

APPENDIX**OBESITY, ABDOMINAL OBESITY, PHYSICAL ACTIVITY, AND CALORIC INTAKE IN U.S. ADULTS:
1988-2010**

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Definition of Leisure-Time Physical Activity Levels

During the home interview component of NHANES, a physical activity questionnaire was administered. In NHANES-III, participants were asked to record the frequency of leisure-time activities in the past month in terms of times per month. Each activity was given an intensity rating, reflecting the ratio of energy expenditure relative to that of the resting metabolic rate in MET (metabolic equivalent of task). In NHANES 1999-2000 to 2005-2006, participants were asked to report the frequency, duration and level of exertion for each of the reported leisure-time activities in the past month. MET scores were assigned for each activity. From NHANES 2007-2008 onwards, participants were asked to report the number of days per week that they engaged in moderate or vigorous leisure-time activities and the duration of these activities per day. The MET score thresholds used to define moderate and vigorous activity were 4 and 8, respectively.

To define the physical activity levels of participants, different approaches were followed for NHANES-III and for the continuous NHANES waves, as NHANES-III did not consider duration of the activities. For NHANES-III, based on the MET scores, the intensity of activities was defined as moderate (3-6 METS) or vigorous (>6 METS). An ideal level of physical activity was defined as engaging in moderate activities five or more times per week or in vigorous activities three or more times per week.¹ An intermediate level of physical activity was defined as engaging in at least some leisure-time physical activities without meeting the criteria for the ideal group.

For continuous NHANES surveys, the number of minutes of moderate activity per week and the number of minutes of vigorous activity per week were calculated based on the reported frequency, intensity and duration of activities. An ideal level of physical activity was defined as

≥ 150 minutes per week of moderate activities, or ≥ 75 minutes per week of vigorous activities, or ≥ 150 minutes per week of a combination of moderate and vigorous activities.² An intermediate level of physical activity was defined as 1 to 149 minutes per week of moderate activities, or 1 to 74 minutes per week of vigorous activities, or 1 to 149 minutes per week of a combination of moderate and vigorous activities.

Trends in Body-Mass Index: Joinpoint Analyses

Trends in age-adjusted mean BMI over time were analyzed using joinpoint regression program version 4.0.1 from the National Cancer Institute,^{3,4} as previously used in similar analyses.⁵ Joinpoint regression methodology is widely used to identify statistically significant changes in trends. The joinpoint program determines the number of joinpoints (a time point at which the direction or magnitude of trend changes), tests if the change in the trend is significant by performing permutation tests and fits a log-linear model to each segment. The specifications set in advance were: maximum number of joinpoints was set to 1, minimum number of observations for a joinpoint from the beginning or end of data series was set to 3. The slope of a line segment is described as the annual percentage change (APC).

Sensitivity Analyses: Effect of Physical Activity on Body-Mass Index and Waist

Circumference

Methods

To further tease out effect of physical activity on BMI and waist circumference, we performed a sensitivity analysis using only the continuous NHANES data, in which the number of minutes of participation in physical activity are available. To estimate total minutes spent on

physical activity, we calculated intensity-adjusted leisure-time physical activity minutes per week based on the recommendations given in Physical Activity Guidelines for Americans: Appendix 1 (<http://www.health.gov/paguidelines/guidelines/appendix1>), which states that “1 minute of vigorous-intensity activity counts the same as 2 minutes of moderate-intensity activity.” The intensity-adjusted total minutes were top-truncated to 1,680 minutes/week. We performed the multivariate regression analysis with log transformed BMI and waist circumference as the response variables, and year, intensity-adjusted leisure-time physical activity minutes per week and calorie intake as the explanatory variables, and adjusted for age, age squared and gender. Analyses were performed for all adults and also after stratification by gender.

To compare the trends with any physical activity or leisure-time physical activity as an explanatory variable, we performed a sub-analysis using only NHANES data from 1999-2000 to 2005-2006 as the physical activity questionnaires were consistent in these survey cycles. Any physical activity includes walking or bicycling for transport, activities around the home or yard information, as well as leisure-time physical activity.

Results

The results of these sensitivity analyses were similar to the results of the primary analyses.

BMI increased significantly over the years in both women (APC 0.21, 95% CI 0.03 - 0.38) and men (APC 0.35, 95% CI 0.17 - 0.53) after adjusting for physical activity, caloric intake, and age. The level of physical activity was associated with the degree of increase in BMI. In contrast, the effect of caloric intake was not significant.

In women, BMI decreased by 0.94% (95% CI, 0.76-1.1%) for every 100 minutes/week increase in physical activity. In men, BMI decreased by 0.24% (95% CI, 0.11-0.36%) for every 100 minutes/week increase in physical activity.

Waist circumference increased significantly over the years in both women (APC 0.31, 95% CI 0.15 - 0.46) and men (APC 0.19, 95% CI 0.06 - 0.32) after adjusting for physical activity, caloric intake, and age. The level of physical activity was associated with the degree of increase in waist circumference. In contrast, the effect of caloric intake was not significant.

In women, waist circumference decreased by 0.79% (95% CI, 0.66-0.91%) for every 100 minutes/week increase in physical activity. In men, waist circumference decreased by 0.32% (95% CI, 0.23-0.42%) for every 100 minutes/week increase in physical activity.

In the analyses restricted to NHANES data from 1999-2000 to 2005-2006, average BMI, average waist circumference, prevalence of obesity, and prevalence of abdominal obesity all increased significantly only in the subgroup with no physical activity. The trends were comparable with any physical activity or leisure-time physical activity as an explanatory variable.

Appendix Table 1. Trends in average body-mass index, waist circumference, and prevalence of obesity and abdominal obesity, U.S. adults stratified by race/ethnicity, 1988-2010

