

Supplementary Online Content

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Supplementary Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eMethods

Levels of leisure time physical activity were assessed using separate questions in each age group. For children, times per week to play or exercise hard (enough to sweat and breath hard) were asked between cycles 2001-2002 to 2007-2008, whereas from cycles 2009-2010 onwards, days physically active at least 60 minutes in the past 7 days were asked. Children's leisure time physical activity was defined using a binary variable dichotomized by cycle-specific median cut-offs of responses to aforementioned questions to present inactive and active. Meanwhile in adolescents and adults, two questions were administrated asking if they engaged in sports or recreational activities for at least 10 minutes continuously over the past 30 days, at 1) vigorous and 2) moderate levels, respectively. Leisure time physical activity were defined by a binary variable, with "no" responses to both questions classified as inactive, whereas "yes" to any or both questions classified active.

Smoking status was assessed in adults only, defined as never smokers: did not smoke 100 cigarettes and do not smoke now; former smokers: smoked 100 cigarettes in life and do not smoke now; and current smokers: smoked 100 cigarettes in life and smoke now.

eTable 1. Assessment of Sedentary Behaviors, NHANES 2001-2016

Cycle	Variable	Children	Adolescents	Adults	
		5-11 years	12-19 years	≥20 years	
Screen-based sedentary behaviors					
Sitting watching TV/videos					
2001-2002	PAD590	X			Over the past 30 days, on average about how many hours per day did {you/SP} sit and watch TV or videos? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2003-2004	PAD590	X	X	X	Over the past 30 days, on average about how many hours per day did {you/SP} sit and watch TV or videos? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2005-2006	PAD590	X	X	X	Over the past 30 days, on average about how many hours per day did {you/SP} sit and watch TV or videos? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2007-2008	PAD590	X			Over the past 30 days, on average how many hours per day did {SP} sit and watch TV or videos? Would you say ... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more, or / None]
2009-2010	PAD590	X			Over the past 30 days, on average how many hours per day did {SP} sit and watch TV or videos? Would you say ... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2011-2012	PAQ710	X	X	X	Over the past 30 days, on average how many hours per day did {you/SP} sit and watch TV or videos? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / {You do/SP does} not watch TV or videos / Refused / Don't know]
2013-2014	PAQ710	X	X	X	Over the past 30 days, on average how many hours per day did {you/SP} sit and watch TV or videos? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / {You do/SP does} not watch TV or videos / Refused / Don't know]
2015-2016	PAQ710	X	X	X	Over the past 30 days, on average how many hours per day did {you/SP} sit and watch TV or videos? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / {You do/SP does} not watch TV or videos / Refused / Don't know]
Computer use					
2001-2002	PAD600	X			Over the past 30 days, on average about how many hours per day did {you/SP} use a computer or play computer games? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2003-2004	PAD600	X	X	X	Over the past 30 days, on average about how many hours per day did {you/SP} use a computer or play computer games? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2005-2006	PAD600	X	X	X	Over the past 30 days, on average about how many hours per day did {you/SP} use a computer or play computer games? Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2007-2008	PAD600	X			Over the past 30 days, on average how many hours per day did {SP} use a computer or play computer games outside of school? Would you say ... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]

2009-2010	PAD600	X			Over the past 30 days, on average how many hours per day did {SP} use a computer or play computer games outside of school? Would you say ... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / None / Refused / Don't know]
2011-2012	PAQ715	X	X	X	Over the past 30 days, on average how many hours per day did {you/SP} use a computer or play computer games outside of work or school? Include Playstation, Nintendo DS, or other portable video games. Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / {You do/SP does} not use a computer outside of work or school / Refused / Don't know]
2013-2014	PAQ715	X	X	X	Over the past 30 days, on average how many hours per day did {you/SP} use a computer or play computer games outside of work or school? Include Playstation, Nintendo DS, or other portable video games. Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / {You do/SP does} not use a computer outside of work or school / Refused / Don't know]
2015-2016	PAQ715	X	X	X	Over the past 30 days, on average how many hours per day did {you/SP} use a computer or play computer games outside of work or school? Include Playstation, Nintendo DS, or other portable video games. Would you say... [Less than 1 hour / 1 hour / 2 hours / 3 hours / 4 hours / 5 hours or more / {You do/SP does} not use a computer outside of work or school / Refused / Don't know]
Total sitting time					
2007-2008	PAD680		X	X	The following question is about sitting or reclining at work, at home, or at school. Include time spent sitting at a desk, sitting with friends, traveling in a car, bus, or train, reading, playing cards, watching television, or using a computer. Do not include time spent sleeping. How much time {do you/does SP} usually spend sitting or reclining on a typical day? [minutes / Refused / Don't know]
2009-2010	PAD680		X	X	The following question is about sitting or reclining at work, at home, or at school. Include time spent sitting at a desk, sitting with friends, traveling in a car, bus, or train, reading, playing cards, watching television, or using a computer. Do not include time spent sleeping. How much time {do you/does SP} usually spend sitting or reclining on a typical day? [minutes / Refused / Don't know]
2011-2012	PAQ680		X	X	The following question is about sitting or reclining at work, at home, or at school. Include time spent sitting at a desk, sitting with friends, traveling in a car, bus, or train, reading, playing cards, watching television, or using a computer. Do not include time spent sleeping. How much time {do you/does SP} usually spend sitting or reclining on a typical day? [minutes / Refused / Don't know]
2013-2014	PAQ680		X	X	The following question is about sitting or reclining at work, at home, or at school. Include time spent sitting at a desk, sitting with friends, traveling in a car, bus, or train, reading, playing cards, watching television, or using a computer. Do not include time spent sleeping. How much time {do you/does SP} usually spend sitting or reclining on a typical day? [minutes / Refused / Don't know]
2015-2016	PAQ680		X	X	The following question is about sitting or reclining at work, at home, or at school. Include time spent sitting at a desk, sitting with friends, traveling in a car, bus, or train, reading, playing cards, watching television, or using a computer. Do not include time spent sleeping. How much time {do you/does SP} usually spend sitting or reclining on a typical day? [minutes / Refused / Don't know]

eTable 2. Sample Size for Daily Sedentary Behaviors Among US Adults by Socio-demographic and Lifestyle Characteristics, NHANES 2015-2016^{a,b}

	No. of Participants by Age Group (Weighted %)		
	≥20 years	20-64 years	≥65 years
Overall	4542 (100)	3737 (100)	805 (100)
Sex			
Female	2311 (50.4)	1937 (49.9)	374 (53.1)
Male	2231 (49.6)	1800 (50.1)	431 (46.9)
Race/ethnicity			
Non-Hispanic white	1408 (63.3)	1046 (60.4)	362 (79.1)
Non-Hispanic black	946 (11.2)	814 (12.0)	132 (6.9)
Hispanic	1417 (15.9)	1205 (17.6)	212 (6.7)
Other ^c	771 (9.6)	672 (10.0)	99 (7.3)
Annual household income			
<\$25,000	961 (13.6)	710 (12.9)	251 (17.5)
\$25,000-<\$75,000	1805 (37.2)	1503 (36.2)	302 (42.4)
≥\$75,000	1288 (40.7)	1138 (42.9)	150 (29.1)
Weight status ^d			
Normal	1234 (27.7)	1032 (28.3)	202 (24.3)
Overweight	1445 (31.5)	1130 (30.3)	315 (38.0)
Obese	1652 (36.5)	1402 (37.0)	250 (34.2)
Leisure-time physical activity ^e			
Active	2441 (60.4)	2067 (61.1)	374 (56.3)
Inactive	2101 (39.6)	1670 (38.9)	431 (43.7)
Educational attainment			
<High school	969 (12.8)	750 (12.7)	219 (13.0)
High school	949 (19.8)	786 (19.7)	163 (20.5)
>High school	2624 (67.4)	2201 (67.6)	423 (66.5)
Smoking status			
Never	2806 (59.5)	2389 (60.9)	417 (51.8)
Former	948 (23.3)	633 (20.0)	315 (41.1)
Current	781 (17.1)	710 (19.0)	71 (6.7)

^a Participant characteristics were presented according to age group: ≥20 years, 20-64 years, ≥65 years. Sample size was weighted to be nationally representative.

^b No. of participants within each age group may not sum to equal the overall due to missing data. Weighted percentage may not sum to 100% due to missing data.

^c "Other" includes race/ethnicity other than non-Hispanic white, non-Hispanic black, or Hispanic, including multiracial.

^d For weight status definitions, see the Methods section.

