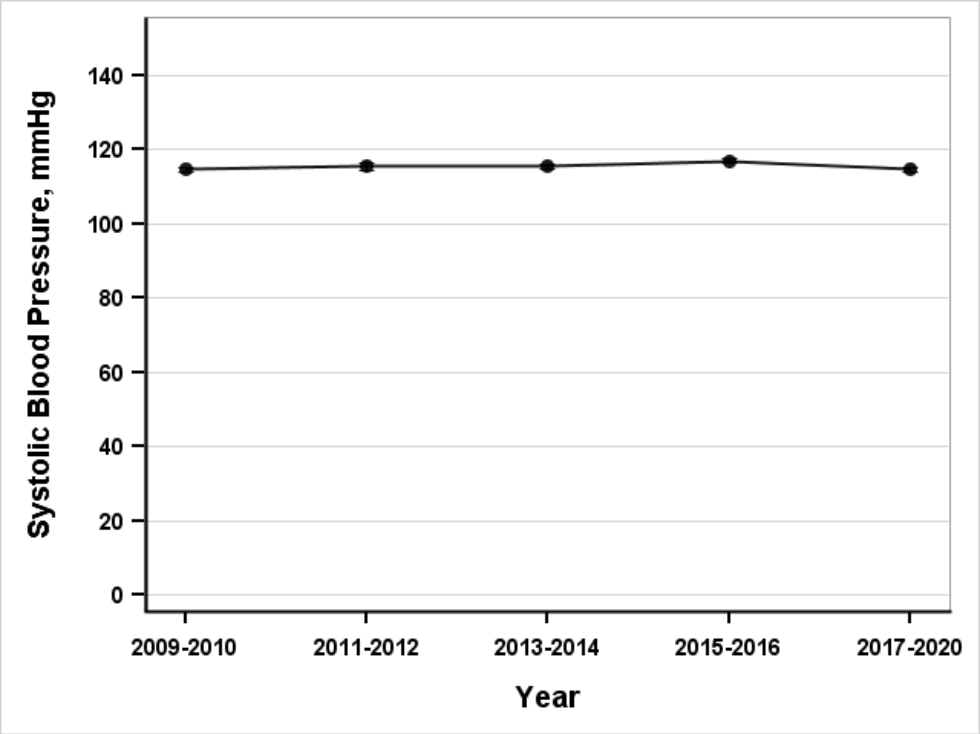
Supplemental Online Content

Aggarwal R, Yeh RW, Joynt Maddox KE, Wadhera RK. Cardiovascular risk factor prevalence, treatment, and control in US adults aged 20 to 44 years, 2009 to March 2020. *JAMA*. Published online March 5, 2023. doi:10.1001/jama.2023.2307

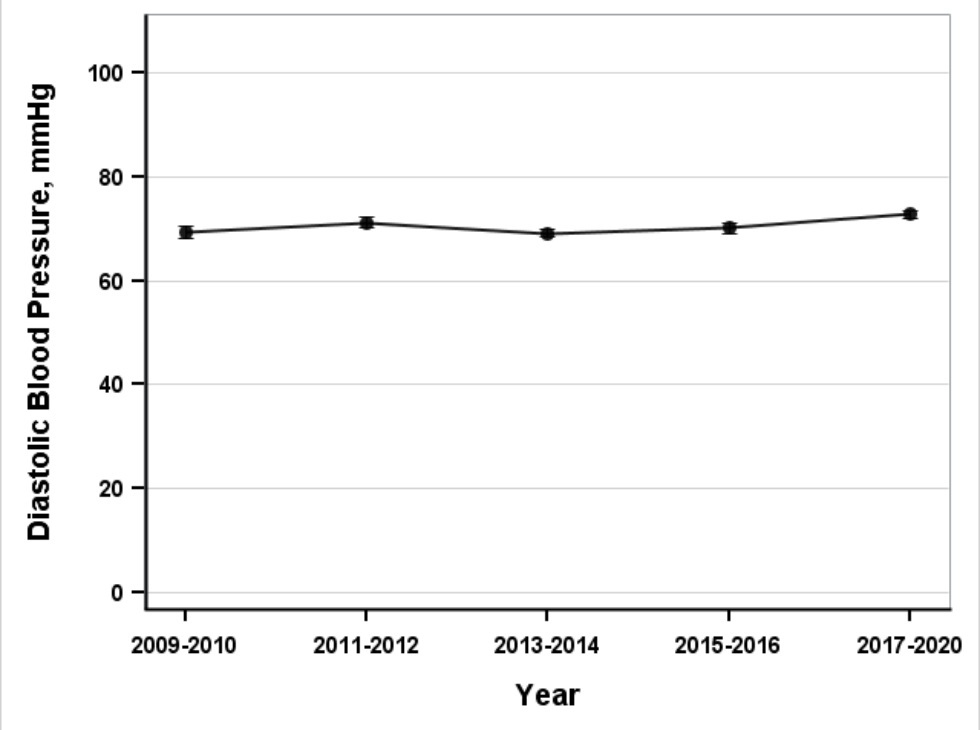
This supplemental material has been provided by the authors to give readers additional information about their work.

eFigure 1. Age-Adjusted Trends in Mean Blood Pressure, Hemoglobin A_{1c}, Total Cholesterol Levels, and Body Mass Index for US Adults Age 20 to 44 Years, 2009-2010 to 2017-March 2020[a-d]