	Body mass index and waist circumference		Category based on body-mass index			Category based on waist circumference
	Mean body mass index in kg/m ² (95% CI)	Mean waist circumference in cm (95% CI)	Obese, % of population (95% CI)	Overweight, % of population(95% CI)	Normal weight, % of population(95% CI)	Abdominal obesity, % of population(95% CI)
Women						
18-39 years, non-Hispanic white						
1988-1994	24.6 (24.1-25.0)	82.0 (80.9-83.2)	17.7 (14.9-20.5)	16.4 (14.2-18.7)	60.5 (57.2-63.8)	25.9 (21.8-30.0)
2009-2010	27.1 (26.4-27.8)	90.4 (88.3-92.5)	26.6 (22.6-30.7)	23.4 (16.6-30.3)	46.4 (40.5-52.4)	46.3 (39.7-52.9)
Trend	APC 0.48 (0.32-0.64)	APC 0.52 (0.39-0.65)	OR 1.031 (1.015-1.048)	OR 1.019 (1.004-1.035)	OR 0.970 (0.958-0.983)	OR 1.048 (1.032-1.065)
40-64 years, non-Hispanic white						
1988-1994	27.3 (26.8-27.8)	91.5 (90.3-92.6)	27.5 (24.0-31.1)	28.8 (26.1-31.5)	41.0 (37.4-44.7)	52.7 (49.6-55.8)
2009-2010	28.5 (27.9-29.1)	96.4 (95.1-97.7)	35.6 (30.7-40.5)	28.1 (23.0-33.2)	33.0 (29.0-36.9)	66.0 (61.7-70.4)
Trend	APC 0.25 (0.12-0.38)	APC 0.30 (0.20-0.40)	OR 1.021 (1.007-1.035)	OR 0.998 (0.985-1.012)	OR 0.981 (0.970-0.993)	OR 1.032 (1.021-1.044)
65 years and older, non-Hispanic white						
1988-1994	26.3 (26.1-26.6)	92.9 (91.8-93.9)	22.4 (20.0-24.8)	32.5 (30.3-34.7)	41.5 (38.3-44.6)	63.1 (59.1-67.1)
2009-2010	29.0 (28.2-29.8)	98.4 (97.2-99.6)	37.6 (32.4-42.8)	32.0 (26.5-37.5)	28.3 (24.6-32.0)	73.6 (70.3-76.9)
Trend	APC 0.38 (0.27-0.50)	APC 0.26 (0.17-0.35)	OR 1.028 (1.015-1.041)	OR 1.006 (0.994-1.017)	OR 0.975 (0.964-0.986)	OR 1.026 (1.011-1.041)
18-39 years, non-Hispanic black						
1988-1994	27.4 (26.8-27.9)	87.6 (86.3-88.9)	28.7 (25.4-31.9)	25.9 (23.4-28.4)	41.8 (37.7-45.9)	42.1 (38.1-46.2)
2009-2010	31.1 (29.5-32.7)	96.5 (92.2-100.7)	54.1 (44.3-63.8)	18.8 (13.5-24.0)	23.6 (17.2-30.0)	65.7 (54.3-77.1)
Trend	APC 0.64 (0.44-0.84)	APC 0.51 (0.35-0.66)	OR 1.051 (1.034-1.068)	OR 0.990 (0.977-1.004)	OR 0.952 (0.937-0.968)	OR 1.049 (1.030-1.068)
40-64 years, non-Hispanic black						
1988-1994	30.3 (29.7-30.9)	98.0 (96.5-99.5)	46.8 (42.1-51.4)	30.0 (26.5-33.6)	20.9 (16.8-24.9)	72.3 (67.8-76.9)
2009-2010	33.8 (32.3-35.2)	104.6 (102.8-106.3)	61.4 (55.0-67.7)	27.3 (22.0-32.5)	10.4 (6.8-14.0)	83.9 (76.7-91.1)
Trend	APC 0.39 (0.21-0.57)	APC 0.29 (0.17-0.41)	OR 1.024 (1.009-1.038)	OR 0.991 (0.977-1.005)	OR 0.974 (0.956-0.993)	OR 1.024 (1.002-1.047)
65 years and older, non-Hispanic black						
1988-1994	29.1 (28.4-29.8)	97.9 (96.1-99.7)	36.3 (31.6-40.9)	36.1 (31.3-40.8)	25.1 (21.5-28.8)	75.7 (70.8-80.7)
2009-2010	31.4 (29.9-33.0)	100.7 (98.1-103.4)	55.6 (44.4-66.7)	25.8 (16.1-35.5)	17.1 (9.8-24.5)	81.9 (72.0-91.8)
Trend	APC 0.35 (0.12-0.57)	APC 0.18 (0.03-0.32)	OR 1.042 (1.020-1.065)	OR 0.968 (0.947-0.990)	OR 0.983 (0.961-1.006)	OR 1.024 (0.995-1.054)
18-39 years, Mexican-American						
1988-1994	26.9 (26.5-27.3)	86.7 (85.8-87.7)	26.6 (23.4-29.8)	30.2 (25.8-34.6)	40.5 (37.2-43.7)	42.5 (39.9-45.2)
2009-2010	28.8 (27.9-29.6)	94.3 (91.8-96.8)	36.8 (32.1-41.6)	29.3 (24.2-34.5)	33.2 (26.8-39.6)	60.5 (51.3-69.7)
Trend	APC 0.40 (0.24-0.57)	APC 0.51 (0.38-0.65)	OR 1.031 (1.014-1.049)	OR 0.998 (0.983-1.014)	OR 0.976 (0.961-0.990)	OR 1.051 (1.031-1.071)
40-64 years, Mexican-American						
1988-1994	29.7 (29.0-30.3)	96.4 (95.2-97.6)	43.6 (39.3-48.0)	33.7 (30.2-37.3)	22.2 (17.3-27.2)	74.4 (70.6-78.2)
2009-2010	31.0 (30.1-31.9)	100.0 (97.5-102.6)	54.2 (45.7-62.7)	36.0 (27.4-44.6)	9.4 (5.5-13.2)	84.6 (78.6-90.6)
Trend	APC 0.21 (0.02-0.40)	APC 0.19 (0.04-0.35)	OR 1.022 (1.001-1.044)	OR 1.000 (0.980-1.021)	OR 0.964 (0.943-0.986)	OR 1.029 (1.004-1.054)
65 years and older, Mexican-American						
1988-1994	28.0 (27.1-28.9)	97.0 (94.5-99.6)	29.7 (23.1-36.4)	38.8 (31.1-46.5)	30.3 (23.0-37.6)	72.7 (64.5-80.9)
2009-2010	29.3 (28.6-29.9)	98.8 (97.5-100.1)	35.7 (27.0-44.4)	41.0 (31.0-51.0)	21.6 (15.8-27.3)	82.2 (73.2-91.2)
Trend	APC 0.26 (0.04-0.48)	APC 0.18 (-0.01-0.37)	OR 1.017 (0.991-1.043)	OR 1.006 (0.981-1.031)	OR 0.975 (0.951-1.001)	OR 1.039 (1.001-1.078)
Men						
18-39 years, non-Hispanic white						