^e For leisure-time physical activity definitions, see the Methods section.

eTable 3. Sample Size for Crude Weighted Trends in Sedentary Behaviors Among US Population, NHANES 2001-2016

		Trends in Sedentary Behaviors, Sample Size							
		2001-2002	2003-2004	2005-2006	2007-2008	2009-2010	2011-2012	2013-2014	2015-2016
Screen-based sedentary behaviors									
<i>Sitting Watching Television or Videos</i>									
5-11 years	N	1,296	1,139	1,236	1,140	1,308	1,378	1,430	1,415
	Weighted N	25,806,284	26,321,004	25,004,808	22,670,089	25,120,957	25,677,877	25,700,651	26,710,058
12-19 years	N		1,990	1,957			1,097	1257	1141
	Weighted N		28,740,133	28,434,700			29,417,452	251,096,624	28,571,997
≥20 years	N		4,008	4,155			4,599	4,724	4,542
	Weighted N		172,895,054	181,510,304			195,662,400	194,281,610	194,449,923
20-64 years	N		3,087	3,408			3,826	3,916	3,737
	Weighted N		150,282,766	157,717,257			168,654,548	166,903,855	163,989,122
≥65 years	N		921	747			773	808	805
	Weighted N		22,612,288	23,793,047			27,007,852	27,377,755	30,460,801
<i>Computer Use Outside School or Work</i>									
5-11 years	N	1,296	1,139	1,236	1,140	1,308	1,378	1,430	1,415
	Weighted N	25,806,284	26,321,004	25,004,808	22,670,089	25,120,957	25,677,877	25,700,651	26,710,058
12-19 years	N		1,990	1,957			1,097	1257	1141
	Weighted N		28,740,133	28,434,700			29,417,452	251,096,624	28,571,997
≥20 years	N		4,008	4,155			4,599	4,724	4,542
	Weighted N		172,895,054	181,510,304			195,662,400	194,281,610	194,449,923
20-64 years	N		3,087	3,408			3,826	3,916	3,737
	Weighted N		150,282,766	157,717,257			168,654,548	166,903,855	163,989,122
≥65 years	N		921	747			773	808	805
	Weighted N		22,612,288	23,793,047			27,007,852	27,377,755	30,460,801
Total Sitting Time									
12-19 years	N				1,031	1,161	1,093	1,248	1,129
	Weighted N				28,166,458	29,061,996	29,363,866	29,845,825	28,273,402
≥20 years	N				4,798	5,059	4,578	4,697	4,494
	Weighted N				183,760,009	187,137,602	195,007,127	193,269,559	192,793,057
20-64 years	N				3,821	4,109	3,807	3,893	3,699
	Weighted N				161,108,699	161,853,299	168,106,308	165,989,984	162,636,061
≥65 years	N				977	950	771	804	795
	Weighted N				22,651,310	25,284,303	26,900,819	27,279,574	30,156,996

eTable 4. Crude Weighted Trends in Sedentary Behaviors Overall and According to Race/Ethnicity Among US Population, NHANES 2001-2016^{a,b}

	Trends in Sedentary Behaviors								β (95% CI) ^c	P for Trend ^c	2015-2016 vs 1 st Cycle, Difference (95% CI) ^d
	2001-2002	2003-2004	2005-2006	2007-2008	2009-2010	2011-2012	2013-2014	2015-2016			
Screen-based sedentary behaviors											
Sitting Watching Television or Videos ≥ 2 h/d, Weighted %											
5-11 years											
All	65.5 (59.1 to 72.0)	72.6 (68.1 to 77.2)	61.0 (56.3 to 65.7)	63.2 (57.8 to 68.7)	61.8 (54.5 to 69.1)	63.6 (59.2 to 68.0)	57.6 (53.7 to 61.4)	62.2 (57.1 to 67.2)	-1.1 (-1.9 to -0.4)	.004	-3.4 (-11.2 to 4.4)
Non-Hispanic White	64.3 (56.8 to 71.8)	70.1 (63.5 to 76.6)	55.2 (48.8 to 61.5)	60.0 (53.2 to 66.8)	59.9 (50.4 to 69.3)	61.5 (54.4 to 68.6)	53.6 (48.8 to 58.5)	59.1 (52.7 to 65.5)	-1.2 (-2.2 to -0.3)	.01	-5.1 (-14.6 to 4.3)
Non-Hispanic black	74.5 (68.4 to 80.6)	81.4 (78.6 to 84.2)	76.9 (72.1 to 81.7)	75.5 (69.4 to 81.7)	73.5 (67.5 to 79.4)	78.9 (71.7 to 86.0)	68.4 (64.7 to 72.1)	75.3 (68.6 to 81.9)	-0.6 (-1.5 to 0.2)	.12	0.8 (-7.8 to 9.4)
Hispanic	63.1 (55.9 to 70.4)	73.1 (66.2 to 80.0)	66.7 (59.1 to 74.4)	64.1 (59.4 to 68.7)	59.7 (51.2 to 68.1)	62.2 (56.9 to 67.6)	62.9 (55.8 to 70.1)	63.8 (56.2 to 71.3)	-0.7 (-1.8 to 0.4)	.21	0.6 (-9.4 to 10.7)
12-19 years											
All		64.2 (59.4 to 68.9)	57.5 (53.7 to 61.3)			63.2 (57.5 to 69.0)	60.6 (57.5 to 63.7)	59.4 (53.7 to 65.0)	-0.2 (-1.1 to 0.6)	.61	-4.8 (-11.8 to 2.3)
Non-Hispanic white		62.4 (56.4 to 68.4)	53.6 (50.2 to 57.1)			60.4 (51.0 to 69.9)	57.5 (51.5 to 63.5)	55.3 (46.9 to 63.8)	-0.4 (-1.6 to 0.8)	.50	-7.0 (-17.0 to 2.9)
Non-Hispanic black		72.4 (66.9 to 77.9)	74.6 (69.5 to 79.8)			71.5 (66.1 to 76.8)	68.3 (62.7 to 74.0)	67.7 (61.3 to 74.2)	-1.0 (-2.0 to 0.1)	.07	-4.7 (-12.8 to 3.4)
Hispanic		66.3 (59.3 to 73.4)	60.2 (53.0 to 67.4)			66.8 (59.3 to 74.3)	64.9 (60.2 to 69.7)	62.8 (57.0 to 68.6)	0.1 (-1.1 to 1.2)	.95	-3.5 (-12.3 to 5.3)
≥ 20 years											
All		64.7 (61.8 to 67.6)	64.1 (62.1 to 66.1)			66.9 (64.2 to 69.5)	65.9 (64.0 to 67.9)	65.1 (61.4 to 68.8)	0.2 (-0.3 to 0.8)	.38	0.4 (-4.1 to 4.9)
Non-Hispanic white		63.4 (60.1 to 66.8)	63.2 (61.0 to 65.4)			66.8 (63.5 to 70.2)	66.9 (64.0 to 69.7)	66.5 (61.3 to 71.6)	0.7 (-0.1 to 1.4)	.05	3.0 (-2.9 to 8.9)
Non-Hispanic black		73.6 (67.9 to 79.4)	75.4 (70.0 to 80.8)			77.3 (73.3 to 81.3)	76.1 (71.5 to 80.7)	73.3 (69.7 to 76.8)	0.1 (-0.8 to 1.0)	.88	-0.4 (-6.9 to 6.1)
Hispanic		65.9 (62.3 to 69.4)	58.9 (53.7 to 64.2)			62.3 (58.4 to 66.2)	61.5 (58.6 to 64.4)	58.7 (54.6 to 62.8)	-0.6 (-1.3 to 0.2)	.12	-7.1 (-12.3 to -1.9)
Computer Use Outside School or Work ≥ 1 h/d, Weighted %											
5-11 years											
All	42.9 (39.7 to 46.0)	36.8 (30.1 to 43.5)	33.2 (28.4 to 38.0)	41.4 (36.3 to 46.5)	39.7 (34.0 to 45.4)	47.1 (40.0 to 54.3)	54.2 (50.4 to 57.9)	55.9 (48.8 to 63.0)	2.6 (1.8 to 3.4)	<.001	13.0 (5.6 to 20.5)