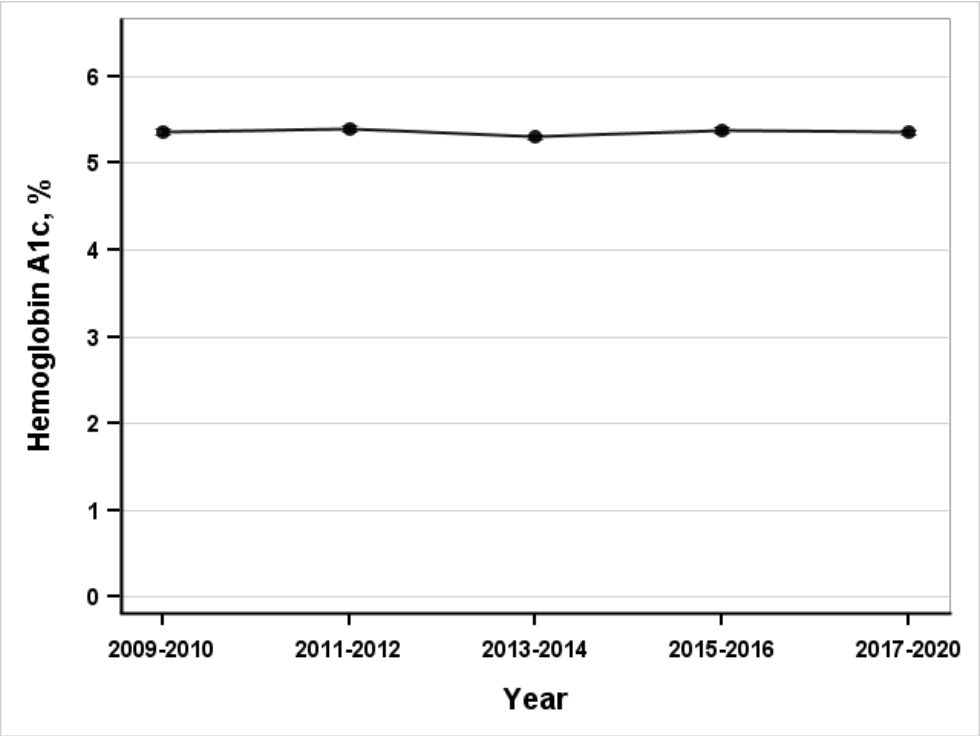
A) Systolic Blood Pressure



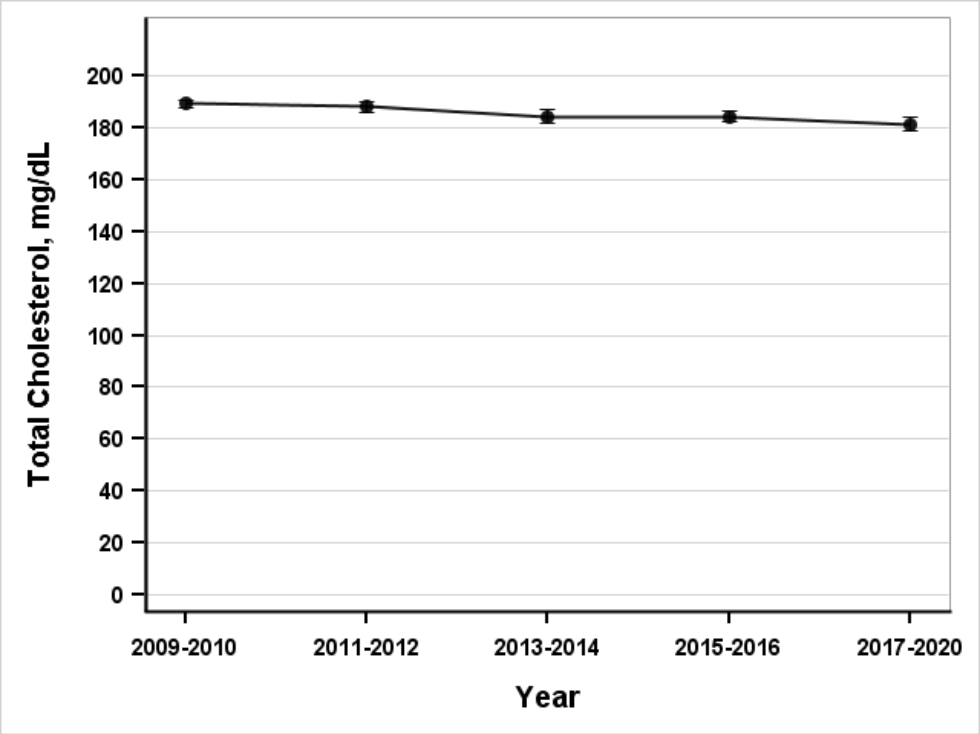
B) Diastolic Blood Pressure



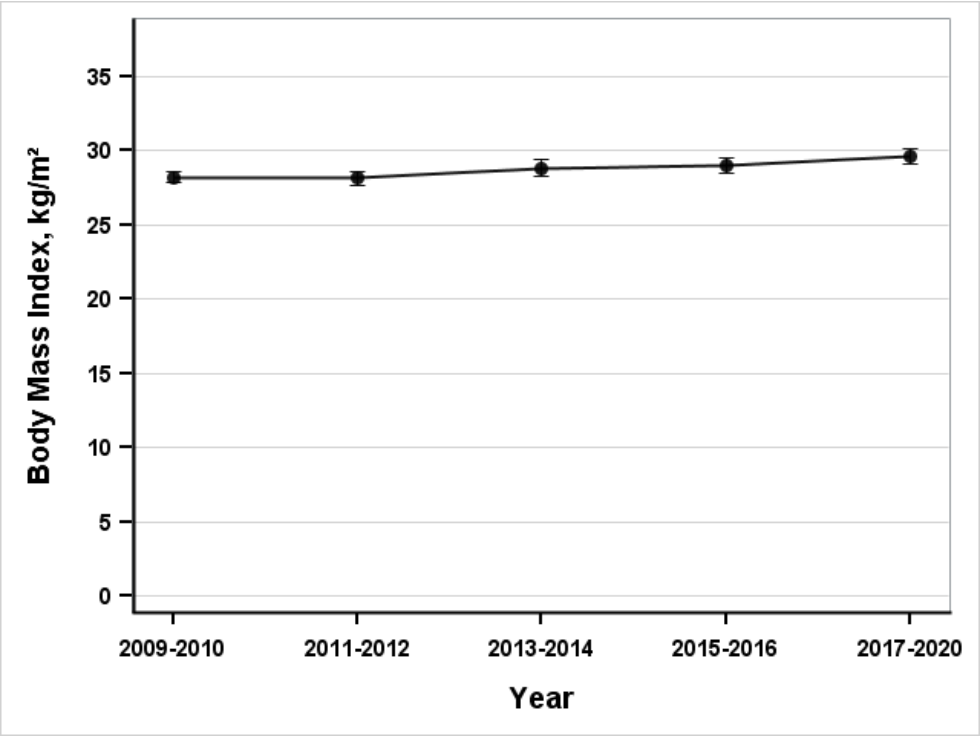
C) Hemoglobin A_{1c}



D) Total Cholesterol



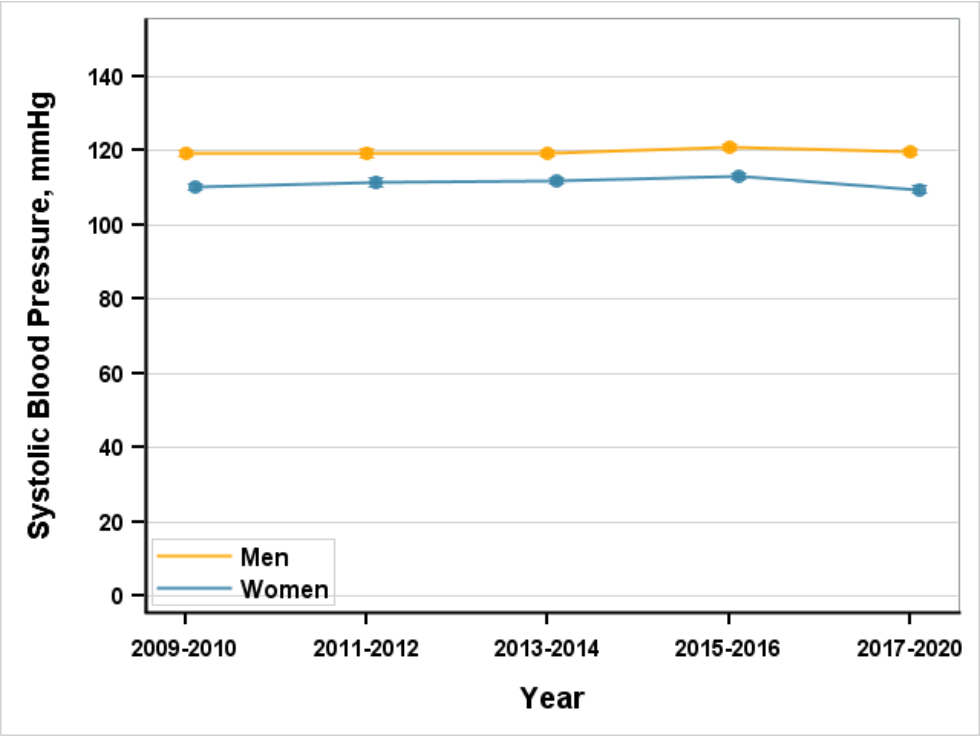
E) Body Mass Index



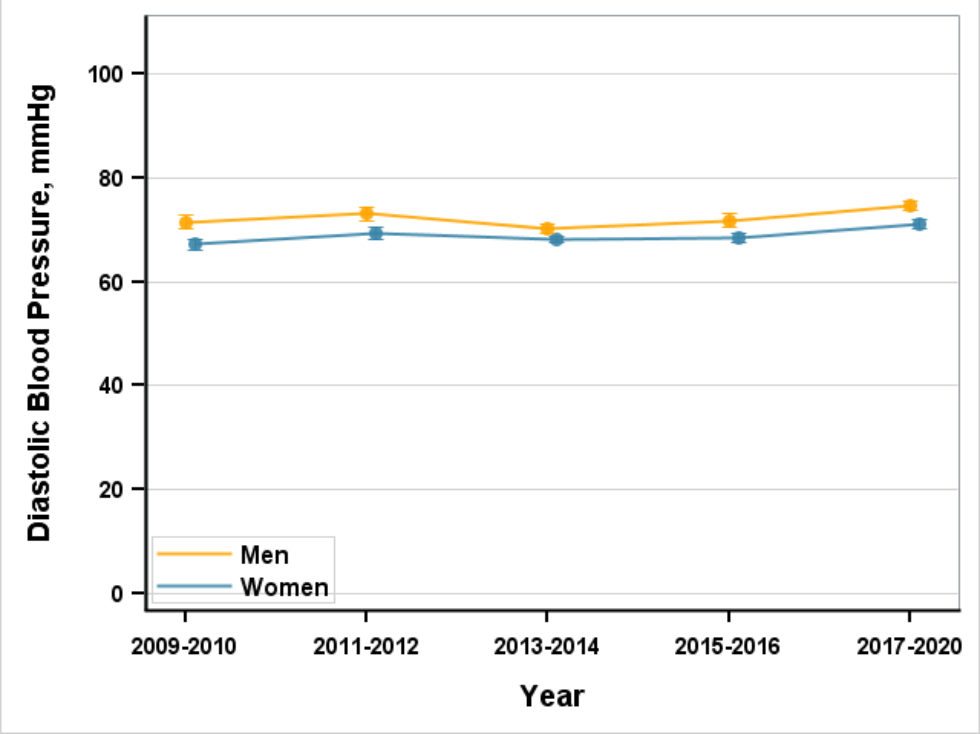
[a]Nationally representative estimates of US adults ages 20-44 years from the National Health and Nutrition Examination Survey (NHANES), 2009 to March 2020. Estimates are shown with 95% confidence intervals.
[b]Systolic and diastolic blood pressure were determined as the mean of three measurements.
[c]Hemoglobin A1c and total cholesterol were determined by laboratory measurement.
[d]Body mass index was determined by measurement of height and weight.