1988-1994	25.7 (25.3-26.1)	91.0 (90.2-91.9)	14.4 (12.1-16.7)	34.7 (31.3-38.1)	49.1 (45.8-52.4)	15.2 (12.8-17.5)
2009-2010	27.8 (27.0-28.5)	96.2 (94.1-98.2)	33.1 (25.7-40.4)	30.4 (26.7-34.0)	35.4 (28.3-42.5)	30.6 (24.0-37.1)
Trend	APC 0.35 (0.23-0.47)	APC 0.26 (0.18-0.35)	OR 1.051 (1.034-1.069)	OR 0.994 (0.983-1.006)	OR 0.972 (0.960-0.984)	OR 1.045 (1.030-1.060)
40-64 years, non-Hispanic white						
1988-1994	27.6 (27.2-27.9)	99.8 (99.1-100.5)	25.5 (22.8-28.2)	44.1 (40.8-47.3)	29.8 (26.3-33.3)	38.7 (35.2-42.2)
2009-2010	29.3 (28.7-29.9)	104.2 (102.7-105.7)	36.6 (31.7-41.5)	44.5 (38.3-50.8)	18.1 (12.9-23.3)	51.3 (45.9-56.7)
Trend	APC 0.33 (0.22-0.43)	APC 0.25 (0.18-0.33)	OR 1.030 (1.018-1.043)	OR 1.000 (0.987-1.012)	OR 0.963 (0.948-0.978)	OR 1.033 (1.020-1.047)
65 years and older, non-Hispanic white						
1988-1994	26.7 (26.4-27.1)	101.0 (100.2-101.9)	20.5 (17.3-23.8)	45.3 (41.5-49.0)	32.5 (28.9-36.1)	46.7 (43.2-50.2)
2009-2010	28.9 (28.4-29.4)	106.7 (105.6-107.8)	37.3 (31.3-43.3)	39.3 (33.9-44.8)	22.3 (18.8-25.8)	62.1 (57.6-66.6)
Trend	APC 0.40 (0.30-0.49)	APC 0.30 (0.24-0.37)	OR 1.043 (1.027-1.059)	OR 0.992 (0.979-1.004)	OR 0.970 (0.958-0.982)	OR 1.040 (1.030-1.051)
18-39 years, non-Hispanic black						
1988-1994	26.1 (25.7-26.4)	87.8 (87.0-88.6)	18.8 (16.7-21.0)	31.1 (28.1-34.0)	48.3 (44.8-51.8)	13.9 (12.2-15.5)
2009-2010	28.9 (27.6-30.2)	92.8 (90.2-95.4)	35.2 (26.6-43.9)	27.1 (20.3-33.8)	35.7 (30.2-41.1)	28.0 (19.8-36.1)
Trend	APC 0.52 (0.36-0.68)	APC 0.36 (0.24-0.48)	OR 1.052 (1.035-1.071)	OR 0.995 (0.981-1.008)	OR 0.967 (0.955-0.979)	OR 1.052 (1.033-1.072)
40-64 years, non-Hispanic black						
1988-1994	27.0 (26.7-27.4)	95.3 (94.2-96.5)	22.4 (18.8-25.9)	41.6 (37.7-45.6)	34.4 (30.9-38.0)	27.9 (24.2-31.6)
2009-2010	30.0 (29.0-30.9)	102.3 (100.1-104.4)	42.9 (36.8-49.0)	31.7 (26.1-37.2)	24.8 (19.9-29.7)	41.1 (35.5-46.6)
Trend	APC 0.49 (0.33-0.65)	APC 0.33 (0.21-0.44)	OR 1.053 (1.034-1.072)	OR 0.981 (0.967-0.994)	OR 0.970 (0.956-0.985)	OR 1.035 (1.020-1.051)
65 years and older, non-Hispanic black						
1988-1994	26.0 (25.4-26.6)	96.9 (95.4-98.3)	20.7 (16.5-25.0)	35.9 (31.5-40.2)	38.4 (33.1-43.8)	34.2 (29.2-39.3)
2009-2010	28.0 (26.8-29.1)	102.6 (99.6-105.6)	32.9 (23.6-42.2)	34.7 (28.5-41.0)	30.4 (23.6-37.2)	54.8 (46.8-62.9)
Trend	APC 0.48 (0.27-0.70)	APC 0.37 (0.21-0.52)	OR 1.045 (1.020-1.071)	OR 0.995 (0.979-1.012)	OR 0.971 (0.950-0.992)	OR 1.052 (1.030-1.074)
18-39 years, Mexican-American						
1988-1994	26.0 (25.6-26.5)	89.8 (88.6-90.9)	15.0 (11.8-18.2)	40.6 (37.1-44.2)	43.1 (38.9-47.3)	13.5 (9.9-17.0)
2009-2010	28.4 (27.3-29.6)	96.6 (93.8-99.4)	30.5 (23.5-37.4)	44.5 (42.0-46.9)	24.4 (17.6-31.2)	31.8 (23.0-40.6)
Trend	APC 0.50 (0.33-0.68)	APC 0.40 (0.27-0.54)	OR 1.048 (1.024-1.072)	OR 1.010 (0.997-1.024)	OR 0.954 (0.937-0.971)	OR 1.051 (1.026-1.077)
40-64 years, Mexican-American						
1988-1994	28.5 (28.1-28.9)	100.0 (98.9-101.1)	33.4 (28.9-37.8)	45.0 (40.7-49.2)	21.1 (17.9-24.4)	40.5 (35.9-45.1)
2009-2010	29.5 (29.0-30.0)	102.0 (100.4-103.5)	38.7 (32.8-44.7)	47.8 (41.0-54.6)	13.5 (10.6-16.4)	44.6 (37.2-52.1)
Trend	APC 0.22 (0.08-0.36)	APC 0.16 (0.05-0.27)	OR 1.019 (1.000-1.040)	OR 1.004 (0.988-1.020)	OR 0.968 (0.949-0.987)	OR 1.017 (0.996-1.038)
65 years and older, Mexican-American						
1988-1994	26.7 (26.1-27.3)	99.1 (97.6-100.5)	19.8 (14.0-25.6)	47.7 (40.0-55.4)	31.0 (25.5-36.5)	40.0 (31.6-48.4)
2009-2010	29.0 (27.2-30.8)	104.8 (102.1-107.4)	36.1 (20.7-51.5)	47.1 (35.9-58.2)	16.9 (6.5-27.3)	58.7 (49.7-67.7)
Trend	APC 0.44 (0.11-0.77)	APC 0.31 (0.16-0.46)	OR 1.057 (1.010-1.106)	OR 0.993 (0.966-1.021)	OR 0.960 (0.930-0.992)	OR 1.040 (1.013-1.069)

Appendix Table 2: Annual changes in prevalence of abdominal obesity, stratified by obesity category based on body-mass index, U.S. adults, 1988-2010

	Abdominal obesity, % of population (95% CI)		Abdominal obesity category based on waist circumference, Odds ratio (95% CI) of being in category in any given year compared to previous year
	1988-1994	2009-2010	
Women			
Obese			
18 years and older	96.4 (94.5-98.3)	99.6 (99.1-100.0)	1.144 (1.090-1.200)
18-39 years	92.5 (87.5-97.5)	99.2 (97.9-100.0)	1.155 (1.083-1.232)
40-64 years	98.5 (97.6-99.4)	99.9 (99.7-100.0)	1.130 (1.068-1.195)
65 years and older	99.8 (99.4-100.0)	99.5 (98.4-100.0)	0.907 (0.707-1.164)
Overweight			
18 years and older	66.1 (62.7-69.4)	80.8 (78.1-83.5)	1.045 (1.032-1.057)
18-39 years	47.2 (39.9-54.5)	69.8 (62.7-76.9)	1.051 (1.030-1.072)
40-64 years	71.9 (67.3-76.5)	85.6 (80.4-90.7)	1.044 (1.025-1.063)
65 years and older	85.4 (81.9-88.9)	86.4 (81.7-91.1)	1.026 (0.998-1.055)
Normal weight			
18 years and older	9.6 (8.1-11.0)	13.8 (10.1-17.5)	1.026 (1.012-1.040)
18-39 years	2.6 (1.2-4.0)	5.6 (3.2-8.1)	1.042 (1.011-1.075)
40-64 years	13.4 (10.8-16.1)	17.2 (10.6-23.7)	1.018 (0.995-1.042)
65 years and older	28.3 (24.2-32.4)	31.4 (26.8-36.0)	1.009 (0.993-1.026)
Men			
Obese			
18 years and older	89.4 (86.7-92.1)	91.1 (89.7-92.5)	1.012 (0.991-1.033)
18-39 years	79.7 (74.3-85.1)	81.5 (77.6-85.5)	1.004 (0.977-1.032)
40-64 years	94.7 (91.5-97.8)	95.7 (94.1-97.4)	1.017 (0.978-1.057)
65 years and older	97.0 (94.4-99.7)	98.9 (97.2-100.0)	1.062 (0.978-1.152)
Overweight			
18 years and older	24.5 (22.1-26.8)	27.8 (24.3-31.3)	1.017 (1.007-1.027)
18-39 years	8.6 (6.2-11.0)	10.4 (5.9-14.9)	1.012 (0.991-1.033)
40-64 years	31.4 (27.8-35.0)	29.7 (24.5-34.9)	1.007 (0.993-1.022)
65 years and older	52.1 (47.8-56.4)	61.7 (55.5-68.0)	1.028 (1.013-1.044)