Non-Hispanic white	39.6 (34.8 to 44.4)	35.2 (27.1 to 43.2)	28.5 (23.2 to 33.9)	37.2 (31.8 to 42.5)	37.4 (28.0 to 46.8)	48.1 (38.0 to 58.1)	55.0 (47.9 to 62.0)	53.1 (41.6 to 64.5)	2.9 (1.7 to 4.1)	<.001	13.5 (1.6 to 25.4)
Non-Hispanic black	61.2 (55.6 to 66.8)	48.8 (40.9 to 56.7)	50.1 (41.3 to 58.8)	62.7 (58.4 to 67.0)	56.1 (48.7 to 63.6)	59.2 (52.7 to 65.7)	59.3 (52.5 to 66.1)	70.5 (61.9 to 79.2)	1.6 (0.5 to 2.7)	.005	9.4 (-0.5 to 19.2)
Hispanic	37.8 (29.4 to 46.2)	34.1 (26.6 to 41.6)	27.6 (21.3 to 33.9)	37.8 (33.2 to 42.4)	32.9 (27.4 to 38.3)	36.6 (30.6 to 42.5)	50.4 (44.4 to 56.3)	51.4 (46.2 to 56.6)	2.5 (1.4 to 3.6)	<.001	13.6 (4.1 to 23.1)
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12-19 years											
All		52.6 (47.1 to 58.0)	54.8 (50.7 to 59.0)			62.4 (57.7 to 67.1)	64.1 (59.2 to 68.9)	57.4 (53.2 to 61.6)	1.4 (0.5 to 2.3)	.002	4.8 (-1.8 to 11.4)
Non-Hispanic white		54.7 (48.3 to 61.0)	57.6 (52.5 to 62.8)			61.8 (53.5 to 70.1)	64.4 (57.4 to 71.5)	55.5 (48.5 to 62.6)	0.8 (-0.4 to 2.0)	.20	0.9 (-8.2 to 10.0)
Non-Hispanic black		48.5 (42.6 to 54.4)	54.2 (42.8 to 65.6)			71.9 (64.0 to 79.7)	62.8 (57.0 to 68.7)	55.9 (48.3 to 63.4)	2.0 (0.6 to 3.5)	.007	7.4 (-1.8 to 16.5)
Hispanic		41.6 (34.0 to 49.2)	39.6 (31.7 to 47.6)			52.4 (46.6 to 58.1)	61.4 (56.1 to 66.6)	56.0 (49.4 to 62.5)	3.3 (2.0 to 4.6)	<.001	14.4 (4.8 to 24.0)
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≥20 years											
All		29.3 (27.0 to 31.5)	32.0 (28.6 to 35.3)			50.1 (45.7 to 54.6)	49.0 (46.3 to 51.8)	50.4 (47.7 to 53.1)	3.9 (3.4 to 4.4)	<.001	21.2 (17.8 to 24.5)
Non-Hispanic white		30.9 (27.9 to 33.9)	33.3 (29.0 to 37.6)			51.1 (45.0 to 57.3)	50.8 (47.9 to 53.7)	53.5 (49.4 to 57.5)	4.1 (3.5 to 4.8)	<.001	22.6 (17.8 to 27.4)
Non-Hispanic black		30.1 (26.3 to 34.0)	35.9 (30.9 to 40.9)			53.3 (49.5 to 57.1)	49.9 (45.6 to 54.1)	51.3 (45.6 to 57.0)	3.7 (2.8 to 4.6)	<.001	21.1 (14.6 to 27.7)
Hispanic		18.4 (14.3 to 22.5)	17.4 (13.8 to 21.1)			37.5 (33.4 to 41.6)	38.8 (34.7 to 42.9)	36.0 (32.0 to 40.0)	3.8 (3.0 to 4.5)	<.001	17.6 (12.2 to 23.1)
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Total Sitting Time (h/d), Weighted Mean											
12-19 years											
All				7.0 (6.7 to 7.4)	7.2 (6.7 to 7.6)	7.9 (7.5 to 8.4)	8.4 (8.0 to 8.7)	8.2 (7.9 to 8.4)	0.3 (0.3 to 0.4)	<.001	1.1 (0.7 to 1.5)
Non-Hispanic white				7.1 (6.7 to 7.6)	7.2 (6.5 to 7.8)	8.0 (7.4 to 8.7)	8.1 (7.6 to 8.6)	8.1 (7.8 to 8.4)	0.3 (0.2 to 0.4)	<.001	1.0 (0.4 to 1.5)
Non-Hispanic black				7.0 (6.3 to 7.7)	7.1 (6.6 to 7.6)	7.8 (7.3 to 8.3)	8.9 (8.7 to 9.1)	8.3 (7.9 to 8.8)	0.4 (0.3 to 0.6)	<.001	1.4 (0.5 to 2.2)
Hispanic				6.7 (6.2 to 7.3)	7.2 (6.8 to 7.6)	7.7 (7.3 to 8.1)	8.4 (8.0 to 8.8)	8.1 (7.7 to 8.4)	0.4 (0.2 to 0.5)	<.001	1.3 (0.7 to 1.9)
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≥20 years											

All	5.5 (5.2 to 5.7)	5.6 (5.5 to 5.7)	6.2 (6.0 to 6.5)	7.0 (6.7 to 7.2)	6.4 (6.2 to 6.6)	0.3 (0.3 to 0.4)	<.001	1.0 (0.7 to 1.3)
Non-Hispanic white	5.7 (5.4 to 6.1)	5.9 (5.7 to 6.2)	6.6 (6.3 to 6.8)	7.1 (6.9 to 7.4)	6.8 (6.5 to 7.1)	0.3 (0.2 to 0.4)	<.001	1.0 (0.6 to 1.5)
Non-Hispanic black	5.3 (4.8 to 5.7)	5.2 (4.8 to 5.6)	6.3 (5.7 to 6.9)	7.4 (7.1 to 7.8)	6.2 (5.8 to 6.5)	0.4 (0.3 to 0.5)	<.001	0.9 (0.4 to 1.4)
Hispanic	4.1 (3.8 to 4.4)	4.1 (3.9 to 4.4)	4.7 (4.3 to 5.0)	5.9 (5.5 to 6.2)	5.2 (4.9 to 5.4)	0.4 (0.3 to 0.5)	<.001	1.1 (0.7 to 1.5)

^a Among children 5-11 years old, adolescents 12-19 years, and adults \geq 20 years, respectively.

^b Weighted estimates and 95% CIs were estimated for each survey cycle. All estimates were weighted to be nationally representative.

^c The estimate β , 95% CI, and *P* for trend were calculated using linear regression that included the National Health and Nutrition Examination Survey (NHANES) 2-year cycle as a continuous variable. The estimate β can be interpreted as the average percentage point change in prevalence every 2 years.

^d A decrease difference below 0.

eTable 5. Age- and Multivariable-adjusted Weighted Associations of Survey Cycle and Prevalence of Screen-based Sedentary Behaviors Overall and According to Race/Ethnicity, NHANES 2001-2016^a