eFigure 2. Age-Adjusted Trends in Mean Blood Pressure, Hemoglobin A_{1c}, Total Cholesterol Levels, and Body Mass Index for US Adults Age 20 to 44 Years by Sex, 2009-2010 to 2017-March 2020[a-d]

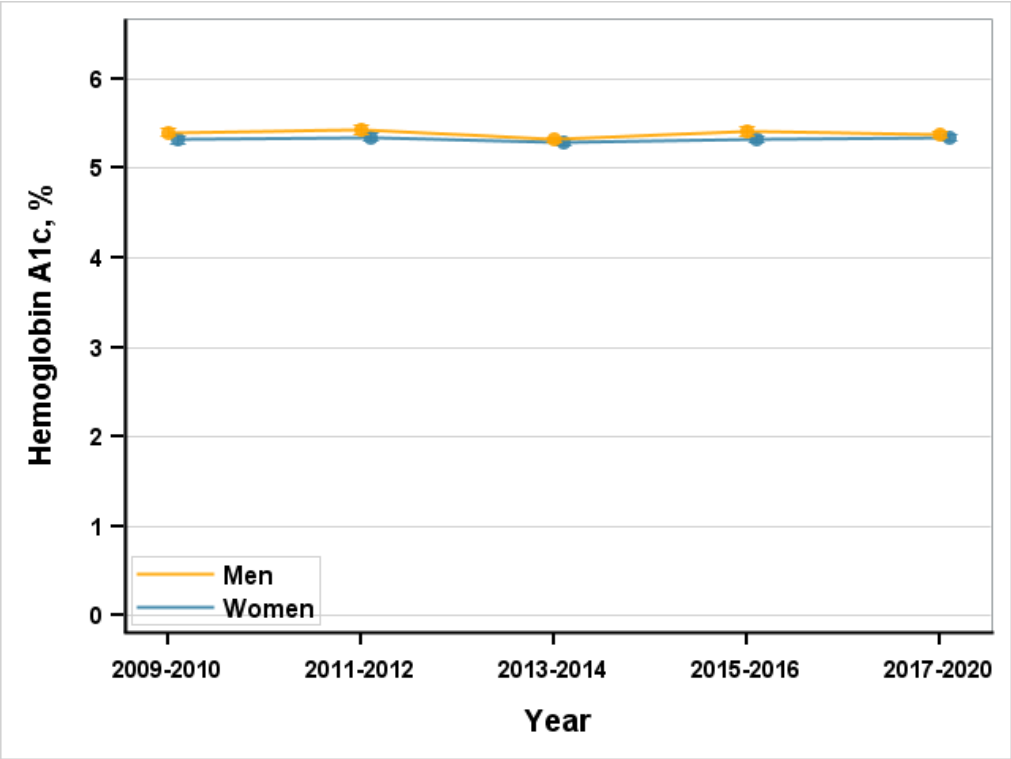
A) Systolic Blood Pressure



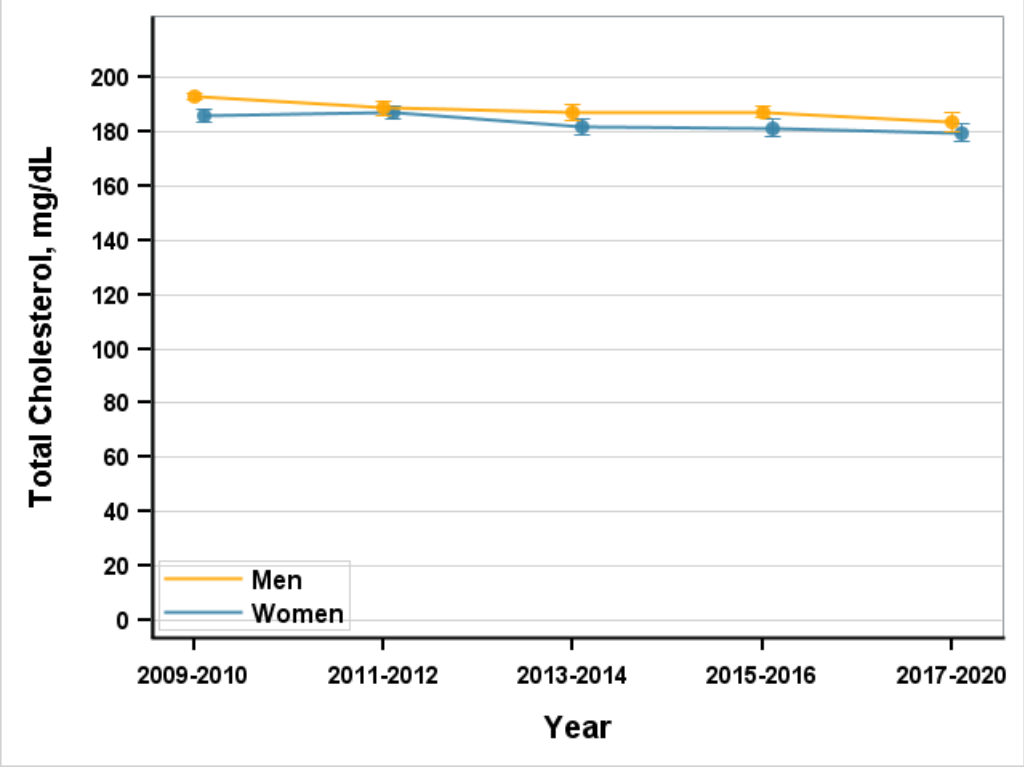
B) Diastolic Blood Pressure



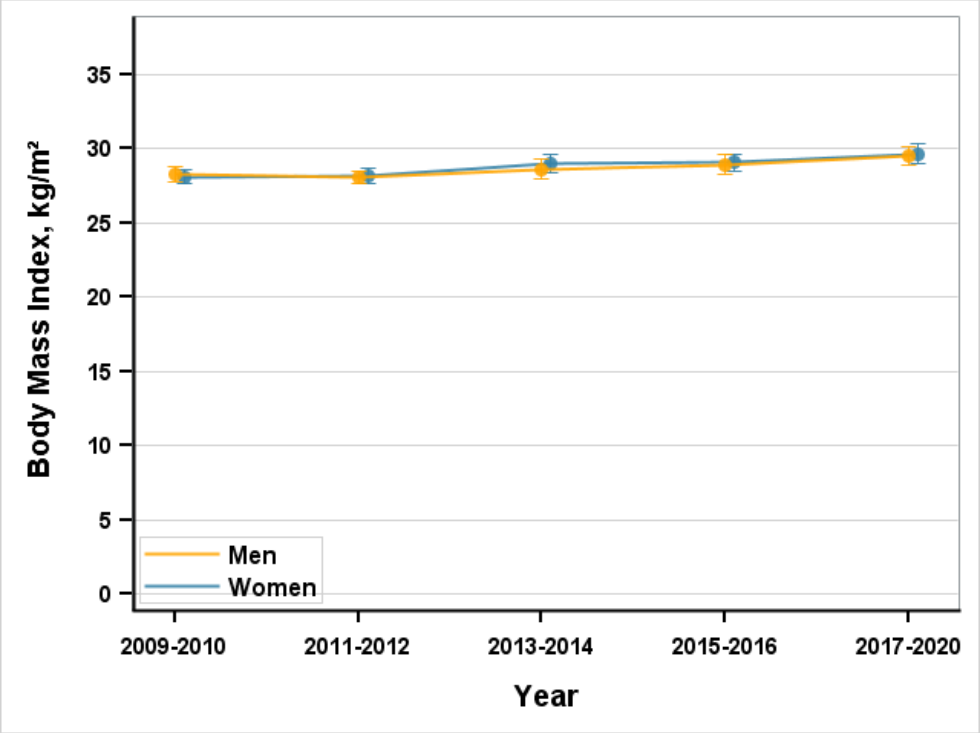
C) Hemoglobin A_{1c}



D) Total Cholesterol



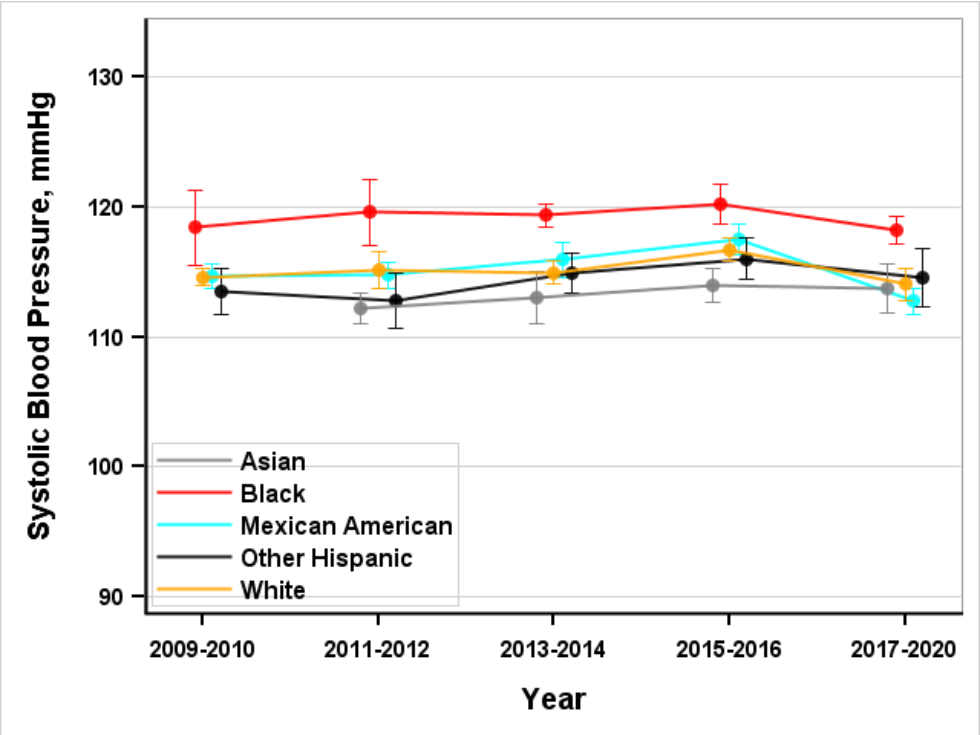
E) Body Mass Index



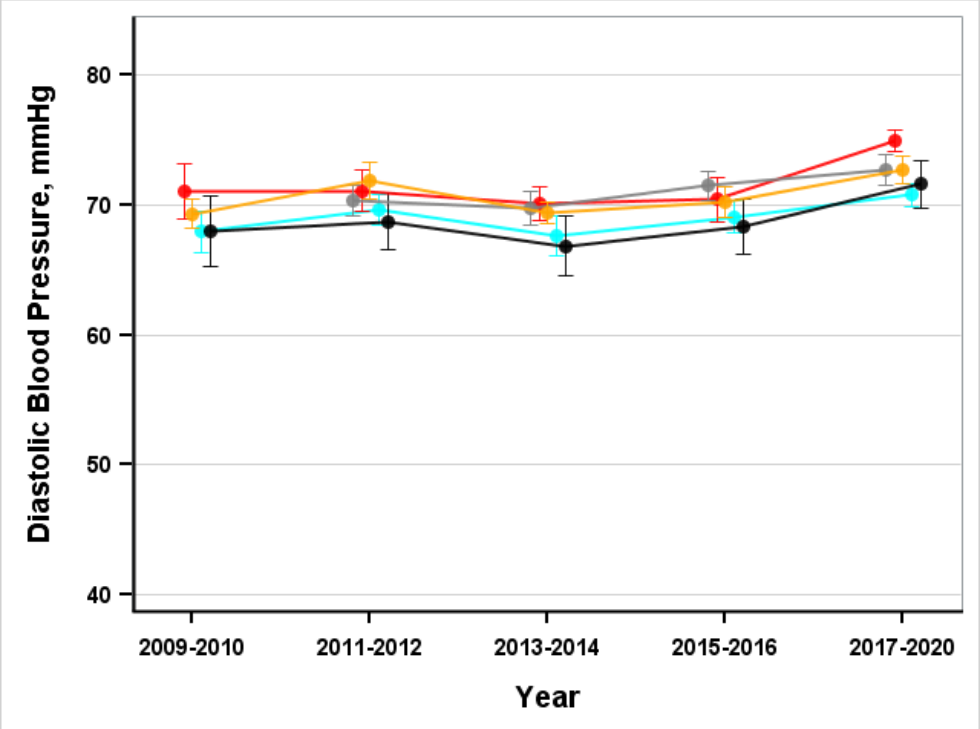
[a]Nationally representative estimates of US adults ages 20-44 years from the National Health and Nutrition Examination Survey (NHANES), 2009 to March 2020. Estimates are shown by sex along with 95% confidence intervals. Sex was determined by self-report.
[b]Systolic and diastolic blood pressure were determined as the mean of three measurements.
[c]Hemoglobin A1c and total cholesterol were determined by laboratory measurement.
[d]Body mass index was determined by measurement of height and weight.

eFigure 3. Age-Adjusted Trends in Mean Blood Pressure, Hemoglobin A_{1c}, Total Cholesterol Levels, and Body Mass Index for US Adults Age 20 to 44 Years by Race and Ethnicity, 2009-2010 to 2017-March 2020[a-d]