Normal weight			
18 years and older	0.7 (0.4-1.0)	0.2 (0.0-0.5)	0.979 (0.951-1.008)
18-39 years	-- *	-- *	-- *
40-64 years	1.2 (0.2-2.2)	0.5 (0.0-1.2)	0.946 (0.904-0.990)
65 years and older	3.4 (1.7-5.2)	0.3 (0.0-0.8)	0.992 (0.954-1.031)

* Small sample size precludes estimation

Appendix Table 3. Trends in reported levels of leisure-time physical activity and daily caloric intake, U.S. adults, stratified by race/ethnicity, 1988-2010

	Reported leisure-time physical activity			Mean energy intake in kcal/day(95% CI)
	None, % of population (95% CI)	Intermediate level, % of population (95% CI)	Ideal level, % of population(95% CI)	
Women				
18-39 years, non-Hispanic white				
1988-1994	10.4 (8.2-12.6)	51.3 (46.9-55.7)	38.3 (34.2-42.4)	1939 (1874-2005)
2009-2010	41.3 (34.9-47.7)	21.9 (17.5-26.4)	36.8 (31.5-42.1)	1861 (1820-1903)
Trend	OR 1.080 (1.061-1.100)	OR 0.933 (0.920-0.945)	OR 1.010 (0.996-1.024)	APC -0.16 (-0.38-0.06)
40-64 years, non-Hispanic white				
1988-1994	15.2 (12.7-17.8)	48.6 (45.8-51.4)	36.2 (32.1-40.2)	1715 (1685-1746)
2009-2010	43.4 (38.4-48.4)	21.3 (18.0-24.7)	35.2 (31.5-39.0)	1795 (1708-1882)
Trend	OR 1.077 (1.056-1.099)	OR 0.936 (0.925-0.948)	OR 0.995 (0.980-1.011)	APC 0.17 (-0.08-0.42)
65 years and older, non-Hispanic white				
1988-1994	29.3 (25.8-32.7)	30.9 (28.0-33.9)	39.8 (35.3-44.3)	1491 (1459-1523)
2009-2010	64.2 (58.0-70.4)	12.1 (7.9-16.3)	23.7 (18.0-29.4)	1607 (1523-1690)
Trend	OR 1.073 (1.055-1.090)	OR 0.957 (0.945-0.970)	OR 0.957 (0.940-0.974)	APC 0.40 (0.18-0.62)
18-39 years, non-Hispanic black				
1988-1994	19.5 (16.2-22.8)	47.4 (43.8-51.0)	33.0 (29.4-36.7)	1970 (1915-2025)
2009-2010	59.9 (54.1-65.8)	19.4 (13.7-25.1)	20.7 (15.8-25.5)	1957 (1790-2125)
Trend	OR 1.070 (1.055-1.086)	OR 0.936 (0.922-0.949)	OR 0.989 (0.975-1.004)	APC -0.14 (-0.52-0.24)
40-64 years, non-Hispanic black				
1988-1994	33.0 (28.7-37.3)	39.6 (35.5-43.8)	27.4 (23.1-31.6)	1645 (1587-1703)
2009-2010	71.1 (64.0-78.2)	14.3 (10.2-18.3)	14.6 (8.4-20.8)	1728 (1613-1843)
Trend	OR 1.064 (1.046-1.083)	OR 0.948 (0.933-0.964)	OR 0.972 (0.954-0.990)	APC 0.41 (0.02-0.79)
65 years and older, non-Hispanic black				
1988-1994	51.3 (44.7-57.9)	30.1 (25.2-35.0)	18.6 (13.5-23.7)	1340 (1261-1419)
2009-2010	69.7 (61.4-77.9)	18.0 (11.7-24.3)	12.4 (3.7-21.1)	1509 (1298-1720)
Trend	OR 1.040 (1.015-1.066)	OR 0.962 (0.938-0.985)	OR 0.980 (0.949-1.011)	APC 0.56 (-0.03-1.15)
18-39 years, Mexican-American				
1988-1994	29.9 (26.6-33.3)	44.0 (40.8-47.2)	26.0 (22.2-29.9)	1873 (1833-1913)
2009-2010	57.2 (49.4-65.0)	16.7 (12.2-21.2)	26.1 (18.5-33.7)	1844 (1698-1990)
Trend	OR 1.056 (1.034-1.079)	OR 0.934 (0.917-0.952)	OR 1.002 (0.981-1.024)	APC -0.10 (-0.51-0.30)
40-64 years, Mexican-American				
1988-1994	30.8 (27.7-33.9)	42.8 (39.2-46.4)	26.4 (22.7-30.0)	1697 (1621-1772)
2009-2010	70.3 (60.3-80.2)	9.6 (3.9-15.3)	20.1 (13.2-27.1)	1733 (1595-1872)
Trend	OR 1.088 (1.063-1.114)	OR 0.917 (0.897-0.937)	OR 0.975 (0.954-0.997)	APC 0.18 (-0.37-0.72)
65 years and older, Mexican-American				
1988-1994	47.2 (41.5-53.0)	28.9 (23.0-34.8)	23.8 (16.9-30.7)	1271 (1198-1344)
2009-2010	80.2 (74.1-86.3)	6.8 (3.6-10.0)	13.0 (5.9-20.0)	1455 (1381-1528)
Trend	OR 1.081 (1.058-1.105)	OR 0.934 (0.909-0.959)	OR 0.950 (0.918-0.984)	APC 0.77 (0.20-1.35)
Men				
18-39 years, non-Hispanic white				
1988-1994	7.3 (5.5-9.1)	46.0 (42.2-49.8)	46.7 (42.6-50.7)	3050 (2965-3134)