	Sitting Watching Television or Videos ≥ 2 h/d				Computer Use Outside School or Work ≥ 1 h/d			
	Odds Ratios (95% CI)		Predicted Margins (95% CI)		Odds Ratios (95% CI)		Predicted Margins (95% CI)	
	Age-Adjusted	Multivariable-Adjusted ^b	Age-Adjusted	Multivariable-Adjusted ^b	Age-adjusted	Multivariable-Adjusted ^b	Age- Adjusted	Multivariable-Adjusted ^b
Children 5-11 years								
All^c								
2001-2002	1 [Reference]	1 [Reference]	65.9 (59.6 to 72.2)	67.0 (60.3 to 73.8)	1 [Reference]	1 [Reference]	41.9 (38.5 to 45.2)	41.6 (38.6 to 44.5)
2003-2004	1.40 (1.00 to 1.98)	1.24 (0.85 to 1.79)	72.4 (68.3 to 76.5)	71.9 (67.8 to 76.1)	0.78 (0.58 to 1.05)	0.78 (0.58 to 1.03)	36.3 (30.1 to 42.5)	35.4 (29.4 to 41.4)
2005-2006	0.82 (0.59 to 1.14)	0.81 (0.57 to 1.15)	61.7 (57.4 to 66.0)	62.3 (58.4 to 66.2)	0.67 (0.52 to 0.85)	0.65 (0.51 to 0.82)	32.4 (28.0 to 36.8)	31.6 (27.2 to 36.0)
2007-2008	0.90 (0.64 to 1.27)	0.85 (0.60 to 1.22)	63.4 (58.5 to 68.4)	63.3 (58.9 to 67.6)	0.93 (0.73 to 1.19)	0.94 (0.75 to 1.19)	40.3 (35.2 to 45.5)	40.0 (35.0 to 44.9)
2009-2010	0.85 (0.57 to 1.26)	0.81 (0.54 to 1.22)	61.7 (55.2 to 68.2)	62.5 (56.5 to 68.5)	0.87 (0.67 to 1.13)	0.88 (0.68 to 1.16)	38.5 (33.0 to 44.0)	38.5 (33.0 to 44.1)
2011-2012	0.92 (0.67 to 1.27)	0.93 (0.65 to 1.33)	64.1 (60.0 to 68.3)	65.5 (61.5 to 69.6)	1.21 (0.89 to 1.63)	1.30 (0.95 to 1.77)	47.2 (40.4 to 54.1)	48.0 (41.0 to 55.0)
2013-2014	0.71 (0.53 to 0.97)	0.70 (0.49 to 1.00)	57.7 (53.5 to 61.9)	58.8 (54.4 to 63.2)	1.61 (1.33 to 1.95)	1.65 (1.35 to 2.02)	54.3 (50.7 to 57.8)	53.9 (49.9 to 57.9)
2015-2016	0.86 (0.62 to 1.21)	0.85 (0.58 to 1.24)	62.8 (58.1 to 67.5)	63.7 (58.9 to 68.5)	1.72 (1.27 to 2.32)	1.88 (1.41 to 2.52)	56.6 (49.7 to 63.6)	57.3 (51.0 to 63.6)
<i>P</i> for trend	.004	.02			<.001	<.001		
Non-Hispanic white								
2001-2002	1 [Reference]	1 [Reference]	64.6 (57.2 to 72.0)	65.0 (56.6 to 73.4)	1 [Reference]	1 [Reference]	38.4 (33.1 to 43.7)	37.4 (32.0 to 42.7)
2003-2004	1.32 (0.86 to 2.00)	1.14 (0.72 to 1.81)	69.9 (64.4 to 75.4)	68.3 (62.3 to 74.2)	0.84 (0.58 to 1.24)	0.86 (0.58 to 1.28)	34.9 (27.6 to 42.3)	33.7 (26.2 to 41.1)
2005-2006	0.69 (0.46 to 1.02)	0.70 (0.44 to 1.11)	55.9 (49.7 to 62.1)	56.7 (50.1 to 63.2)	0.62 (0.45 to 0.85)	0.64 (0.46 to 0.88)	28.0 (23.2 to 32.8)	27.5 (22.7 to 32.3)
2007-2008	0.83 (0.55 to 1.24)	0.79 (0.52 to 1.21)	60.5 (54.4 to 66.6)	59.2 (54.0 to 64.5)	0.88 (0.65 to 1.20)	0.91 (0.65 to 1.29)	35.7 (30.0 to 41.4)	35.2 (29.1 to 41.3)
2009-2010	0.83 (0.51 to 1.34)	0.83 (0.50 to 1.39)	59.3 (51.1 to 67.5)	61.0 (52.9 to 69.1)	0.91 (0.59 to 1.40)	0.95 (0.59 to 1.52)	35.8 (27.0 to 44.7)	36.0 (26.6 to 45.4)
2011-2012	0.89 (0.58 to 1.35)	0.92 (0.58 to 1.48)	61.8 (55.4 to 68.3)	63.3 (56.5 to 70.0)	1.44 (0.94 to 2.21)	1.65 (1.07 to 2.54)	48.5 (39.4 to 57.7)	49.5 (40.3 to 58.8)
2013-2014	0.64 (0.45 to 0.92)	0.62 (0.41 to 0.96)	53.3 (48.0 to 58.5)	53.9 (48.7 to 59.1)	1.91 (1.35 to 2.69)	2.00 (1.37 to 2.92)	55.2 (48.2 to 62.3)	53.9 (46.3 to 61.6)
2015-2016	0.80 (0.54 to 1.19)	0.79 (0.50 to 1.26)	59.6 (53.7 to 65.4)	60.2 (54.1 to 66.3)	1.72 (1.07 to 2.79)	1.98 (1.24 to 3.16)	53.7 (42.8 to 64.5)	54.4 (44.4 to 64.3)
<i>P</i> for trend	.010	.06			<.001	<.001		
Non-Hispanic black								
2001-2002	1 [Reference]	1 [Reference]	75.5 (69.8 to 81.2)	76.1 (69.4 to 82.8)	1 [Reference]	1 [Reference]	61.8 (56.7 to 66.9)	63.7 (57.1 to 70.3)
2003-2004	1.49 (1.07 to 2.09)	1.37 (0.91 to 2.08)	81.9 (79.4 to 84.5)	81.5 (78.7 to 84.3)	0.61 (0.42 to 0.88)	0.56 (0.38 to 0.83)	49.1 (41.7 to 56.5)	49.4 (42.8 to 56.0)
2005-2006	1.14 (0.78 to 1.66)	1.06 (0.68 to 1.65)	77.4 (73.5 to 81.3)	77.3 (73.3 to 81.2)	0.64 (0.43 to 0.95)	0.54 (0.35 to 0.82)	48.9 (41.1 to 56.6)	48.3 (40.4 to 56.2)
2007-2008	1.06 (0.70 to 1.62)	0.96 (0.59 to 1.58)	76.0 (70.6 to 81.4)	75.8 (69.9 to 81.6)	1.08 (0.81 to 1.45)	0.96 (0.67 to 1.37)	63.2 (58.4 to 68.1)	62.4 (57.6 to 67.2)
2009-2010	0.94 (0.63 to 1.42)	0.84 (0.52 to 1.38)	73.3 (67.8 to 78.7)	72.8 (66.5 to 79.1)	0.80 (0.56 to 1.16)	0.75 (0.46 to 1.21)	56.2 (47.9 to 64.5)	56.6 (47.0 to 66.1)
2011-2012	1.27 (0.78 to 2.09)	1.30 (0.75 to 2.24)	79.8 (72.8 to 86.8)	80.6 (74.5 to 86.7)	0.92 (0.66 to 1.30)	0.83 (0.57 to 1.19)	58.5 (52.2 to 64.8)	59.2 (53.5 to 64.8)
2013-2014	0.74 (0.53 to 1.04)	0.78 (0.52 to 1.19)	69.1 (65.2 to 73.1)	71.2 (67.3 to 75.1)	0.95 (0.67 to 1.35)	0.88 (0.60 to 1.29)	59.4 (53.1 to 65.8)	60.6 (54.7 to 66.5)

2015-2016	1.05 (0.68 to 1.63)	1.03 (0.64 to 1.66)	75.8 (70.1 to 81.6)	76.9 (71.7 to 82.0)	1.57 (1.01 to 2.44)	1.46 (0.89 to 2.39)	71.4 (63.8 to 78.9)	71.8 (63.9 to 79.8)
<i>P</i> for trend	.14	.27			.004	.006		
Hispanic								
2001-2002	1 [Reference]	1 [Reference]	63.3 (55.9 to 70.7)	65.3 (56.6 to 74.0)	1 [Reference]	1 [Reference]	36.4 (28.7 to 44.2)	35.3 (27.7 to 43.0)
2003-2004	1.57 (1.01 to 2.45)	1.41 (0.86 to 2.31)	72.5 (65.9 to 79.1)	73.0 (66.9 to 79.0)	0.84 (0.53 to 1.32)	0.86 (0.52 to 1.42)	31.8 (24.5 to 39.1)	31.7 (23.2 to 40.3)
2005-2006	1.16 (0.76 to 1.78)	1.11 (0.69 to 1.80)	68.2 (62.0 to 74.4)	67.8 (61.5 to 74.2)	0.63 (0.40 to 0.99)	0.69 (0.44 to 1.09)	26.8 (21.1 to 32.5)	27.5 (21.5 to 33.5)
2007-2008	1.04 (0.73 to 1.47)	0.92 (0.60 to 1.41)	63.6 (59.6 to 67.6)	63.5 (58.9 to 68.0)	1.00 (0.68 to 1.46)	1.01 (0.66 to 1.55)	36.7 (32.2 to 41.1)	35.4 (29.3 to 41.5)
2009-2010	0.86 (0.55 to 1.34)	0.83 (0.50 to 1.39)	60.7 (53.3 to 68.2)	61.2 (53.0 to 69.5)	0.80 (0.53 to 1.20)	0.83 (0.55 to 1.25)	31.8 (26.9 to 36.7)	31.2 (25.9 to 36.6)
2011-2012	0.96 (0.67 to 1.39)	0.93 (0.59 to 1.47)	62.5 (57.2 to 67.9)	63.9 (58.1 to 69.6)	0.95 (0.63 to 1.45)	1.07 (0.69 to 1.65)	35.9 (30.0 to 41.9)	36.8 (30.3 to 43.4)
2013-2014	0.99 (0.65 to 1.49)	0.98 (0.59 to 1.65)	63.3 (56.4 to 70.3)	65.2 (57.3 to 73.2)	1.67 (1.12 to 2.51)	1.69 (1.14 to 2.52)	49.5 (44.1 to 54.8)	48.5 (43.2 to 53.7)
2015-2016	1.03 (0.67 to 1.57)	0.94 (0.55 to 1.63)	64.5 (56.4 to 72.6)	64.3 (55.1 to 73.4)	1.77 (1.21 to 2.61)	1.94 (1.24 to 3.03)	52.1 (46.4 to 57.9)	51.2 (43.7 to 58.8)
<i>P</i> for trend	.22	.27			<.001	<.001		