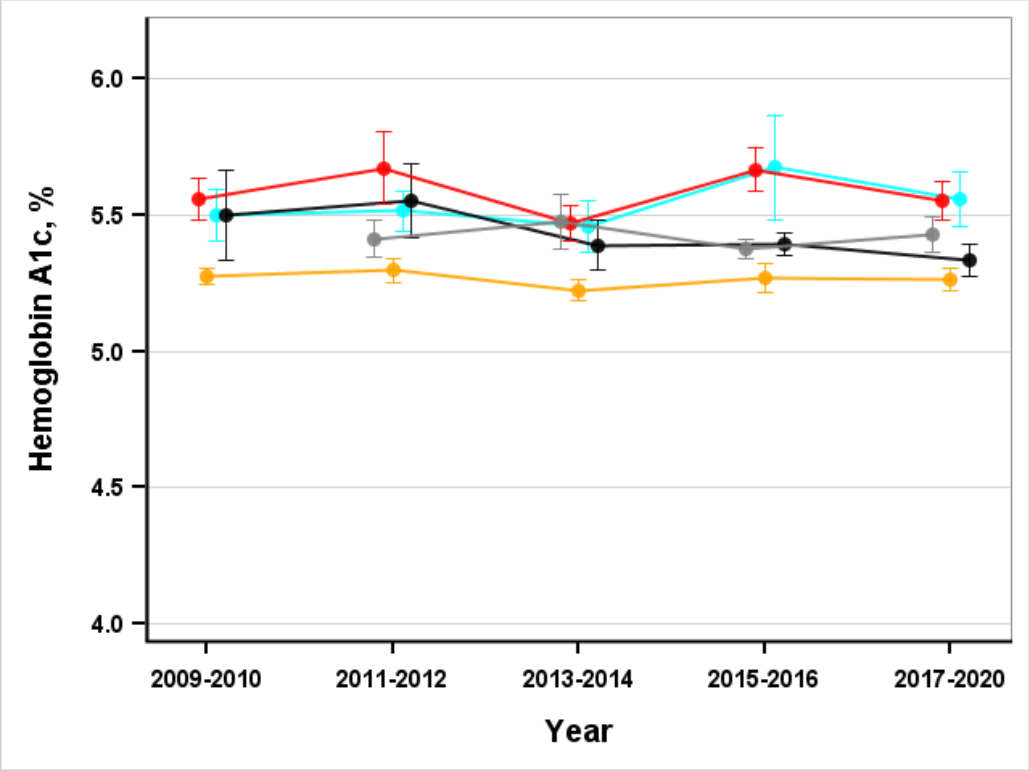
A) Systolic Blood Pressure



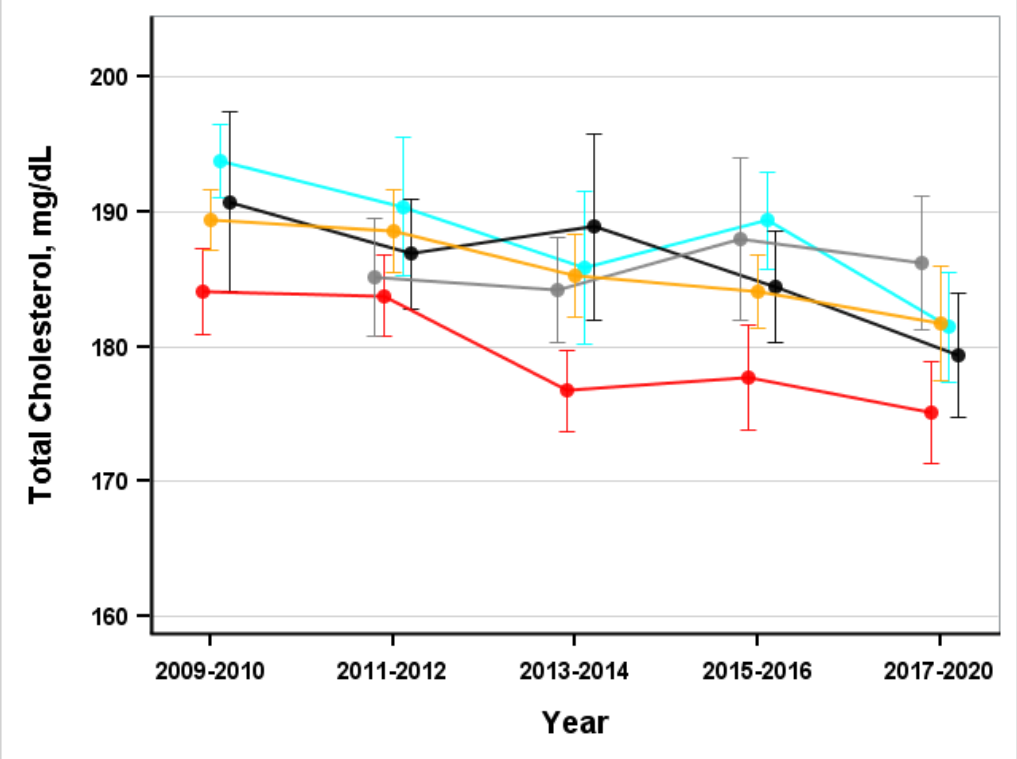
B) Diastolic Blood Pressure



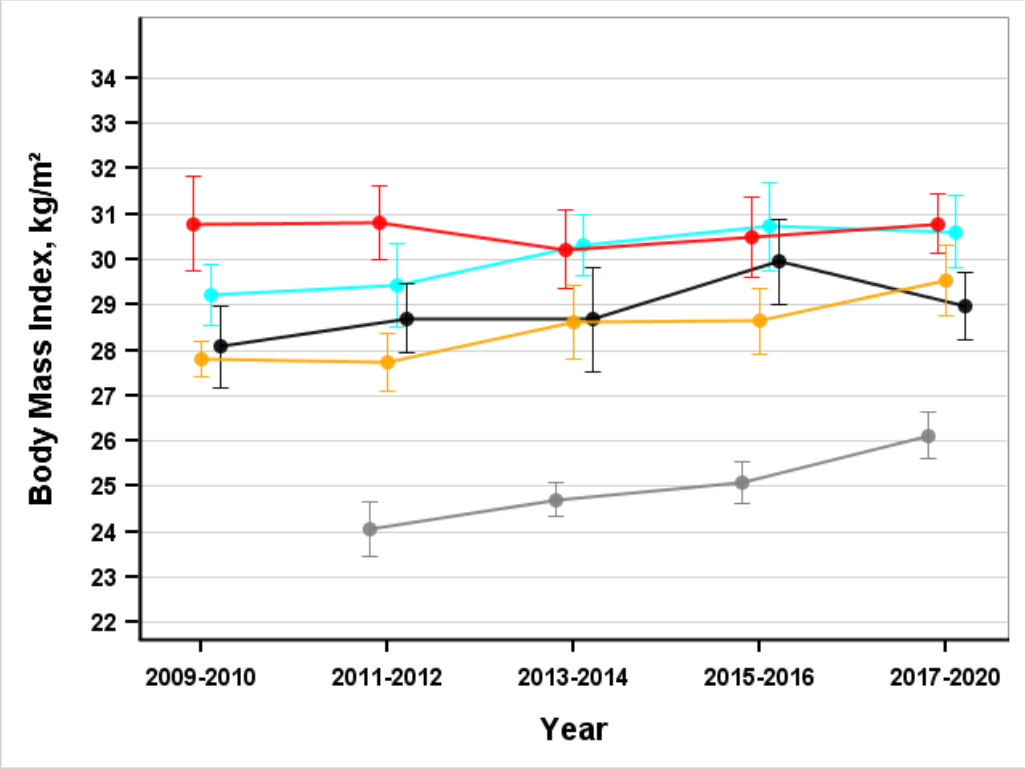
C) Hemoglobin A_{1c}



D) Total Cholesterol



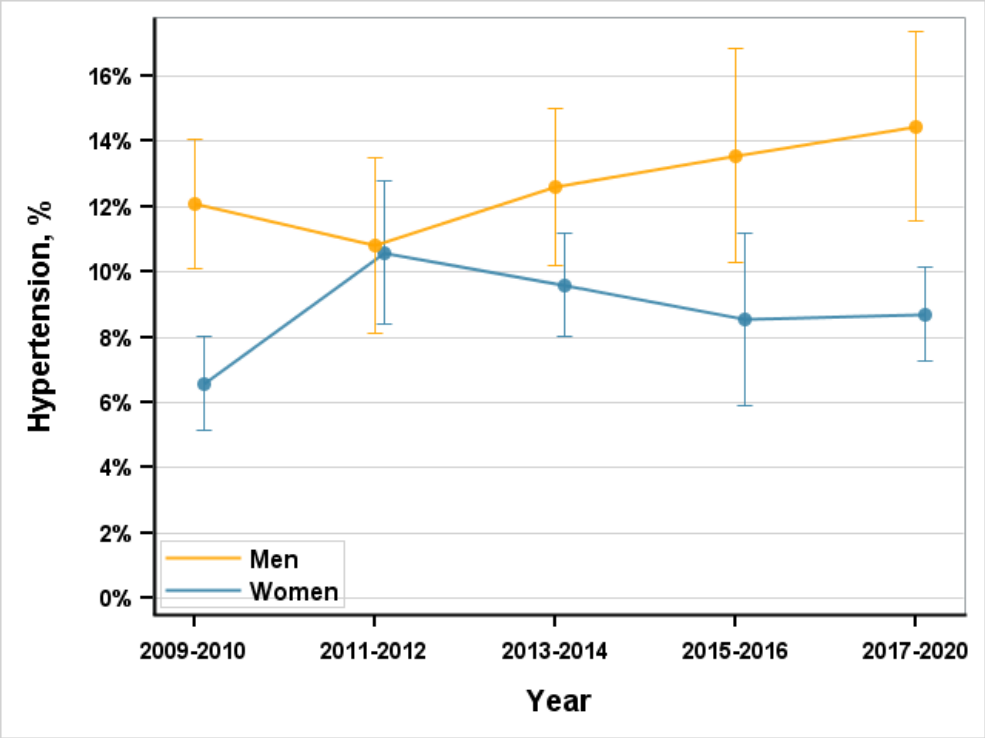
E) Body Mass Index



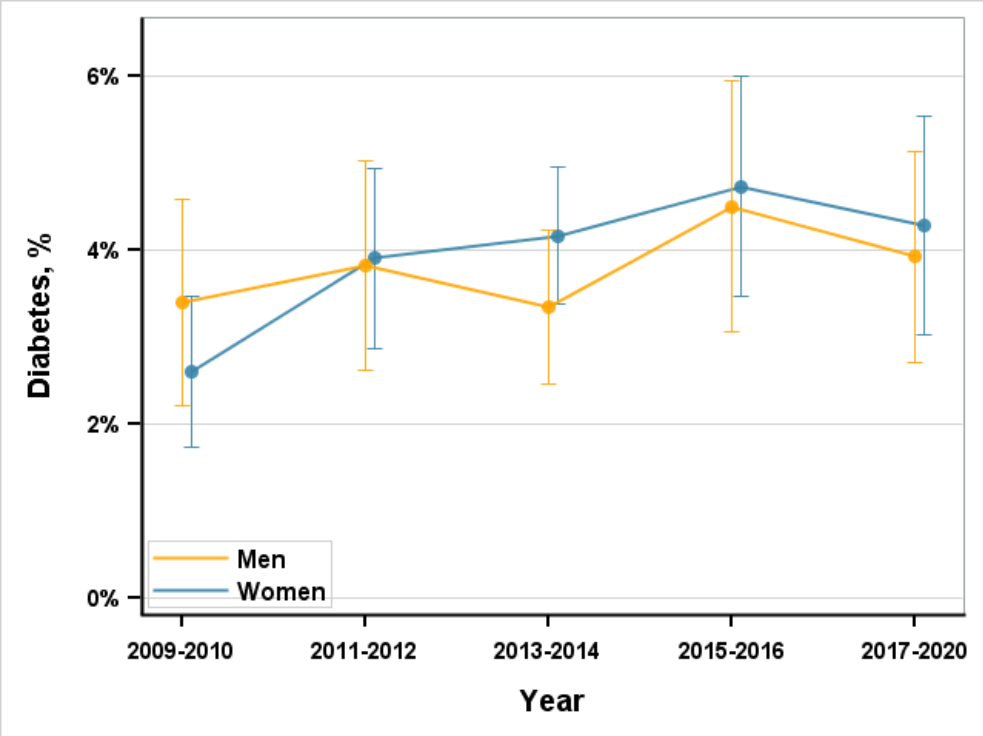
[a]Nationally representative estimates of US adults ages 20-44 years from the National Health and Nutrition Examination Survey (NHANES), 2009 to March 2020. Estimates are shown by race and ethnicity along with 95% confidence intervals. Race and ethnicity were based on self-report to close-ended questions. White, Black, and Asian adults only included those self-reporting as non-Hispanic. Other Hispanic adults included those self-reporting as Hispanic but not as Mexican American. Data for Asian adults were only collected starting 2011 onwards.
[b]Systolic and diastolic blood pressure were determined as the mean of three measurements.
[c]Hemoglobin A1c and total cholesterol were determined by laboratory measurement.
[d]Body mass index was determined by measurement of height and weight.