2009-2010	28.6 (21.6-35.6)	16.7 (12.0-21.4)	54.7 (45.7-63.8)	2773 (2632-2913)
Trend	OR 1.064 (1.042-1.085)	OR 0.936 (0.922-0.949)	OR 1.016 (1.001-1.032)	APC -0.38 (-0.63--0.12)
40-64 years, non-Hispanic white				
1988-1994	9.1 (6.8-11.3)	48.0 (44.0-52.0)	42.9 (39.5-46.3)	2547 (2472-2621)
2009-2010	43.9 (40.7-47.1)	17.3 (13.5-21.0)	38.8 (33.7-44.0)	2590 (2497-2682)
Trend	OR 1.107 (1.085-1.130)	OR 0.928 (0.915-0.942)	OR 0.983 (0.970-0.997)	APC 0.17 (-0.05-0.40)
65 years and older, non-Hispanic white				
1988-1994	16.3 (13.9-18.7)	35.3 (32.6-38.1)	48.4 (44.9-51.8)	2013 (1957-2069)
2009-2010	54.9 (50.2-59.5)	12.8 (9.7-15.9)	32.3 (28.5-36.2)	2018 (1951-2085)
Trend	OR 1.094 (1.079-1.109)	OR 0.942 (0.931-0.954)	OR 0.962 (0.951-0.972)	APC -0.03 (-0.28-0.22)
18-39 years, non-Hispanic black				
1988-1994	6.7 (4.6-8.7)	35.9 (32.9-38.8)	57.4 (53.9-61.0)	2917 (2800-3034)
2009-2010	37.6 (28.9-46.3)	5.3 (1.4-9.3)	57.0 (46.3-67.7)	2510 (2388-2632)
Trend	OR 1.070 (1.047-1.093)	OR 0.922 (0.908-0.937)	OR 1.004 (0.987-1.022)	APC -0.56 (-0.85--0.26)
40-64 years, non-Hispanic black				
1988-1994	19.6 (15.8-23.4)	42.3 (37.9-46.7)	38.1 (34.2-42.0)	2314 (2226-2403)
2009-2010	57.4 (48.3-66.5)	11.8 (7.2-16.4)	30.8 (23.5-38.0)	2593 (2285-2901)
Trend	OR 1.070 (1.050-1.091)	OR 0.928 (0.913-0.944)	OR 0.987 (0.970-1.003)	APC 0.58 (0.08-1.08)
65 years and older, non-Hispanic black				
1988-1994	29.6 (22.5-36.7)	35.0 (28.9-41.2)	35.4 (29.0-41.7)	1651 (1559-1744)
2009-2010	71.9 (63.5-80.3)	9.9 (1.4-18.4)	18.2 (10.3-26.1)	1912 (1803-2021)
Trend	OR 1.080 (1.056-1.103)	OR 0.939 (0.913-0.965)	OR 0.957 (0.934-0.980)	APC 1.04 (0.43-1.65)
18-39 years, Mexican-American				
1988-1994	19.5 (15.2-23.8)	42.0 (37.0-46.9)	38.6 (34.3-42.8)	2792 (2697-2887)
2009-2010	52.8 (42.6-63.1)	10.7 (4.6-16.9)	36.4 (29.9-43.0)	2613 (2442-2784)
Trend	OR 1.052 (1.032-1.074)	OR 0.914 (0.895-0.934)	OR 1.018 (1.001-1.036)	APC -0.35 (-0.72-0.03)
40-64 years, Mexican-American				
1988-1994	24.2 (20.0-28.5)	44.3 (40.5-48.0)	31.5 (27.7-35.3)	2424 (2364-2484)
2009-2010	63.2 (53.6-72.9)	13.5 (8.5-18.5)	23.3 (16.2-30.3)	2409 (2240-2578)
Trend	OR 1.080 (1.055-1.106)	OR 0.919 (0.900-0.938)	OR 0.976 (0.955-0.997)	APC 0.21 (-0.30-0.71)
65 years and older, Mexican-American				
1988-1994	32.1 (25.6-38.6)	28.8 (22.5-35.1)	39.1 (32.4-45.8)	1777 (1657-1897)
2009-2010	59.4 (48.2-70.6)	12.0 (5.4-18.6)	28.6 (22.0-35.3)	1919 (1693-2144)
Trend	OR 1.061 (1.029-1.095)	OR 0.947 (0.919-0.976)	OR 0.968 (0.941-0.997)	APC 0.45 (-0.21-1.11)

Appendix Table 4: Annual changes in mean body-mass index, mean waist circumference and daily caloric intake, stratified by reported level of leisure-time physical activity, U.S. adults, 1988-2010

	Mean body mass index in kg/m ² (95% CI)			Mean waist circumference in cm (95% CI)			Mean energy intake in kcal/day(95% CI)		
	1988-1994	2009-2010	Annual percentage change (95% CI)	1988-1994	2009-2010	Annual percentage change (95% CI)	1988-1994	2009-2010	Annual percentage change (95% CI)
Women									
No reported leisure-time physical activity									
18 years and older	27.9 (27.3-28.6)	29.7 (29.2-30.2)	0.28 (0.16 - 0.40)	92.9 (91.4-94.4)	97.3 (95.6-99.1)	0.25 (0.14 - 0.37)	1714 (1664-1764)	1791 (1753-1828)	0.27 (0.02-0.52)
18-39 years	26.7 (25.6-27.8)	28.5 (27.7-29.3)	0.26 (0.03 - 0.49)	87.4 (84.6-90.2)	92.9 (90.4-95.4)	0.31 (0.11 - 0.51)	1875 (1793-1958)	1914 (1827-2001)	-0.04 (-0.52-0.44)
40-64 years	29.5 (28.5-30.6)	30.7 (29.9-31.5)	0.16 (-0.04 - 0.35)	97.4 (95.3-99.6)	100.4 (98.5-102.3)	0.18 (0.03 - 0.33)	1681 (1600-1762)	1762 (1668-1855)	0.29 (-0.14-0.72)
65 years and older	27.2 (26.6-27.9)	30.2 (29.2-31.2)	0.50 (0.33 - 0.67)	95.6 (93.7-97.5)	100.9 (99.1-102.8)	0.30 (0.17 - 0.43)	1395 (1336-1454)	1556 (1497-1616)	0.63 (0.29-0.96)
Intermediate level of reported leisure-time physical activity									
18 years and older	26.6 (26.2-27.0)	28.4 (27.9-28.8)	0.39 (0.28 - 0.51)	89.1 (88.2-90.0)	94.7 (93.7-95.7)	0.38 (0.30 - 0.46)	1776 (1738-1814)	1783 (1714-1851)	0.09 (-0.11-0.28)
18-39 years	25.4 (24.9-25.9)	27.9 (26.9-29.0)	0.50 (0.33 - 0.68)	83.8 (82.6-84.9)	92.2 (89.9-94.5)	0.53 (0.41 - 0.65)	1969 (1889-2050)	1757 (1663-1852)	-0.27 (-0.60-0.06)
40-64 years	27.7 (27.2-28.2)	28.8 (27.7-29.9)	0.32 (0.15 - 0.49)	92.4 (91.1-93.7)	96.5 (94.1-98.9)	0.28 (0.16 - 0.41)	1702 (1665-1739)	1874 (1776-1972)	0.38 (0.13-0.64)
65 years and older	26.9 (26.4-27.4)	28.3 (26.3-30.3)	0.26 (0.06 - 0.47)	94.3 (93.0-95.6)	96.5 (91.5-101.6)	0.14 (-0.02 - 0.29)	1478 (1427-1530)	1627 (1392-1861)	0.41 (0.00-0.82)
Ideal level of reported leisure-time physical activity									
18 years and older	25.5 (25.2-25.7)	26.7 (26.1-27.2)	0.28 (0.16 - 0.39)	86.0 (85.2-86.7)	90.5 (89.2-91.8)	0.33 (0.25 - 0.41)	1765 (1722-1808)	1774 (1705-1843)	0.08 (-0.13-0.30)
18-39 years	24.3 (23.9-24.7)	26.6 (25.4-27.8)	0.48 (0.32 - 0.65)	80.9 (79.9-81.8)	88.5 (85.9-91.2)	0.52 (0.39 - 0.64)	1926 (1856-1996)	1892 (1795-1988)	-0.12 (-0.42-0.18)
40-64 years	26.5 (26.1-26.9)	26.8 (25.9-27.6)	0.10 (-0.08 - 0.28)	89.2 (87.8-90.5)	91.6 (89.6-93.6)	0.20 (0.06 - 0.33)	1697 (1616-1779)	1719 (1603-1835)	0.18 (-0.23-0.59)
65 years and older	25.9 (25.4-26.3)	26.6 (25.2-27.9)	0.12 (-0.06 - 0.31)	90.8 (89.7-91.9)	92.8 (90.6-95.0)	0.13 (0.01 - 0.24)	1530 (1472-1588)	1616 (1508-1723)	0.41 (0.07-0.75)