Adolescents 12-19 years

All^a

2003-2004	1 [Reference]	1 [Reference]	64.5 (60.0 to 68.9)	65.0 (60.8 to 69.2)	1 [Reference]	1 [Reference]	52.6 (47.7 to 57.6)	54.3 (48.9 to 59.6)
2005-2006	0.75 (0.59 to 0.95)	0.73 (0.59 to 0.90)	57.5 (54.2 to 60.8)	57.8 (54.6 to 61.0)	1.09 (0.84 to 1.41)	1.04 (0.78 to 1.38)	54.7 (50.7 to 58.7)	55.3 (51.2 to 59.5)
2011-2012	0.96 (0.70 to 1.30)	0.96 (0.71 to 1.29)	62.4 (57.0 to 67.7)	63.2 (57.8 to 68.7)	1.51 (1.15 to 1.99)	1.42 (1.07 to 1.89)	61.6 (57.3 to 66.0)	61.5 (57.3 to 65.7)
2013-2014	0.86 (0.68 to 1.08)	0.83 (0.67 to 1.02)	60.5 (57.7 to 63.2)	60.7 (57.9 to 63.5)	1.60 (1.20 to 2.12)	1.47 (1.06 to 2.02)	63.3 (58.4 to 68.1)	63.2 (58.0 to 68.3)
2015-2016	0.81 (0.60 to 1.08)	0.75 (0.58 to 0.97)	58.6 (53.1 to 64.1)	57.8 (52.6 to 63.0)	1.22 (0.95 to 1.58)	1.11 (0.84 to 1.47)	57.0 (53.0 to 60.9)	56.6 (52.2 to 61.0)
<i>P</i> for trend	.58	.29			.002	.03		

Non-Hispanic white

2003-2004	1 [Reference]	1 [Reference]	62.6 (57.0 to 68.3)	62.9 (57.3 to 68.4)	1 [Reference]	1 [Reference]	55.0 (49.2 to 60.7)	56.7 (50.5 to 62.8)
2005-2006	0.69 (0.53 to 0.91)	0.69 (0.52 to 0.91)	53.7 (50.7 to 56.6)	53.9 (50.8 to 57.0)	1.10 (0.80 to 1.51)	1.07 (0.75 to 1.51)	57.3 (52.3 to 62.3)	58.3 (52.5 to 64.1)
2011-2012	0.92 (0.59 to 1.44)	0.96 (0.62 to 1.50)	59.5 (50.6 to 68.4)	60.8 (51.9 to 69.7)	1.36 (0.90 to 2.05)	1.28 (0.85 to 1.91)	60.9 (52.9 to 68.9)	61.0 (53.0 to 69.0)
2013-2014	0.82 (0.58 to 1.15)	0.81 (0.59 to 1.12)	57.2 (51.2 to 63.3)	57.6 (52.0 to 63.3)	1.48 (1.01 to 2.17)	1.33 (0.88 to 2.02)	63.4 (56.0 to 70.8)	63.0 (54.9 to 71.0)
2015-2016	0.74 (0.50 to 1.11)	0.73 (0.48 to 1.10)	53.9 (46.1 to 61.7)	54.0 (45.9 to 62.0)	1.04 (0.74 to 1.48)	0.95 (0.67 to 1.37)	55.0 (48.9 to 61.1)	54.9 (48.7 to 61.1)
<i>P</i> for trend	.51	.51			.18	.67		

Non-Hispanic black

2003-2004	1 [Reference]	1 [Reference]	72.9 (68.1 to 77.7)	73.4 (68.5 to 78.3)	1 [Reference]	1 [Reference]	48.7 (43.3 to 54.2)	49.7 (42.9 to 56.5)
2005-2006	1.08 (0.76 to 1.53)	1.07 (0.75 to 1.54)	74.4 (69.8 to 79.0)	74.8 (70.0 to 79.5)	1.24 (0.77 to 2.00)	1.22 (0.73 to 2.05)	54.1 (43.8 to 64.4)	54.7 (44.3 to 65.1)
2011-2012	0.92 (0.65 to 1.30)	0.92 (0.66 to 1.29)	70.4 (65.2 to 75.6)	70.8 (65.8 to 75.7)	2.69 (1.74 to 4.15)	2.44 (1.59 to 3.73)	71.6 (63.9 to 79.2)	70.2 (63.3 to 77.0)
2013-2014	0.81 (0.57 to 1.16)	0.81 (0.56 to 1.18)	69.1 (64.5 to 73.6)	69.7 (64.9 to 74.5)	1.79 (1.29 to 2.47)	1.75 (1.21 to 2.53)	62.0 (57.0 to 66.9)	62.6 (57.4 to 67.8)
2015-2016	0.77 (0.53 to 1.11)	0.72 (0.51 to 1.02)	67.3 (61.0 to 73.7)	66.5 (60.9 to 72.1)	1.32 (0.91 to 1.92)	1.23 (0.81 to 1.89)	55.6 (47.9 to 63.3)	55.1 (47.1 to 63.2)
<i>P</i> for trend	.046	.027			.008	.037		

Hispanic

2003-2004	1 [Reference]	1 [Reference]	66.2 (59.4 to 73.0)	66.9 (59.7 to 74.1)	1 [Reference]	1 [Reference]	41.6 (34.6 to 48.7)	42.9 (35.4 to 50.4)
2005-2006	0.77 (0.50 to 1.18)	0.72 (0.47 to 1.10)	60.1 (53.1 to 67.1)	59.3 (52.8 to 65.8)	0.92 (0.60 to 1.42)	0.83 (0.52 to 1.30)	39.7 (32.4 to 47.0)	38.3 (30.3 to 46.2)
2011-2012	1.07 (0.68 to 1.67)	1.07 (0.66 to 1.73)	66.9 (60.0 to 73.8)	67.8 (60.6 to 75.1)	1.53 (1.06 to 2.20)	1.44 (0.96 to 2.15)	52.1 (46.5 to 57.6)	51.7 (45.1 to 58.4)
2013-2014	0.94 (0.66 to 1.36)	0.94 (0.62 to 1.43)	65.5 (62.0 to 69.0)	66.4 (61.4 to 71.4)	2.23 (1.56 to 3.21)	2.23 (1.55 to 3.19)	61.5 (56.3 to 66.8)	62.7 (57.9 to 67.5)
2015-2016	0.86 (0.58 to 1.26)	0.78 (0.52 to 1.16)	62.9 (57.6 to 68.1)	61.7 (56.0 to 67.4)	1.82 (1.23 to 2.68)	1.73 (1.12 to 2.66)	55.6 (49.9 to 61.4)	55.9 (48.8 to 63.1)
<i>P</i> for trend	.94	.93			<.001	<.001		

Adults ≥20 years

All^c

2003-2004	1 [Reference]	1 [Reference]	65.2 (62.3 to 68.1)	65.2 (62.2 to 68.3)	1 [Reference]	1 [Reference]	28.5 (26.4 to 30.5)	28.3 (26.0 to 30.6)
2005-2006	0.97 (0.83 to 1.14)	0.98 (0.84 to 1.14)	64.6 (62.5 to 66.7)	64.8 (62.9 to 66.7)	1.15 (0.97 to 1.37)	1.13 (0.95 to 1.33)	31.4 (28.5 to 34.4)	30.8 (28.2 to 33.5)
2011-2012	1.09 (0.91 to 1.30)	1.13 (0.96 to 1.33)	67.1 (64.5 to 69.6)	67.6 (65.5 to 69.8)	2.57 (2.14 to 3.09)	2.62 (2.20 to 3.11)	50.2 (46.3 to 54.0)	50.3 (47.0 to 53.5)
2013-2014	1.04 (0.89 to 1.21)	1.09 (0.94 to 1.27)	66.0 (64.1 to 67.9)	66.7 (65.1 to 68.4)	2.42 (2.08 to 2.82)	2.41 (2.10 to 2.77)	48.9 (46.2 to 51.6)	48.4 (46.2 to 50.5)
2015-2016	1.00 (0.82 to 1.23)	1.08 (0.88 to 1.33)	65.2 (61.7 to 68.8)	66.5 (63.0 to 70.1)	2.59 (2.24 to 3.00)	2.54 (2.17 to 2.97)	49.9 (47.4 to 52.3)	48.8 (46.2 to 51.4)
<i>P</i> for trend	.56	.12			<.001	<.001		