eFigure 4. Age-Adjusted Trends in Hypertension, Diabetes, Hyperlipidemia, Obesity, and Smoking History Among US Adults Age 20 to 44 Years by Sex, 2009-2010 to 2017-March 2020[a-f]

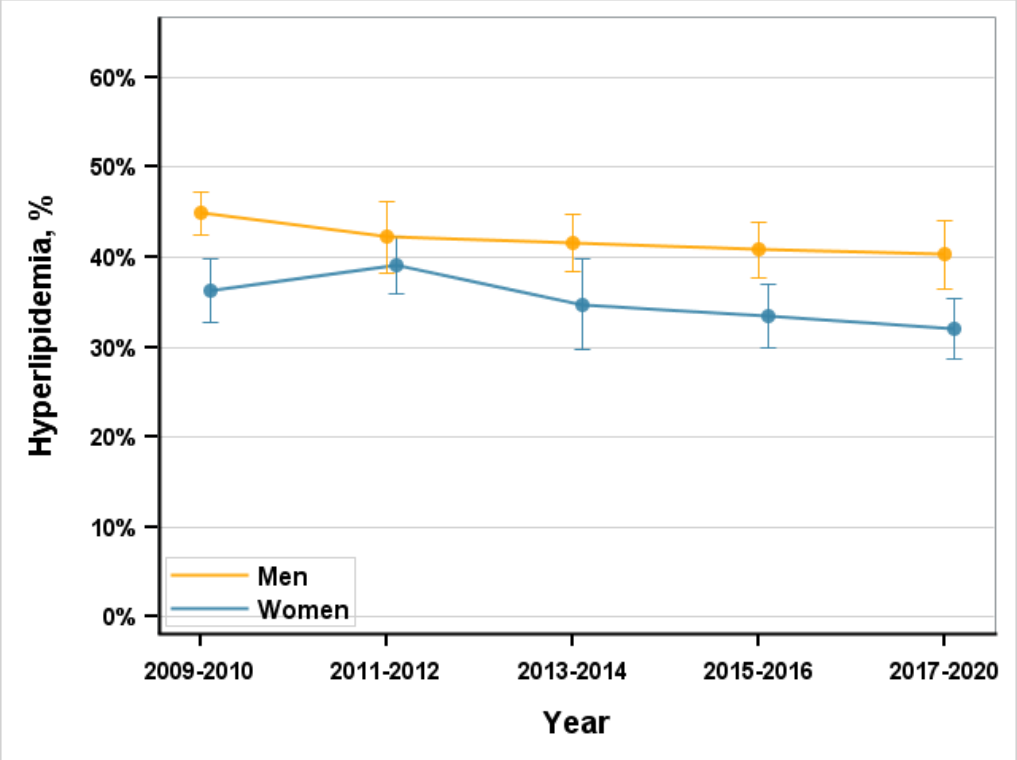
A) Hypertension



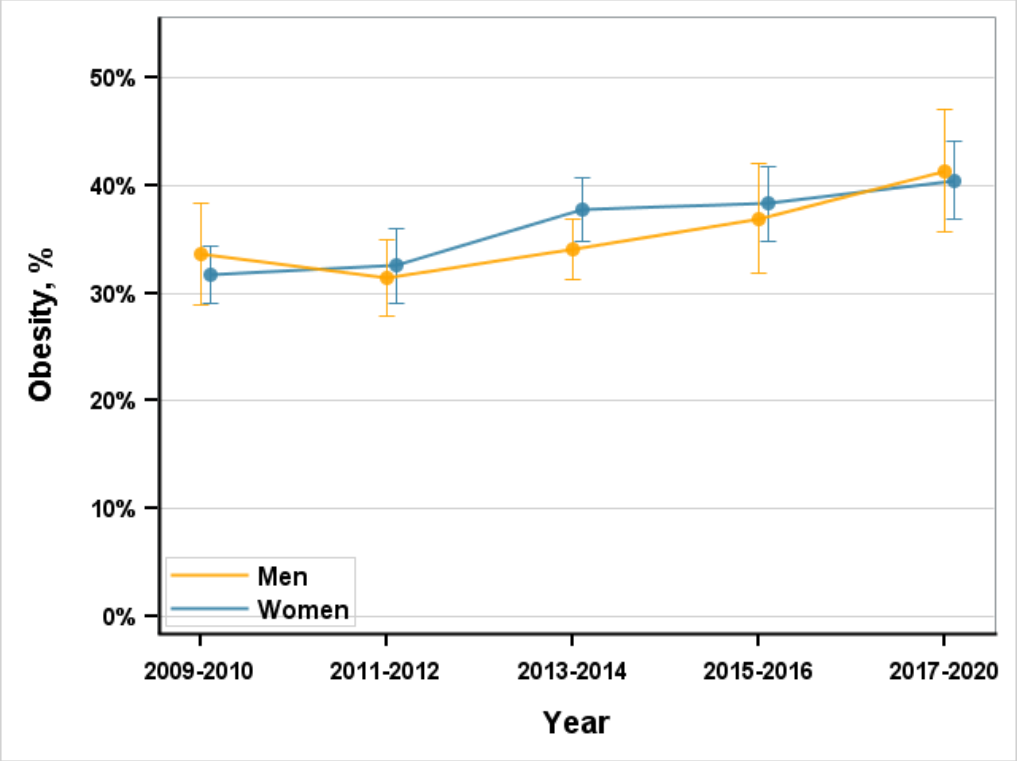
B) Diabetes



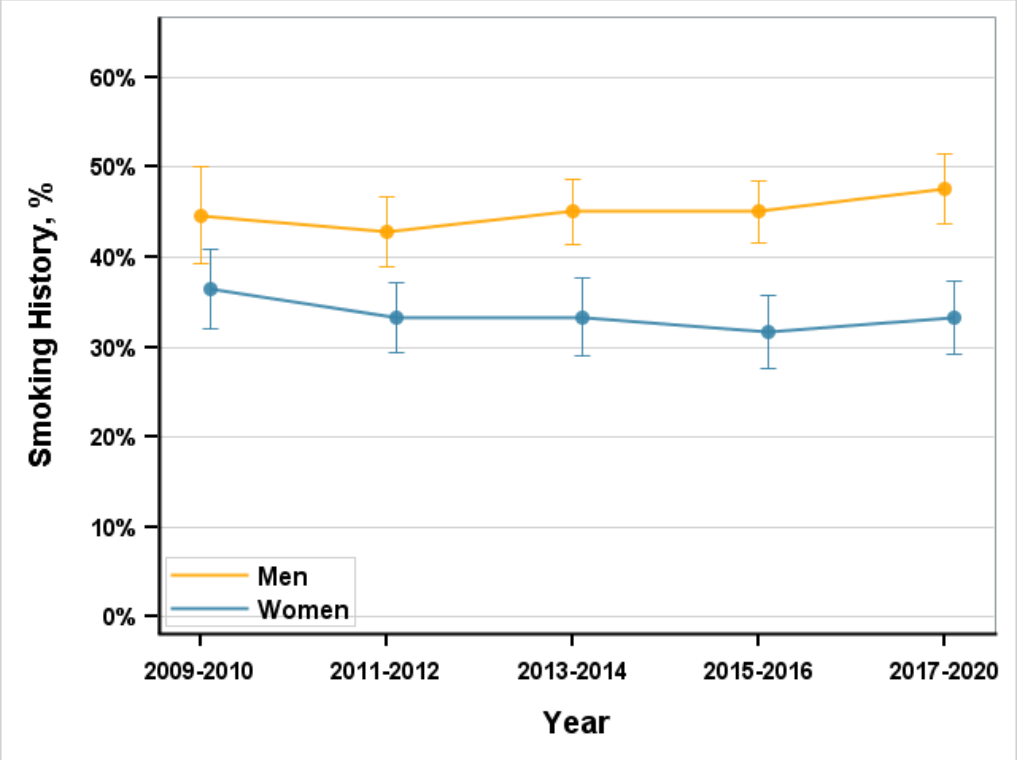
C) Hyperlipidemia



D) Obesity



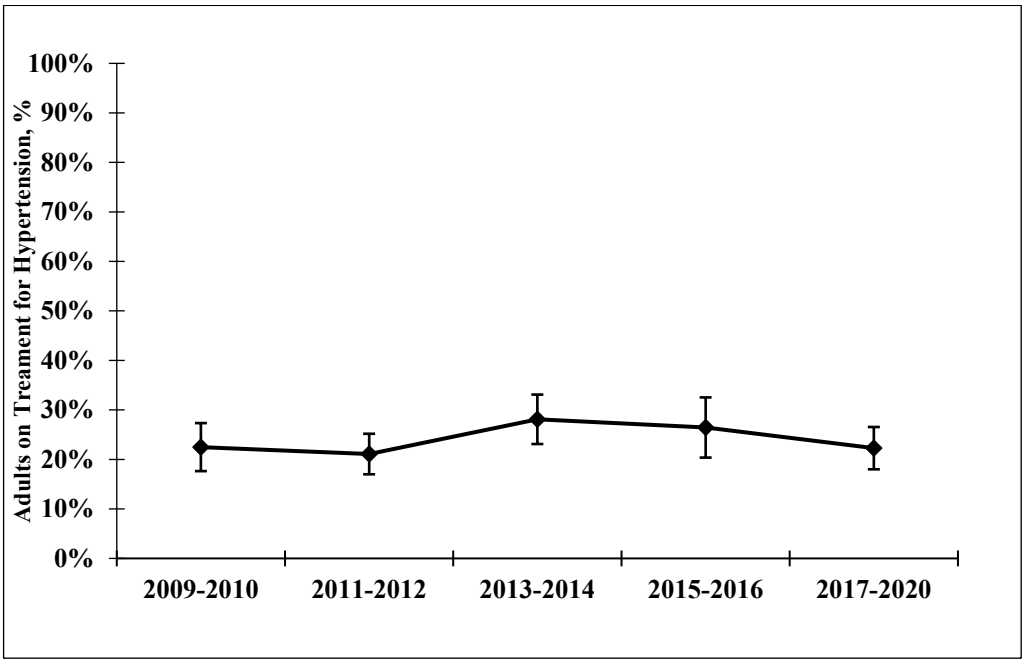
E) Smoking History



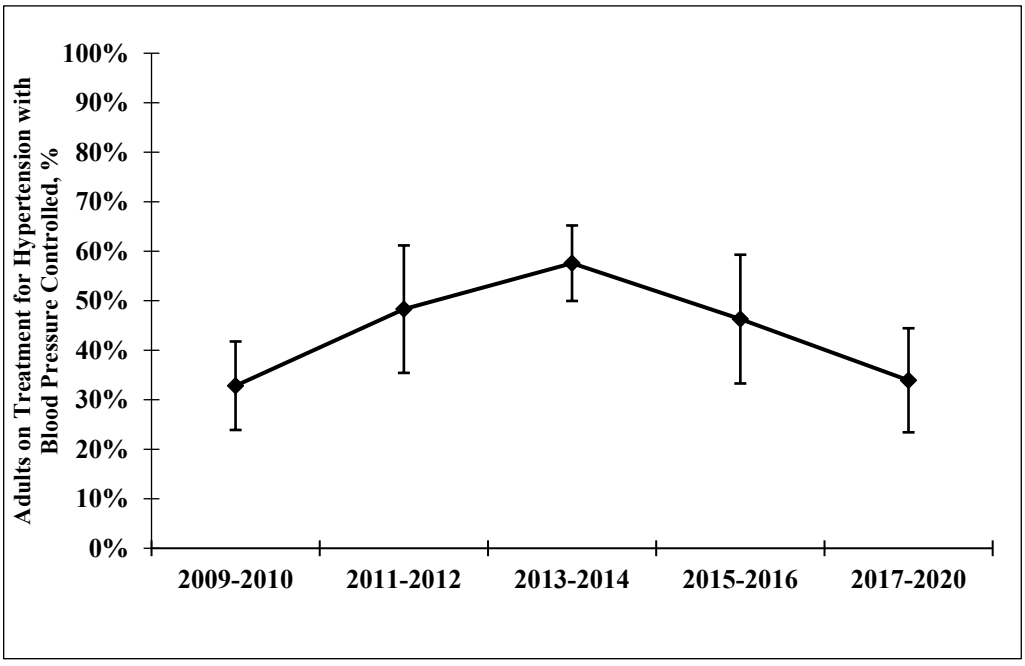
[a]Nationally representative estimates of US adults ages 20-44 years from the National Health and Nutrition Examination Survey (NHANES), 2009 to March 2020. Estimates are shown by sex along with 95% confidence intervals. Sex was determined by self-report.
[b]Hypertension was defined as a systolic blood pressure of ≥140 mmHg, diastolic blood pressure of ≥90 mmHg, or a prescription for antihypertensive therapy.
