0.02)	0.48	(0.04)
<b>Over 350% poverty:</b>						
2 - 5.....	0.54	(0.13)	0.12*	(0.07)	0.42	(0.10)
6 - 11.....	0.53	(0.09)	0.07*	(0.02)	0.46	(0.10)
12 - 19.....	0.58	(0.06)	0.11	(0.02)	0.47	(0.06)
20 and over...	1.01	(0.09)	0.26	(0.03)	0.75	(0.07)
2 and over...	0.92	(0.08)	0.23	(0.03)	0.69	(0.06)
<b>All individuals:</b>						
2 - 5.....	0.39	(0.05)	0.06*	(0.02)	0.32	(0.04)
6 - 11.....	0.39	(0.06)	0.06	(0.01)	0.33	(0.05)
12 - 19.....	0.55	(0.06)	0.12	(0.02)	0.43	(0.05)
20 and over...	0.86	(0.06)	0.22	(0.02)	0.64	(0.05)
2 and over...	0.76	(0.06)	0.18	(0.01)	0.57	(0.05)

\*, a-f Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>.

SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 4e. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – flavonols**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Flavonols									
	Total		Isorhamnetin		Kaempferol		Myricetin		Quercetin	
----- <i>mg</i> -----										
<b>Under 131% poverty:</b>										
2 - 5.....	6.79	(0.39)	0.24	(0.04)	1.01	(0.09)	0.34	(0.05)	5.20	(0.30)
6 - 11.....	7.80	(0.46)	0.31	(0.03)	1.18	(0.11)	0.42	(0.05)	5.88	(0.34)
12 - 19.....	12.89	(1.32)	0.47	(0.03)	2.98	(0.39)	0.90	(0.13)	8.54	(0.88)
20 and over...	16.86	(0.91)	0.70	(0.05)	4.51	(0.35)	1.36	(0.12)	10.29	(0.46)
2 and over...	14.42	(0.72)	0.58	(0.03)	3.62	(0.26)	1.10	(0.08)	9.12	(0.40)
<b>131-350% poverty:</b>										
2 - 5.....	7.08	(0.68)	0.21	(0.03)	1.22	(0.20)	0.42	(0.10)	5.23	(0.43)
6 - 11.....	7.92	(0.89)	0.24	(0.03)	1.62	(0.29)	0.60	(0.12)	5.46	(0.48)
12 - 19.....	12.83	(2.84)	0.45	(0.07)	3.10	(0.82)	1.01*	(0.32)	8.27	(1.68)
20 and over...	17.70	(0.77)	0.80	(0.08)	4.50	(0.19)	1.40	(0.08)	11.00	(0.49)
2 and over...	15.69	(0.80)	0.68	(0.06)	3.91	(0.20)	1.23	(0.09)	9.88	(0.50)
<b>Over 350% poverty:</b>										
2 - 5.....	5.61	(0.31)	0.16	(0.03)	0.85	(0.10)	0.20	(0.02)	4.40	(0.27)
6 - 11.....	7.84	(0.72)	0.24	(0.04)	1.39	(0.25)	0.52	(0.10)	5.69	(0.44)
12 - 19.....	11.72	(1.17)	0.41	(0.05)	2.61	(0.34)	0.86	(0.17)	7.84	(0.70)
20 and over...	21.96	(1.21)	0.92	(0.07)	5.60	(0.37)	1.85	(0.14)	13.59	(0.71)
2 and over...	19.37	(1.05)	0.80	(0.06)	4.84	(0.33)	1.60	(0.12)	12.13	(0.60)
<b>All individuals:</b>										
2 - 5.....	6.59	(0.32)	0.20	(0.02)	1.04	(0.09)	0.32	(0.04)	5.03	(0.23)
6 - 11.....	7.82	(0.52)	0.25	(0.01)	1.40	(0.17)	0.50	(0.07)	5.68	(0.30)
12 - 19.....	12.26	(1.25)	0.43	(0.04)	2.81	(0.33)	0.90	(0.12)	8.11	(0.80)
20 and over...	19.44	(0.91)	0.83	(0.05)	4.99	(0.27)	1.59	(0.10)	12.03	(0.53)
2 and over...	16.92	(0.83)	0.70	(0.04)	4.21	(0.24)	1.35	(0.09)	10.65	(0.49)