Non-Hispanic white

2003-2004	1 [Reference]	1 [Reference]	64.5 (61.3 to 67.7)	64.1 (60.6 to 67.7)	1 [Reference]	1 [Reference]	30.4 (27.6 to 33.1)	30.8 (27.8 to 33.7)
2005-2006	0.98 (0.82 to 1.16)	1.00 (0.83 to 1.20)	64.0 (61.8 to 66.2)	64.1 (61.9 to 66.3)	1.12 (0.90 to 1.39)	1.08 (0.88 to 1.33)	32.8 (29.0 to 36.6)	32.5 (29.2 to 35.8)
2011-2012	1.13 (0.92 to 1.38)	1.16 (0.95 to 1.42)	67.1 (64.0 to 70.3)	67.6 (64.8 to 70.3)	2.45 (1.90 to 3.16)	2.39 (1.88 to 3.03)	51.2 (45.7 to 56.7)	51.2 (46.4 to 56.0)
2013-2014	1.13 (0.93 to 1.37)	1.19 (0.98 to 1.44)	67.3 (64.4 to 70.1)	67.9 (65.4 to 70.4)	2.39 (1.99 to 2.86)	2.28 (1.90 to 2.74)	50.6 (47.6 to 53.7)	50.1 (47.3 to 53.0)
2015-2016	1.11 (0.86 to 1.44)	1.22 (0.92 to 1.62)	66.8 (62.1 to 71.5)	68.3 (63.3 to 73.4)	2.70 (2.18 to 3.34)	2.54 (2.06 to 3.13)	52.8 (48.7 to 57.0)	51.9 (48.1 to 55.7)
<i>P</i> for trend	.11	.02			<.001	<.001		

Non-Hispanic black

2003-2004	1 [Reference]	1 [Reference]	73.6 (68.4 to 78.8)	76.0 (71.6 to 80.4)	1 [Reference]	1 [Reference]	28.0 (24.7 to 31.3)	27.9 (24.9 to 30.9)
2005-2006	1.12 (0.74 to 1.70)	1.04 (0.70 to 1.55)	75.8 (70.3 to 81.4)	76.8 (71.2 to 82.3)	1.39 (1.07 to 1.80)	1.34 (1.06 to 1.69)	35.0 (30.5 to 39.6)	34.2 (30.3 to 38.1)
2011-2012	1.19 (0.84 to 1.69)	1.10 (0.79 to 1.53)	76.8 (72.9 to 80.7)	77.5 (74.0 to 81.1)	2.96 (2.38 to 3.69)	2.87 (2.37 to 3.47)	53.4 (49.2 to 57.6)	52.3 (49.0 to 55.6)
2013-2014	1.10 (0.77 to 1.58)	1.00 (0.71 to 1.41)	75.5 (71.3 to 79.7)	75.9 (71.6 to 80.1)	2.56 (2.03 to 3.24)	2.54 (1.92 to 3.36)	49.8 (45.1 to 54.4)	49.5 (43.2 to 55.7)
2015-2016	0.98 (0.70 to 1.35)	0.87 (0.65 to 1.17)	73.2 (69.7 to 76.6)	73.5 (70.3 to 76.7)	2.83 (2.11 to 3.77)	2.61 (1.99 to 3.41)	51.8 (45.9 to 57.7)	50.0 (44.4 to 55.5)
<i>P</i> for trend	.97	.50			<.001	<.001		

Hispanic

2003-2004	1 [Reference]	1 [Reference]	65.7 (62.5 to 68.9)	66.1 (63.3 to 69.0)	1 [Reference]	1 [Reference]	16.7 (13.4 to 20.1)	14.8 (11.5 to 18.1)
2005-2006	0.75 (0.59 to 0.97)	0.76 (0.60 to 0.97)	59.1 (54.2 to 63.9)	59.9 (55.0 to 64.7)	0.92 (0.64 to 1.32)	1.00 (0.70 to 1.45)	15.6 (12.1 to 19.1)	14.9 (11.7 to 18.1)
2011-2012	0.87 (0.71 to 1.07)	0.91 (0.76 to 1.10)	62.6 (59.4 to 65.9)	63.7 (60.8 to 66.6)	3.00 (2.21 to 4.08)	3.34 (2.43 to 4.59)	37.5 (33.4 to 41.5)	36.7 (33.1 to 40.4)
2013-2014	0.82 (0.68 to 1.00)	0.83 (0.68 to 1.02)	61.2 (58.4 to 64.0)	62.0 (58.5 to 65.4)	3.13 (2.31 to 4.26)	3.18 (2.28 to 4.43)	39.0 (34.9 to 43.1)	36.1 (31.8 to 40.4)
2015-2016	0.74 (0.59 to 0.93)	0.75 (0.61 to 0.92)	58.7 (54.5 to 62.8)	59.2 (55.1 to 63.4)	2.80 (2.06 to 3.80)	2.78 (2.07 to 3.73)	35.7 (31.6 to 39.9)	32.3 (29.6 to 35.1)
<i>P</i> for trend	.13	.16			<.001	<.001		

^a Among children 5-11 years, adolescents 12-19 years, and adults ≥ 20 years old. All estimates were weighted to be nationally representative.

^b Multivariable adjusted models included age (continuous), sex, weight status, race/ethnicity (in all races and ethnicities models only), household income and leisure-time physical activity, and education attainment and smoking status (adults ≥ 20 years only).

^c Includes other race/ethnic groups not shown separately.

eTable 6. Estimated Prevalence of Sitting Watching Television or Videos (≥ 2 h/d) in the US Population by Sociodemographic and Lifestyle Characteristics, NHANES 2015-2016^a

	Sitting Watching Television or Videos ≥ 2 h/d, % (95% CI)		
	5-11 years	12-19 years	≥ 20 years
Overall	62.2 (57.1 to 67.2)	59.4 (53.7 to 65.0)	65.1 (61.4 to 68.8)
Sex			
Female	61.1 (55.5 to 66.8)	59.9 (52.8 to 66.9)	63.9 (59.8 to 67.9)
Male	63.1 (56.1 to 70.1)	58.9 (52.0 to 65.9)	66.3 (62.2 to 70.4)
Race/ethnicity			
Non-Hispanic white	59.1 (52.7 to 65.5)	55.3 (46.9 to 63.8)	66.5 (61.3 to 71.6)
Non-Hispanic black	75.3 (68.6 to 81.9)	67.7 (61.3 to 74.2)	73.3 (69.7 to 76.8)
Hispanic	63.8 (56.2 to 71.3)	62.8 (57.0 to 68.6)	58.7 (54.6 to 62.8)
Other ^b	55.3 (42.7 to 67.8)	59.9 (46.7 to 73.0)	56.8 (51.6 to 61.9)
Annual household income			
<\$25,000	70.0 (63.1 to 76.9)	62.8 (55.6 to 69.9)	65.0 (58.3 to 71.7)
\$25,000-<\$75,000	68.2 (62.9 to 73.5)	62.9 (56.6 to 69.2)	70.3 (67.1 to 73.4)
\geq \$75,000	52.9 (45.4 to 60.3)	53.6 (45.3 to 61.9)	61.3 (54.9 to 67.7)
Weight status ^c			
Normal	60.3 (54.9 to 65.7)	53.7 (47.6 to 59.8)	59.0 (53.3 to 64.8)
Overweight	62.9 (51.3 to 74.5)	63.7 (56.2 to 71.1)	64.6 (57.7 to 71.5)
Obese	72.7 (65.7 to 79.7)	67.8 (60.4 to 75.1)	71.2 (67.7 to 74.8)
Leisure-time physical activity ^d			
Active	58.4 (51.1 to 65.7)	57.6 (51.6 to 63.6)	60.7 (56.7 to 64.7)
Inactive	67.0 (60.9 to 73.0)	66.3 (57.1 to 75.6)	71.7 (67.4 to 76.1)
Educational attainment ^e			
<High school			62.2 (53.8 to 70.6)
High school			74.5 (68.8 to 80.3)
>High school			62.8 (58.9 to 66.8)
Smoking status ^e			
Never			61.9 (57.6 to 66.2)
Former			69.3 (63.3 to 75.2)
Current			70.3 (65.8 to 74.9)

^a Participant characteristics were presented according to age group: 5-11 years, 12-19 years, ≥ 20 years. All estimates were weighted to be nationally representative.

^b "Other" includes race/ethnicity other than non-Hispanic white, Non-Hispanic black, or Hispanic, including multiracial.

^c For weight status definition, see the Methods section.