Men									
No reported leisure-time physical activity									
18 years and older	26.6 (26.1-27.1)	29.2 (28.6-29.8)	0.52 (0.37 - 0.66)	96.1 (94.4-97.8)	102.6 (100.9-104.2)	0.35 (0.23 - 0.47)	2438 (2343-2533)	2487 (2384-2589)	0.19 (-0.14-0.53)
18-39 years	26.0 (25.0-26.9)	28.4 (27.6-29.3)	0.44 (0.20 - 0.67)	90.7 (88.1-93.2)	97.8 (95.3-100.2)	0.32 (0.13 - 0.51)	2714 (2536-2891)	2663 (2492-2834)	-0.06 (-0.63-0.50)
40-64 years	27.6 (26.8-28.4)	29.8 (29.0-30.6)	0.52 (0.32 - 0.71)	100.1 (97.5-102.7)	105.2 (103.0-107.4)	0.34 (0.18 - 0.51)	2471 (2322-2620)	2548 (2428-2669)	0.34 (-0.15-0.83)
65 years and older	25.9 (25.1-26.7)	29.4 (28.9-29.9)	0.66 (0.51 - 0.81)	99.7 (97.7-101.8)	108.1 (107.1-109.2)	0.43 (0.32 - 0.53)	1679 (1595-1762)	1903 (1820-1986)	0.38 (-0.02-0.77)
Intermediate level of reported leisure-time physical activity									
18 years and older	27.0 (26.7-27.4)	28.3 (27.6-28.9)	0.28 (0.17 - 0.38)	97.1 (96.3-97.9)	100.0 (98.3-101.7)	0.21 (0.14 - 0.29)	2636 (2576-2695)	2532 (2408-2655)	-0.13 (-0.34-0.09)
18-39 years	25.8 (25.3-26.2)	28.0 (26.6-29.5)	0.37 (0.21 - 0.52)	91.2 (90.0-92.3)	96.3 (93.0-99.7)	0.29 (0.17 - 0.41)	2972 (2864-3080)	2710 (2483-2937)	-0.36 (-0.68--0.03)
40-64 years	28.2 (27.7-28.7)	28.9 (28.0-29.8)	0.21 (0.05 - 0.37)	101.2 (100.1-102.3)	102.9 (100.8-105.1)	0.15 (0.04 - 0.26)	2548 (2466-2631)	2537 (2337-2738)	0.10 (-0.21-0.40)
65 years and older	27.3 (26.8-27.9)	27.4 (25.9-28.9)	0.14 (-0.05 - 0.33)	102.1 (100.5-103.7)	101.9 (98.1-105.8)	0.12 (-0.02 - 0.27)	2015 (1934-2096)	2077 (1818-2336)	-0.03 (-0.44-0.39)
Ideal level of reported leisure-time physical activity									
18 years and older	26.2 (25.9-26.4)	28.0 (27.5-28.6)	0.35 (0.26 - 0.44)	93.9 (93.2-94.5)	98.2 (96.7-99.7)	0.25 (0.18 - 0.32)	2639 (2579-2699)	2536 (2452-2620)	-0.22 (-0.40--0.04)
18-39 years	25.5 (25.1-25.9)	27.5 (26.6-28.3)	0.37 (0.24 - 0.50)	89.0 (87.9-90.0)	93.6 (91.6-95.6)	0.28 (0.17 - 0.38)	3023 (2912-3134)	2678 (2564-2792)	-0.60 (-0.87--0.32)
40-64 years	26.7 (26.4-27.1)	28.7 (27.9-29.6)	0.35 (0.21 - 0.49)	96.6 (95.7-97.4)	100.9 (98.9-102.9)	0.24 (0.13 - 0.34)	2491 (2395-2587)	2585 (2447-2722)	0.23 (-0.09-0.55)
65 years and older	26.4 (26.0-26.7)	27.8 (27.0-28.6)	0.28 (0.15 - 0.42)	99.5 (98.4-100.5)	103.1 (100.4-105.8)	0.22 (0.11 - 0.34)	2047 (1981-2113)	2066 (1942-2191)	0.06 (-0.29-0.41)

Appendix Table 5: Relative increase in body-mass index and waist circumference in “Intermediate” and “No reported” groups compared to “Ideal” reported leisure time physical activity in U.S. adults, 1988-2010.

	Relative increase in BMI compared to Ideal level of Reported leisure time physical activity		Relative increase in waist circumference compared to Ideal level of Reported leisure time physical activity	
	Intermediate Percent Change (95% CI)	None Percent Change (95% CI)	Intermediate Percent Change (95% CI)	None Percent Change (95% CI)
Women				
non-Hispanic white	6.14 (4.64 - 7.65)	8.75 (7.26 - 10.25)	4.63 (3.57 - 5.70)	7.19 (6.02 - 8.37)
non-Hispanic black	1.10 (-2.11 - 4.41)	0.65 (-2.17 - 3.55)	1.28 (-1.03 - 3.66)	1.10 (-1.10 - 3.36)
Mexican-American	3.49 (0.62 - 6.44)	5.06 (2.78 - 7.40)	2.83 (0.60 - 5.10)	3.73 (2.08 - 5.41)
Men				
non-Hispanic white	1.36 (0.26 - 2.46)	2.52 (1.25 - 3.82)	2.10 (1.28 - 2.93)	3.36 (2.40 - 4.33)
non-Hispanic black	0.10 (-2.76 - 3.03)	-2.21 (-4.38 - 0.00)	2.01 (-0.45 - 4.53)	0.22 (-1.51 - 1.98)
Mexican-American	0.39 (-2.04 - 2.88)	1.62 (-0.81 - 4.11)	0.55 (-1.10 - 2.23)	1.16 (-0.59 - 2.95)