\*, a-f Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**Table 4f. Flavonoids<sup>a</sup> from food and beverages<sup>b</sup> – isoflavones**

Mean intake (standard error) per individual, by family income as % of Federal poverty threshold<sup>d</sup> and age, in the United States,<sup>e</sup> What We Eat in America, NHANES 2007-2008<sup>f</sup>

Family income as % of Federal poverty threshold and age (years)	Isoflavones							
	Total		Daidzein		Genistein		Glycitein	
	----- mg -----							
<b>Under 131% poverty:</b>								
2 - 5.....	0.48*	(0.18)	0.21*	(0.08)	0.26*	(0.10)	0.02	(0.01)
6 - 11.....	0.58*	(0.36)	0.25*	(0.16)	0.30*	(0.19)	0.02*	(0.01)
12 - 19.....	0.32	(0.06)	0.12	(0.02)	0.17	(0.03)	0.02	(0.01)
20 and over...	0.66	(0.10)	0.27	(0.04)	0.35	(0.05)	0.05	(0.01)
2 and over...	0.59	(0.09)	0.24	(0.04)	0.31	(0.04)	0.04	(0.01)
<b>131-350% poverty:</b>								
2 - 5.....	0.76*	(0.38)	0.31*	(0.16)	0.41*	(0.20)	0.05*	(0.02)
6 - 11.....	0.25	(0.06)	0.09	(0.02)	0.14	(0.04)	0.02*	(0.01)
12 - 19.....	0.87*	(0.29)	0.38*	(0.15)	0.43	(0.12)	0.06*	(0.02)
20 and over...	1.62	(0.44)	0.63	(0.17)	0.87	(0.24)	0.12	(0.03)
2 and over...	1.37	(0.33)	0.54	(0.13)	0.73	(0.18)	0.10	(0.03)
<b>Over 350% poverty:</b>								
2 - 5.....	2.01*	(0.65)	0.88*	(0.29)	1.04*	(0.33)	0.09*	(0.03)
6 - 11.....	2.11*	(0.98)	0.95*	(0.44)	1.05*	(0.49)	0.10*	(0.05)
12 - 19.....	1.40*	(0.62)	0.52*	(0.22)	0.76*	(0.34)	0.12*	(0.05)
20 and over...	2.43	(0.59)	0.93	(0.21)	1.31	(0.33)	0.19	(0.05)
2 and over...	2.28	(0.52)	0.88	(0.19)	1.23	(0.29)	0.17	(0.04)
<b>All individuals:</b>								
2 - 5.....	1.00	(0.23)	0.43	(0.10)	0.53	(0.12)	0.05	(0.01)
6 - 11.....	0.87*	(0.32)	0.38*	(0.14)	0.44*	(0.16)	0.04*	(0.02)
12 - 19.....	0.82*	(0.25)	0.32	(0.10)	0.43*	(0.13)	0.07*	(0.02)
20 and over...	1.72	(0.30)	0.66	(0.11)	0.92	(0.17)	0.13	(0.02)
2 and over...	1.50	(0.25)	0.59	(0.10)	0.80	(0.14)	0.11	(0.02)

\*, a-f Notes are on page 39.

DATA SOURCE: Flavonoid Intake Data Files 2007-2008, individuals age 2 years and over (excluding breastfed children), day 1, weighted. <http://www.ars.usda.gov/Services/docs.htm?docid=25102>. SUGGESTED CITATION: U.S. Department of Agriculture, Agricultural Research Service. 2015. Flavonoids from food and beverages: Mean intake (standard error) per individual, by family income as % of Federal poverty threshold and age, in the United States, What We Eat in America, NHANES 2007-2008. <http://www.ars.usda.gov/nea/bhnrc/fsrg>.