^d For leisure-time physical activity definition, see the Methods section.

^e Information on educational attainment and smoking status was collected only among participants 20 years or older.

eTable 7. Weighted Logistic Regression Models of Screen-based Sedentary Behaviors, NHANES 2015-2016^a

	Odds Ratio (95% CI)					
	Sitting Watching Television or Videos ≥ 2 h/d			Computer Use Outside School or Work ≥ 1 h/d		
	5-11 years	12-19 years	≥20 years	5-11 years	12-19 years	≥20 years
Age	1.00 (0.92 to	1.04 (0.95 to	1.03 (1.02 to	1.13 (1.05 to	1.04 (0.93 to 1.15)	0.99 (0.98 to 0.99)
Sex						
Female	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Male	1.22 (0.84 to	1.00 (0.70 to	1.13 (0.95 to	2.40 (1.82 to	2.11 (1.57 to 2.84)	0.95 (0.77 to 1.18)
Race/ethnicity						
Non-Hispanic white	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Non-Hispanic black	1.82 (1.13 to	1.39 (0.89 to	1.36 (1.00 to	1.89 (1.07 to	0.96 (0.61 to 1.52)	0.96 (0.73 to 1.26)
Hispanic	0.99 (0.61 to	1.10 (0.67 to	0.76 (0.57 to	0.78 (0.48 to	1.01 (0.67 to 1.50)	0.60 (0.47 to 0.78)
Other ^b	0.99 (0.62 to	1.18 (0.68 to	0.77 (0.56 to	1.58 (0.77 to	2.01 (1.14 to 3.57)	1.01 (0.82 to 1.24)
Annual household income ^e						
<\$25,000	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
\$25,000-<\$75,000	0.89 (0.57 to	1.11 (0.80 to	1.34 (1.00 to	0.88 (0.67 to	0.96 (0.68 to 1.34)	1.27 (0.92 to 1.76)
≥\$75,000	0.50 (0.31 to	0.82 (0.55 to	0.95 (0.63 to	0.54 (0.31 to	1.21 (0.83 to 1.76)	1.11 (0.82 to 1.50)
<i>P</i> for trend ^c	.002	.18	.48	.16	.15	.97
Weight status ^d						
Normal	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Overweight	1.01 (0.63 to	1.58 (1.21 to	1.09 (0.87 to	0.97 (0.63 to	0.97 (0.56 to 1.69)	1.01 (0.78 to 1.31)
Obese	1.47 (0.96 to	1.62 (1.15 to	1.54 (1.23 to	1.04 (0.75 to	1.33 (0.99 to 1.81)	1.24 (0.94 to 1.66)
<i>P</i> for trend ^e	.14	.02	.001	.34	.13	.04
Leisure-time physical activity ^f						
Active	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Inactive	1.57 (1.03 to	1.33 (0.80 to	1.44 (1.20 to	1.40 (1.05 to	1.62 (1.07 to 2.46)	0.94 (0.80 to 1.10)
Educational attainment ^g						
<High school			1 [Reference]			1 [Reference]
High school			1.65 (1.16 to			2.03 (1.74 to 2.37)
>High school			1.11 (0.71 to			2.58 (1.93 to 3.44)
Smoking status ^g						
Never			1 [Reference]			1 [Reference]
Former			0.99 (0.71 to			1.30 (1.01 to 1.68)
Current			1.30 (0.96 to			1.00 (0.77 to 1.31)

^a Participant characteristics are presented by age group: ≥ 20 years, 12-19 years and 5-11 years old. All estimates were weighted to be nationally representative.

^b "Other" includes race/ethnicity other than non-Hispanic white, non-Hispanic black, or Hispanic, including multiracial.

^c Calculated as tests for trend using the median value of each category as a continuous variable.

^d For weight status definition, see the Methods section.

^e *P* for trend was calculated using continuous BMI.

^f For leisure-time physical activity definition, see the Methods section.

^g Information on educational attainment and smoking status was collected only among participants 20 years or older.

eTable 8. Weighted Association of Survey Cycle and Total Sitting Time (h/d) Among US Adults and Adolescents Overall and According to Race/Ethnicity, NHANES 2007-2016^a

	12 to 19 years				20 years and older			
	Regression Coefficients (95% CI)		Predicted Margins (95% CI)		Regression Coefficients (95% CI)		Predicted Margins (95% CI)	
	Age-adjusted	Multivariable-Adjusted ^b	Age-adjusted	Multivariable-Adjusted ^b	Age-Adjusted	Multivariable-Adjusted ^b	Age-adjusted	Multivariable-Adjusted ^b
All^c								
2007-2008	0.0 [Reference]	0.0 [Reference]	7.1 (6.8 to 7.4)	7.2 (6.8 to 7.5)	0.0 [Reference]	0.0 [Reference]	5.5 (5.2 to 5.7)	5.6 (5.4 to 5.8)
2009-2010	0.1 (-0.4 to 0.6)	0.1 (-0.5 to 0.7)	7.2 (6.8 to 7.6)	7.3 (6.8 to 7.7)	0.2 (-0.1 to 0.4)	0.1 (-0.2 to 0.3)	5.6 (5.5 to 5.8)	5.7 (5.5 to 5.8)
2011-2012	0.9 (0.4 to 1.3)	0.8 (0.4 to 1.3)	7.9 (7.6 to 8.3)	8.0 (7.6 to 8.4)	0.7 (0.4 to 1.1)	0.6 (0.4 to 0.9)	6.2 (6.0 to 6.4)	6.2 (6.1 to 6.4)
2013-2014	1.3 (0.8 to 1.7)	1.2 (0.8 to 1.7)	8.4 (8.1 to 8.7)	8.4 (8.1 to 8.7)	1.5 (1.2 to 1.8)	1.4 (1.1 to 1.6)	7.0 (6.8 to 7.2)	7.0 (6.8 to 7.2)
2015-2016	1.1 (0.7 to 1.4)	1.0 (0.6 to 1.4)	8.1 (7.9 to 8.4)	8.2 (7.9 to 8.4)	1.0 (0.7 to 1.3)	0.8 (0.5 to 1.1)	6.4 (6.2 to 6.6)	6.4 (6.2 to 6.6)
<i>P</i> for trend	<.001	<.001			<.001	<.001		
Non-Hispanic White								
2007-2008	0.0 [Reference]	0.0 [Reference]	7.2 (6.8 to 7.6)	7.3 (6.8 to 7.7)	0.0 [Reference]	0.0 [Reference]	5.8 (5.4 to 6.1)	5.9 (5.7 to 6.2)
2009-2010	-0.1 (-0.8 to 0.6)	-0.1 (-0.8 to 0.7)	7.1 (6.6 to 7.7)	7.2 (6.6 to 7.9)	0.2 (-0.2 to 0.6)	0 (-0.3 to 0.4)	6.0 (5.7 to 6.2)	6.0 (5.7 to 6.2)
2011-2012	0.8 (0.1 to 1.5)	0.8 (0.1 to 1.5)	8.0 (7.4 to 8.6)	8.1 (7.5 to 8.6)	0.8 (0.4 to 1.2)	0.6 (0.2 to 0.9)	6.5 (6.3 to 6.7)	6.5 (6.3 to 6.7)
2013-2014	0.9 (0.3 to 1.6)	0.9 (0.2 to 1.6)	8.1 (7.6 to 8.7)	8.2 (7.7 to 8.7)	1.4 (1.0 to 1.8)	1.2 (0.8 to 1.6)	7.2 (6.9 to 7.4)	7.1 (6.9 to 7.3)
2015-2016	0.8 (0.3 to 1.4)	0.8 (0.2 to 1.3)	8.0 (7.7 to 8.4)	8.0 (7.7 to 8.4)	1.0 (0.6 to 1.4)	0.8 (0.4 to 1.2)	6.8 (6.5 to 7.1)	6.7 (6.4 to 7.0)
<i>P</i> for trend	<.001	<.001			<.001	<.001		
Non-Hispanic Black								
2007-2008	0.0 [Reference]	0.0 [Reference]	7.0 (6.3 to 7.7)	7.0 (6.4 to 7.5)	0.0 [Reference]	0.0 [Reference]	5.3 (4.9 to 5.7)	5.3 (5.0 to 5.7)
2009-2010	0.2 (-0.6 to 1.0)	0.2 (-0.6 to 1.0)	7.2 (6.7 to 7.6)	7.2 (6.7 to 7.7)	-0.1 (-0.7 to 0.4)	-0.1 (-0.6 to 0.4)	5.2 (4.8 to 5.5)	5.2 (4.8 to 5.6)
2011-2012	0.9 (0.1 to 1.7)	1.0 (0.3 to 1.6)	7.9 (7.5 to 8.2)	7.9 (7.6 to 8.2)	1.0 (0.3 to 1.7)	0.9 (0.3 to 1.5)	6.3 (5.7 to 6.9)	6.2 (5.7 to 6.7)
2013-2014	1.9 (1.2 to 2.6)	1.8 (1.2 to 2.4)	8.8 (8.7 to 9.0)	8.8 (8.7 to 9.0)	2.2 (1.6 to 2.7)	2.2 (1.7 to 2.7)	7.4 (7.1 to 7.8)	7.5 (7.2 to 7.8)
2015-2016	1.3 (0.5 to 2.2)	1.3 (0.5 to 2.2)	8.3 (7.8 to 8.8)	8.3 (7.7 to 8.9)	0.9 (0.4 to 1.4)	0.9 (0.4 to 1.4)	6.2 (5.9 to 6.5)	6.2 (5.9 to 6.5)
<i>P</i> for trend	<.001	<.001			<.001	<.001		
Hispanic								
2007-2008	0.0 [Reference]	0.0 [Reference]	6.7 (6.2 to 7.2)	6.7 (6.3 to 7.2)	0.0 [Reference]	0.0 [Reference]	4.1 (3.8 to 4.4)	4.2 (3.9 to 4.5)
2009-2010	0.6 (-0.1 to 1.2)	0.5 (0.0 to 1.1)	7.3 (6.9 to 7.6)	7.3 (6.9 to 7.6)	0.0 (-0.4 to 0.4)	0.1 (-0.3 to 0.5)	4.1 (3.9 to 4.3)	4.3 (4.0 to 4.6)
2011-2012	0.9 (0.3 to 1.6)	0.9 (0.3 to 1.5)	7.7 (7.3 to 8.0)	7.6 (7.3 to 8.0)	0.6 (0.1 to 1.0)	0.6 (0.2 to 0.9)	4.7 (4.4 to 5.0)	4.8 (4.5 to 5.1)
2013-2014	1.7 (1.1 to 2.3)	1.6 (1.1 to 2.2)	8.4 (8.1 to 8.7)	8.4 (8.1 to 8.7)	1.8 (1.4 to 2.2)	1.5 (1.1 to 1.9)	5.9 (5.6 to 6.2)	5.8 (5.5 to 6.1)
2015-2016	1.4 (0.8 to 2.0)	1.4 (0.8 to 2.0)	8.1 (7.8 to 8.4)	8.2 (7.8 to 8.5)	1.1 (0.7 to 1.5)	1.0 (0.6 to 1.3)	5.2 (4.9 to 5.5)	5.2 (4.9 to 5.4)
<i>P</i> for trend	<.001	<.001			<.001	<.001		