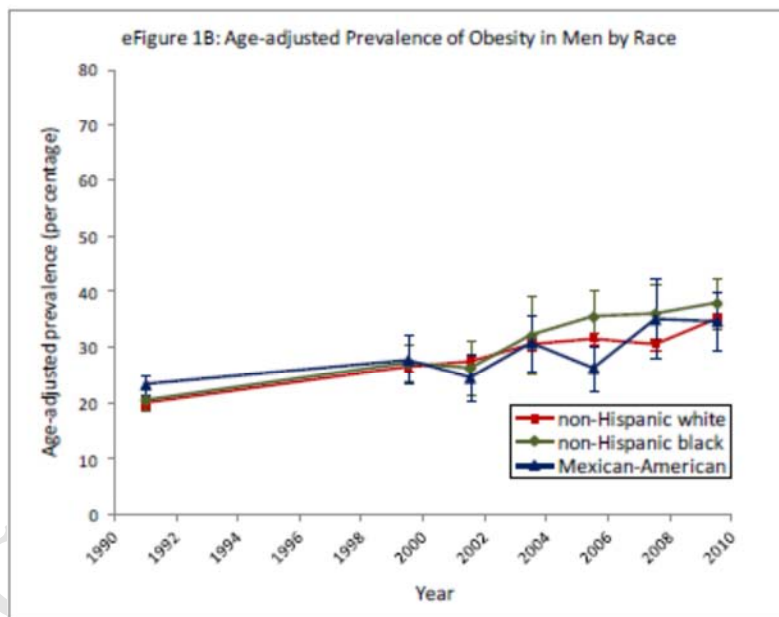
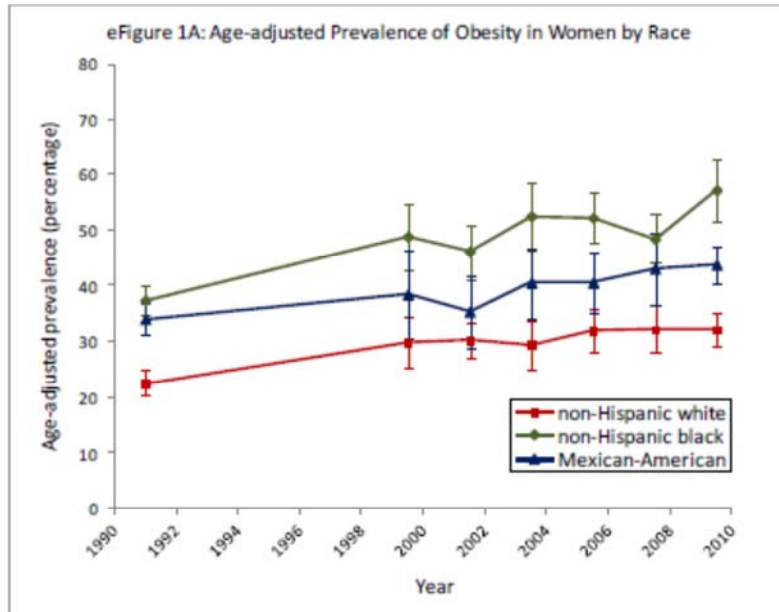
Appendix Table 6: Annual changes in daily intake of fat, carbohydrate and protein, stratified by reported level of leisure-time physical activity, U.S. adults, 1988-2010.

	Reported level of leisure-time physical activity								
	None			Intermediate			Ideal		
	Mean fat intake in g/day(95% CI)	Mean carbohydrate intake in g/day (95% CI)	Mean protein intake in g/day (95% CI)	Mean fat intake in g/day(95% CI)	Mean carbohydrate intake in g/day (95% CI)	Mean protein intake in g/day (95% CI)	Mean fat intake in g/day(95% CI)	Mean carbohydrate intake in g/day (95% CI)	Mean protein intake in g/day (95% CI)
Women									
18 years and older									
1988-1994	66 (64 - 68)	216 (209 - 224)	64 (62 - 67)	69 (67 - 71)	219 (213 - 225)	66 (64 - 68)	65 (63 - 68)	225 (220 - 230)	67 (65 - 69)
2009-2010	67 (65 - 68)	228 (223 - 233)	67 (66 - 69)	67 (63 - 72)	224 (217 - 231)	68 (64 - 72)	65 (62 - 68)	222 (212 - 232)	69 (67 - 71)
Trend	APC 0.26 (-0.07 - 0.59)	APC 0.21 (-0.07 - 0.49)	APC 0.50 (0.18 - 0.81)	APC -0.02 (-0.32 - 0.28)	APC 0.18 (-0.03 - 0.39)	APC 0.22 (-0.03 - 0.48)	APC 0.45 (0.11 - 0.78)	APC -0.19 (-0.44 - 0.07)	APC 0.26 (0.02 - 0.49)
18-39 years									
1988-1994	72 (67 - 76)	238 (228 - 248)	68 (64 - 73)	77 (73 - 81)	240 (229 - 251)	71 (67 - 74)	71 (68 - 75)	244 (234 - 254)	70 (67 - 72)
2009-2010	71 (67 - 75)	245 (235 - 256)	68 (65 - 72)	64 (58 - 69)	227 (214 - 240)	66 (61 - 71)	69 (64 - 73)	239 (227 - 250)	72 (70 - 75)
Trend	APC -0.15 (-0.79 - 0.49)	APC -0.03 (-0.57 - 0.51)	APC 0.37 (-0.26 - 1.00)	APC -0.55 (-1.03 - -0.07)	APC -0.04 (-0.41 - 0.33)	APC -0.10 (-0.51 - 0.30)	APC 0.18 (-0.26 - 0.62)	APC -0.36 (-0.71 - 0.00)	APC 0.22 (-0.16 - 0.59)
40-64 years									
1988-1994	65 (61 - 69)	208 (198 - 219)	64 (59 - 68)	67 (64 - 69)	208 (202 - 214)	65 (63 - 67)	64 (59 - 68)	214 (204 - 224)	66 (63 - 69)
2009-2010	65 (61 - 69)	223 (211 - 235)	69 (65 - 73)	71 (66 - 76)	233 (222 - 244)	72 (66 - 77)	63 (59 - 67)	212 (192 - 232)	68 (64 - 71)
Trend	APC 0.11 (-0.48 - 0.70)	APC 0.31 (-0.14 - 0.75)	APC 0.52 (0.01 - 1.03)	APC 0.26 (-0.12 - 0.63)	APC 0.50 (0.20 - 0.79)	APC 0.53 (0.21 - 0.84)	APC 0.53 (-0.03 - 1.09)	APC -0.16 (-0.66 - 0.34)	APC 0.30 (-0.10 - 0.71)
65 years and older									
1988-1994	52 (49 - 54)	182 (174 - 190)	55 (52 - 58)	54 (51 - 57)	193 (185 - 202)	58 (56 - 60)	54 (50 - 57)	203 (195 - 211)	62 (59 - 65)