**NOTES**

- \* Estimates flagged with an asterisk may be less statistically reliable than estimates that are not flagged. An estimated mean is flagged when either (a) the relative standard error is greater than 30 percent or (b) the sample size is less than 30 times the variance inflation factor (VIF), a broadly calculated average design effect. The VIF used in this table is 2.16.
- <sup>a</sup> Detailed information about the flavonoid data files used in creating these tables is provided in reference 1. These tables include 29 individual flavonoids categorized into 6 (sub)classes as described in reference 2. Theaflavins and thearubigins are included (grouped with flavan-3-ols), but the proanthocyanidins listed in reference 3 are excluded because their content has not yet been determined for the full range of survey foods/beverages. The flavonoids in these tables, except for flavan-3-ols, were calculated and presented as their aglycone forms (anthocyanidins, flavanones, flavones, flavonols, and isoflavones); flavan-3-ols are reported as their actual forms (*personal communication, Dr. Xianli Wu, USDA Nutrient Data Laboratory, March 31, 2016*). Procedures for standardizing analytical values of flavonoids that are present in foods/beverages in varying forms are described in reference 4.
- <sup>b</sup> Estimates are based on intake of food and beverages, including water, and do not include intake from supplements or medications.
- <sup>c</sup> Sum of dietary flavonoids in the 6 classes presented in tables 4a through 4f.
- <sup>d</sup> Percent of poverty level is based on family income, family size and composition using U.S. Census Bureau poverty thresholds (5). The lowest poverty threshold category is related to Federal nutrition assistance programs (<http://www.fns.usda.gov>). Individuals with missing income data are included only in the "all individuals" category. Demographic data used in this table are available at <http://www.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Demographics&CycleBeginYear=2007>.
- <sup>e</sup> To produce estimates that are representative of the U.S. population for the years of data collection, dietary day 1 sample weights (available from <http://www.cdc.gov/nchs/nhanes/search/DataPage.aspx?Component=Dietary&CycleBeginYear=2007>) were used.
- <sup>f</sup> Estimates in this table are based on 1 day of data collected in What We Eat in America, the dietary intake interview component of the National Health and Nutrition Examination Survey, in 2007 to 2008. <http://www.ars.usda.gov/Services/docs.htm?docid=13793>. Breastfed children were excluded because the amount of breast milk consumed was not quantified.

**REFERENCES**

1. Sebastian RS, Goldman JD, Martin CL, Steinfeldt LC, Wilkinson Enns C, Moshfegh AJ. 2014 (slightly revised 2015). *Flavonoid Values for USDA Survey Foods and Beverages 2007-2008: Provisional flavonoid addendum to the USDA Food and Nutrient Database for Dietary Studies, 4.1, and flavonoid intake data files from What We Eat in America (WWEIA), National Health and Nutrition Examination Survey (NHANES) 2007-2008* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. [http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB\\_doc.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/fndds/FlavonoidDB_doc.pdf). Accessed March 31, 2016.
2. Bhagwat S, Haytowitz DB, Wasswa-Kintu S. 2014 (Sep). *USDA's Expanded Flavonoid Database for the Assessment of Dietary Intakes: Documentation and user guide* [release 1]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/FDB-EXP.pdf>. Accessed March 31, 2016.
3. Bhagwat S, Haytowitz D. 2015 (Sep; slightly revised Dec). *USDA Database for the Proanthocyanidin Content of Selected Foods, release 2* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/PA/PA02.pdf>. Accessed March 31, 2016.
4. Bhagwat S, Haytowitz DB, Holden JM (ret.). 2013 (Dec). *USDA Database for the Flavonoid Content of Selected Foods, release 3.1* [documentation]. Beltsville, MD: USDA, Agricultural Research Service. <http://www.ars.usda.gov/SP2UserFiles/Place/80400525/Data/Flav/Flav3-1.pdf>. Accessed March 31, 2016.
5. US Census Bureau. *Poverty thresholds*. <http://www.census.gov/hhes/www/poverty/data/threshld/index.html>. Accessed February 1, 2016.

THIS PAGE IS INTENTIONALLY BLANK