^a Participants characteristics are presented by age group: adolescents 12-19 years, ≥ 20 years. All estimates were weighted to be nationally representative.

^b Multivariable adjusted models included age (continuous), sex, weight status, race/ethnicity (in all races and ethnicities models only), household income, leisure-time physical activity, and educational attainment and smoking status (adults ≥ 20 years only).

^c Includes "other" race/ethnic groups not shown separately.

eTable 9. Weighted Linear Regression Models of Total Sitting Time (h/d) Among Adults and Adolescents on Survey Cycle, NHANES 2007-2016^a

	Regression Coefficient (95% CI)	
	12-19 years	≥20 years
Age	-0.34 (-0.38 to -0.30)	-0.01 (-0.01 to 0.00)
Sex		
Female	0 [Reference]	0 [Reference]
Male	-0.41 (-0.61 to -0.21)	0.12 (0.00 to 0.25)
Race/ethnicity		
Non-Hispanic white	0 [Reference]	0 [Reference]
Non-Hispanic black	0.08 (-0.17 to 0.34)	-0.10 (-0.29 to 0.09)
Hispanic	-0.13 (-0.39 to 0.14)	-1.12 (-1.30 to -0.94)
Other ^b	0.54 (0.14 to 0.94)	0.02 (-0.17 to 0.20)
Annual household income		
<\$25,000	0 [Reference]	0 [Reference]
\$25,000-<\$75,000	0.24 (0.01 to 0.47)	0.19 (0.05 to 0.33)
≥\$75,000	0.28 (-0.01 to 0.57)	0.84 (0.68 to 0.99)
<i>P</i> for trend ^c	.02	<.001
Weight status ^d		
Normal	0 [Reference]	0 [Reference]
Overweight	-0.08 (-0.28 to 0.11)	0.28 (0.13 to 0.44)
Obese	0.51 (0.26 to 0.76)	0.65 (0.49 to 0.81)
<i>P</i> for trend ^e	<.001	<.001
Leisure-time physical activity ^f		
Active	0 [Reference]	0 [Reference]
Inactive	0.38 (0.13 to 0.62)	0.24 (0.12 to 0.37)
Educational attainment ^g		
<High school		0 [Reference]
High school		0.44 (0.27 to 0.61)
>High school		1.30 (1.14 to 1.46)
Smoking status ^g		
Never		0 [Reference]
Former		0.13 (-0.03 to 0.29)
Current		-0.12 (-0.30 to 0.06)
Cycle		
2007-2008	0 [Reference]	0 [Reference]
2009-2010	0.10 (-0.47 to 0.66)	0.06 (-0.19 to 0.32)
2011-2012	0.83 (0.34 to 1.33)	0.61 (0.35 to 0.87)
2013-2014	1.23 (0.75 to 1.70)	1.37 (1.11 to 1.64)
2015-2016	1.00 (0.58 to 1.42)	0.79 (0.53 to 1.05)
<i>P</i> for trend	<.001	<.001

^a Participants characteristics were presented by age group: adolescents 12-19 years, ≥20 years. All estimates were weighted to be nationally representative.

^b "Other" include race other than non-Hispanic white, non-Hispanic black, and Hispanic, including multi-racial.

^c Calculated as tests for trend using the median value of each category as a continuous variable.

^d For weight status definition, see the Methods section.

^e *P* for trend was calculated using continuous BMI.

^f For leisure-time definition, see the Methods section.

eTable 10. Weighted Linear Regression Models of Total Sitting Time (h/d) Among Adults and Adolescents, NHANES 2015-2016^a

	Regression Coefficient (95% CI)	
	12-19 years	≥20 years
Age	-0.25 (-0.37 to -0.13)	-0.01 (-0.02 to 0.00)
Sex		
Female	0 [Reference]	0 [Reference]
Male	-0.01 (-0.41 to 0.40)	0.08 (-0.35 to 0.50)
Race/ethnicity		
Non-Hispanic white	0 [Reference]	0 [Reference]
Non-Hispanic black	0.16 (-0.31 to 0.64)	-0.33 (-0.77 to 0.12)
Hispanic	-0.04 (-0.48 to 0.40)	-1.09 (-1.48 to -0.70)
Other ^b	0.51 (0.07 to 0.95)	-0.36 (-0.72 to 0.01)
Annual household income		
<\$25,000	0 [Reference]	0 [Reference]
\$25,000-<\$75,000	0.22 (-0.04 to 0.49)	0.34 (-0.05 to 0.73)
≥\$75,000	0.02 (-0.68 to 0.72)	0.82 (0.36 to 1.29)
<i>P</i> for trend ^c	.81	<.001
Weight status ^d		
Normal	0 [Reference]	0 [Reference]
Overweight	0.36 (-0.18 to 0.89)	0.24 (-0.10 to 0.58)
Obese	0.53 (0.05 to 1.02)	0.72 (0.27 to 1.17)
<i>P</i> for trend ^e	.006	.003
Leisure-time physical activity ^f		
Active	0 [Reference]	0 [Reference]
Inactive	0.25 (-0.21 to 0.71)	0.36 (0.11 to 0.61)
Educational attainment ^g		
<High school		0 [Reference]
High school		0.58 (0.16 to 1.01)
>High school		1.39 (0.93 to 1.86)
Smoking status ^g		
Never		0 [Reference]
Former		0.07 (-0.37 to 0.51)
Current		-0.37 (-0.75 to 0.02)

^a Participant characteristics were presented by age group: 12-19 years and ≥20 years. All estimated means and prevalence are weighted to be nationally representative.

^b "Other" includes race other than non-Hispanic white, non-Hispanic black, or Hispanic, including multiracial.

^c Calculated as tests for trend using the median value of each category as a continuous variable.

^d For weight status definition, see the Methods section.

^e *P* for trend was calculated using continuous BMI.

^f For leisure-time physical activity definition, see the Methods section.

^g Information on educational attainment and smoking status was collected only among participants 20 years or older.