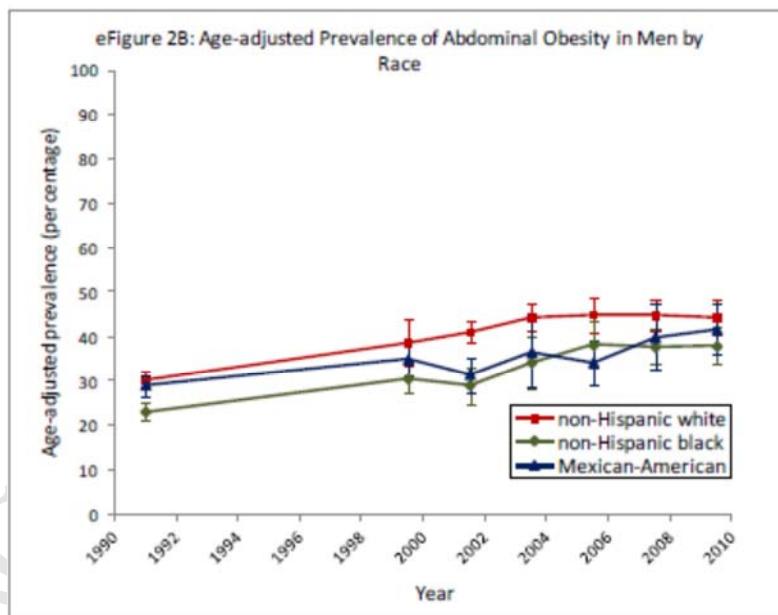
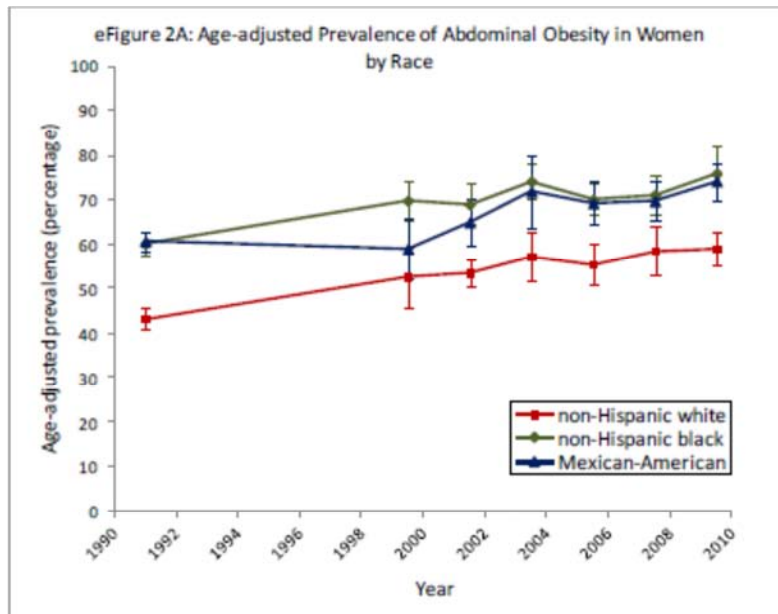
2009-2010	59 (56 - 63)	197 (188 - 205)	61 (58 - 64)	67 (55 - 79)	194 (165 - 224)	64 (56 - 71)	60 (55 - 64)	205 (192 - 218)	64 (58 - 70)
Trend	APC 1.02 (0.43 - 1.61)	APC 0.37 (0.03 - 0.71)	APC 0.62 (0.19 - 1.05)	APC 1.01 (0.47 - 1.54)	APC -0.01 (-0.47 - 0.45)	APC 0.44 (-0.01 - 0.90)	APC 0.97 (0.48 - 1.46)	APC 0.20 (-0.14 - 0.54)	APC 0.26 (-0.16 - 0.68)
Men									
18 years and older									
1988-1994	95 (90 - 100)	293 (278 - 308)	92 (89 - 96)	102 (99 - 106)	309 (301 - 317)	100 (97 - 103)	100 (97 - 104)	320 (311 - 329)	99 (97 - 102)
2009-2010	93 (88 - 98)	296 (284 - 308)	97 (92 - 102)	96 (91 - 101)	305 (288 - 321)	96 (91 - 101)	93 (88 - 97)	297 (287 - 308)	102 (99 - 105)
Trend	APC 0.22 (-0.23 - 0.67)	APC 0.04 (-0.35 - 0.43)	APC 0.37 (0.00 - 0.75)	APC -0.13 (-0.41 - 0.15)	APC -0.12 (-0.36 - 0.13)	APC 0.07 (-0.19 - 0.32)	APC -0.31 (-0.59 - -0.02)	APC -0.41 (-0.62 - -0.20)	APC 0.17 (-0.01 - 0.34)
18-39 years									
1988-1994	105 (96 - 115)	323 (299 - 348)	101 (94 - 107)	115 (110 - 119)	346 (335 - 358)	110 (105 - 114)	116 (111 - 122)	363 (348 - 378)	111 (106 - 116)
2009-2010	95 (87 - 103)	326 (307 - 345)	102 (93 - 110)	101 (89 - 113)	327 (298 - 356)	100 (90 - 110)	94 (89 - 99)	324 (308 - 340)	106 (102 - 110)
Trend	APC -0.30 (-1.09 - 0.50)	APC -0.23 (-0.79 - 0.34)	APC 0.30 (-0.39 - 1.00)	APC -0.43 (-0.85 - 0.00)	APC -0.27 (-0.60 - 0.05)	APC -0.13 (-0.54 - 0.28)	APC -0.93 (-1.34 - -0.53)	APC -0.64 (-0.94 - -0.34)	APC -0.17 (-0.45 - 0.11)
40-64 years									
1988-1994	97 (89 - 105)	297 (273 - 321)	95 (89 - 101)	100 (95 - 105)	297 (285 - 310)	99 (95 - 103)	94 (88 - 99)	302 (287 - 316)	95 (91 - 98)
2009-2010	99 (94 - 104)	293 (275 - 311)	100 (94 - 106)	97 (88 - 105)	304 (278 - 329)	98 (88 - 108)	97 (89 - 105)	292 (276 - 308)	106 (101 - 112)
Trend	APC 0.56 (-0.10 - 1.21)	APC 0.19 (-0.43 - 0.81)	APC 0.45 (-0.05 - 0.95)	APC 0.16 (-0.24 - 0.57)	APC 0.01 (-0.38 - 0.40)	APC 0.28 (-0.09 - 0.65)	APC 0.37 (-0.08 - 0.83)	APC -0.13 (-0.50 - 0.23)	APC 0.68 (0.35 - 1.01)
65 years and older									
1988-1994	62 (57 - 67)	209 (194 - 225)	67 (62 - 71)	78 (73 - 82)	245 (234 - 256)	78 (75 - 82)	76 (72 - 79)	255 (245 - 264)	81 (77 - 84)
2009-2010	72 (68 - 76)	228 (216 - 240)	76 (73 - 80)	82 (68 - 95)	250 (216 - 285)	80 (70 - 90)	80 (73 - 86)	243 (225 - 262)	83 (77 - 89)
Trend	APC 0.48 (-0.03 - 1.00)	APC 0.24 (-0.28 - 0.76)	APC 0.35 (-0.11 - 0.81)	APC -0.02 (-0.59 - 0.55)	APC 0.05 (-0.45 - 0.56)	APC 0.08 (-0.33 - 0.49)	APC 0.34 (-0.11 - 0.78)	APC -0.23 (-0.62 - 0.17)	APC 0.13 (-0.26 - 0.52)

APC = annual percentage change

Appendix Figure 1



Appendix Figure 2



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