[c]Diabetes was defined as a hemoglobin A1c of ≥6.5% or a health care diagnosis of diabetes.
[d]Hyperlipidemia was defined as a total cholesterol of ≥200 mg/dL or a health care diagnosis of high cholesterol.
[e]Obesity was defined as a BMI of ≥30 kg/m^2.
[f]Smoking history was defined as self-report of smoking at least 100 cigarettes ever.

eFigure 5. Age-Adjusted Trends in Hypertension Treatment and Control Rates Among US Adults Aged 20 to 44 Years Using a Lower Blood Pressure Target (<130/80mmHg), 2009-2010 to 2017-March 2020[a-d]

A) Hypertension Treatment



B) Blood Pressure Control

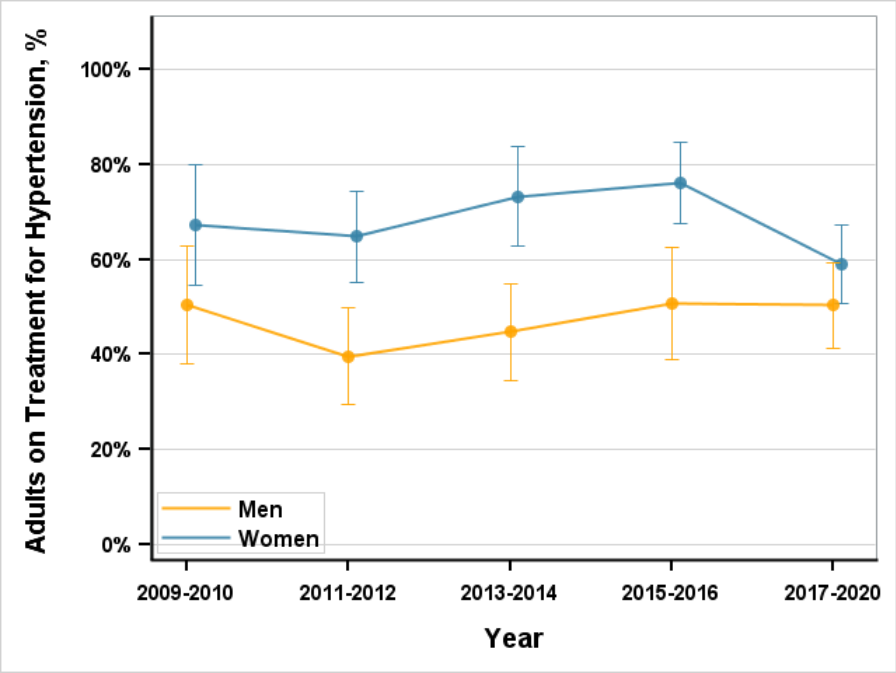


[a]Nationally representative estimates of US adults ages 20-44 years from the National Health and Nutrition Examination Survey (NHANES), 2009 to March 2020. Estimates are shown with 95% confidence intervals.

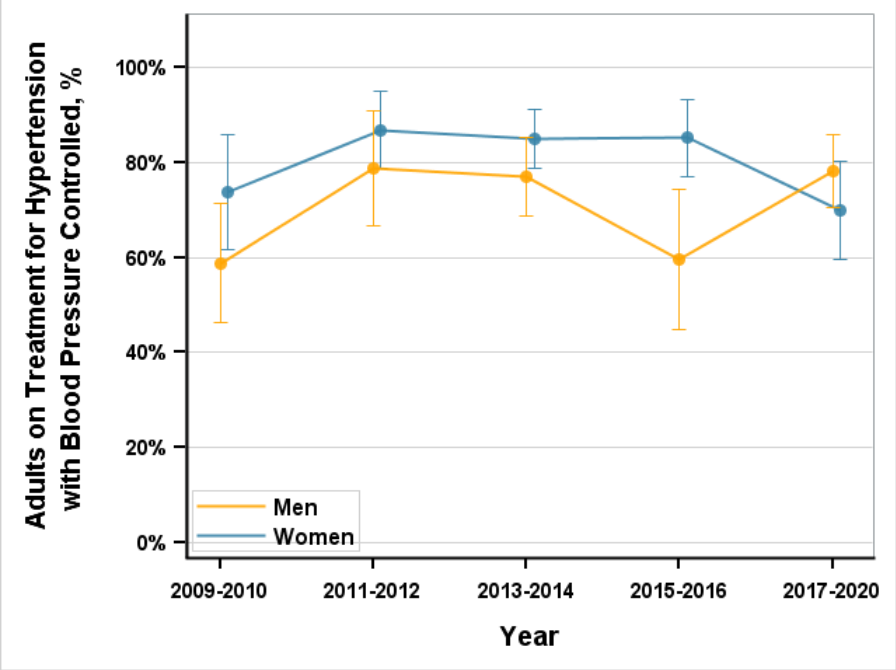
[b]Hypertension was defined as a systolic blood pressure of ≥130 mmHg, diastolic blood pressure of ≥80 mmHg, or a prescription for antihypertensive therapy.
[c]Treatment of hypertension was then determined as a self-report of taking medications for blood pressure among adults with hypertension.
[d]Control was assessed among adults on treatment. Hypertension was considered controlled if systolic blood pressure was <130 mmHg and <80 mmHg.

eFigure 6. Age-Adjusted Trends in Hypertension and Diabetes Treatment and Control Rates Among US Adults Aged 20 to 44 Years by Sex, 2009-2010 to 2017-March 2020[a-f]

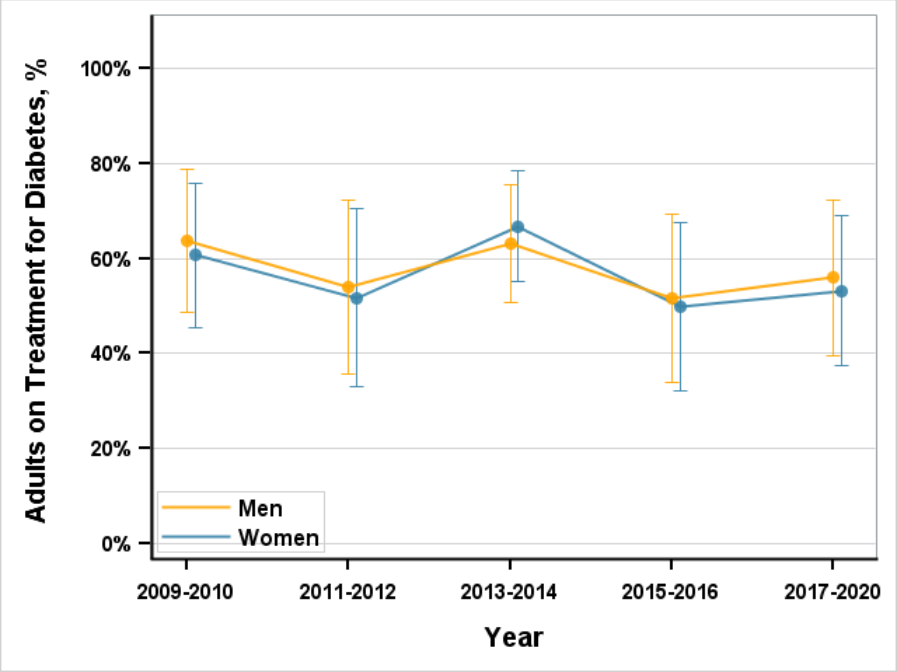
A) Hypertension Treatment



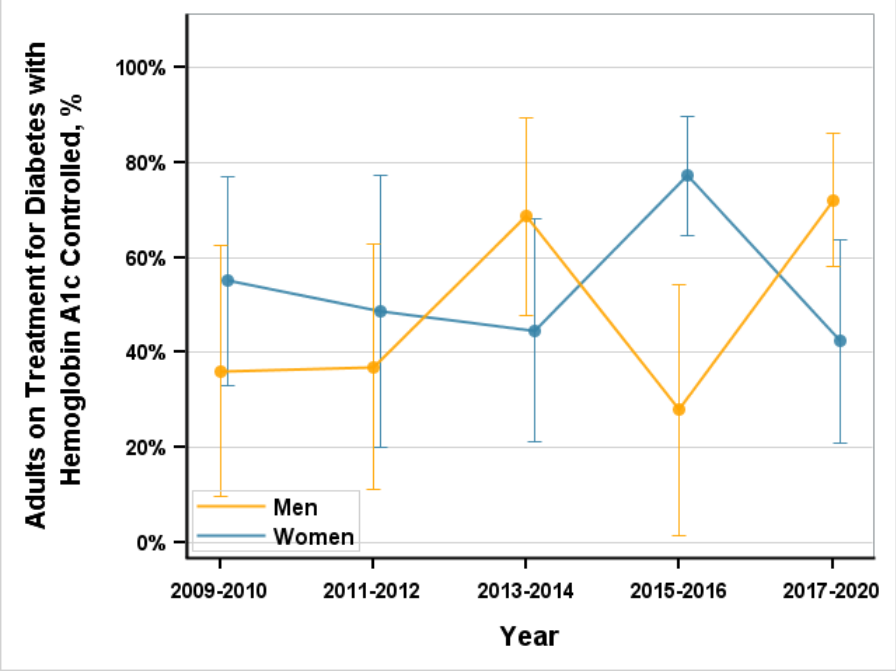
B) Blood Pressure Control



C) Diabetes Treatment



D) Glycemic Control

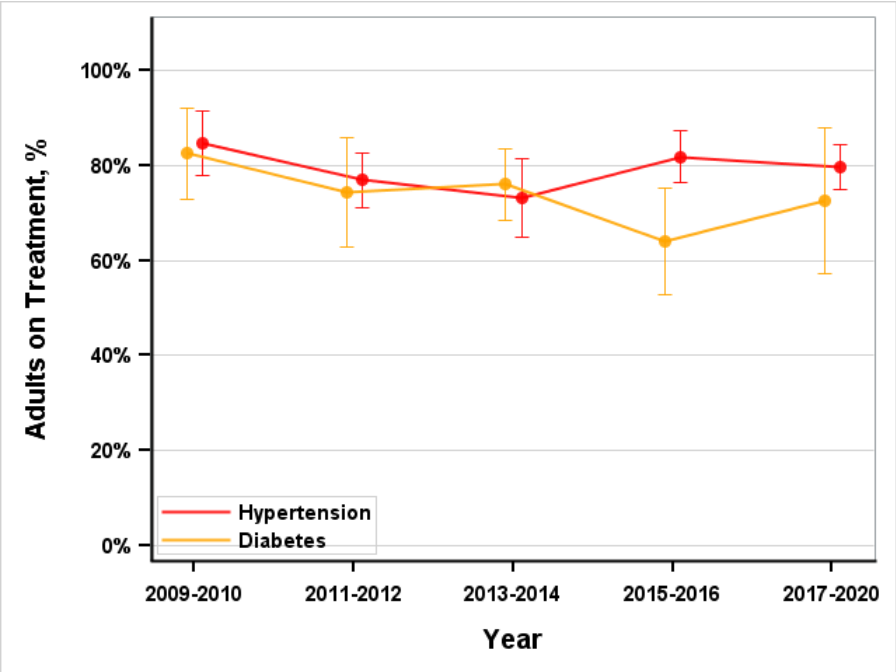


[a]Nationally representative estimates of US adults ages 20-44 years from the National Health and Nutrition Examination Survey (NHANES), 2009 to March 2020. Estimates are shown by sex and with 95% confidence intervals. Sex was determined by self-report.
[b]Treatment of hypertension was defined as a self-report of taking medications for blood pressure and was assessed among adults with hypertension.

[c]Treatment of diabetes was defined as a self-report of taking diabetic pills or insulin and was assessed among adults with diabetes.
[d]Control was assessed among adults on treatment, consistent with prior reports.[12,13]
[e]Hypertension was considered controlled if systolic blood pressure was <140 mmHg and <90 mmHg.
[f]Diabetes was considered control if hemoglobin A1c was <7%.

eFigure 7. Age-Adjusted Trends in Hypertension and Diabetes Treatment Rates Among US Adults Aged 20 to 44 Years Aware They Had the Condition, 2009-2010 to 2017-March 2020[a-d]

A) Hypertension and Diabetes Treatment Rates



[a]Nationally representative estimates of US adults ages 20-44 years from the National Health and Nutrition Examination Survey (NHANES), 2009 to March 2020. Estimates are shown with 95% confidence intervals.
[b]Treatment of hypertension was defined as a self-report of taking medications for blood pressure and was assessed among individuals aware they had hypertension (N=996). Treatment of diabetes was defined as a self-report of taking diabetic pills or insulin and was assessed among individuals aware they had diabetes (N=463).