



beta 2.0

COMMUNITY HEALTH NEEDS ASSESSMENT

Advancing Community Health and Well Being

Community Commons Middlesex Co CHNA Report

Demographics

Report Area: Middlesex County, Connecticut

Demographics // Physical Environment // Health Behaviors // Clinical Care

- Total Population

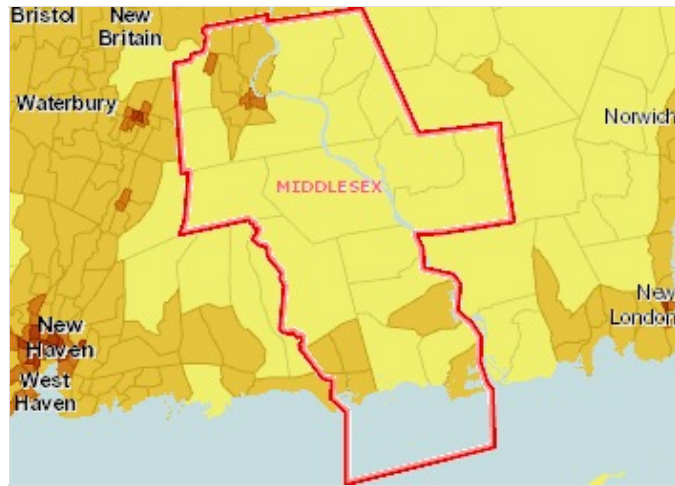
Current population demographics and changes in demographic composition over time play a determining role in the types of health and social services needed by communities.

Total Population

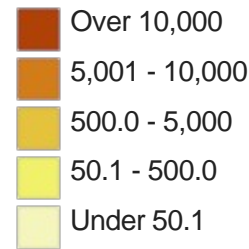
This indicator reports the total number of people in a specific geographic area. This indicator is relevant because population counts are necessary to quantify the community as defined.

Report Area	Total Population	Total Land Area (Square Miles)	Population Density (Per Square Mile)
Middlesex County, Connecticut	164,774	369.30	446.18
Connecticut	3,545,837	4,842.40	732.25
United States	303,965,271	3,531,905.50	86.06

Data Source: [U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates](#). Source geography: Tract.



Population Density (Per Sq. Mi.), By Tract, U.S. Census 2010



Total Population, by Gender

Report Area	Male	Female	Percent Male	Percent Female
Middlesex County, Connecticut	80,583	84,191	48.91%	51.09%
Connecticut	1,724,834	1,821,003	48.64%	51.36%
United States	149,398,720	154,566,544	49.15%	50.85%

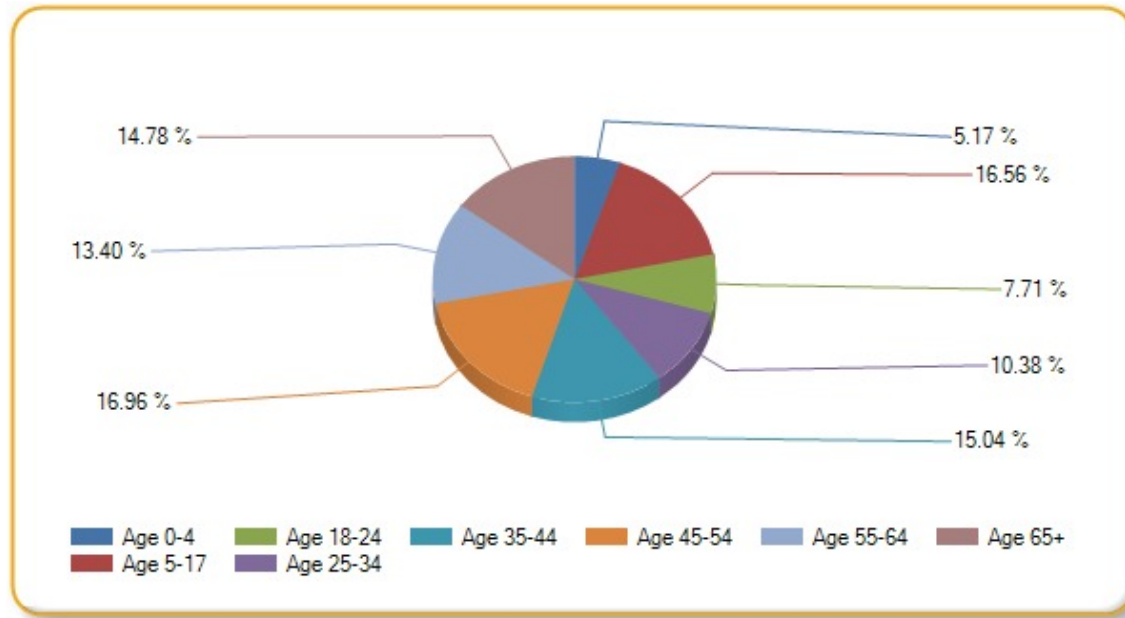
Total Population, by Age Groups

Report Area	Age 0-4	Age 5-17	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65
Middlesex County, Connecticut	8,527	27,290	12,712	17,099	24,775	27,942	22,078	24,351
Connecticut	205,479	622,044	320,031	410,082	513,028	564,213	419,257	491,703
United States	20,131,420	53,901,696	30,205,496	40,191,012	42,206,140	44,302,696	34,277,392	38,749,416

Total Population, Percent by Age Groups

Report Area	Age 0-4	Age 5-17	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65
Middlesex County, Connecticut	5.17%	16.56%	7.71%	10.38%	15.04%	16.96%	13.40%	14.78%
Connecticut	5.79%	17.54%	9.03%	11.57%	14.47%	15.91%	11.82%	13.87%

United States	6.62%	17.73%	9.94%	13.22%	13.89%	14.57%	11.28%	12.75%
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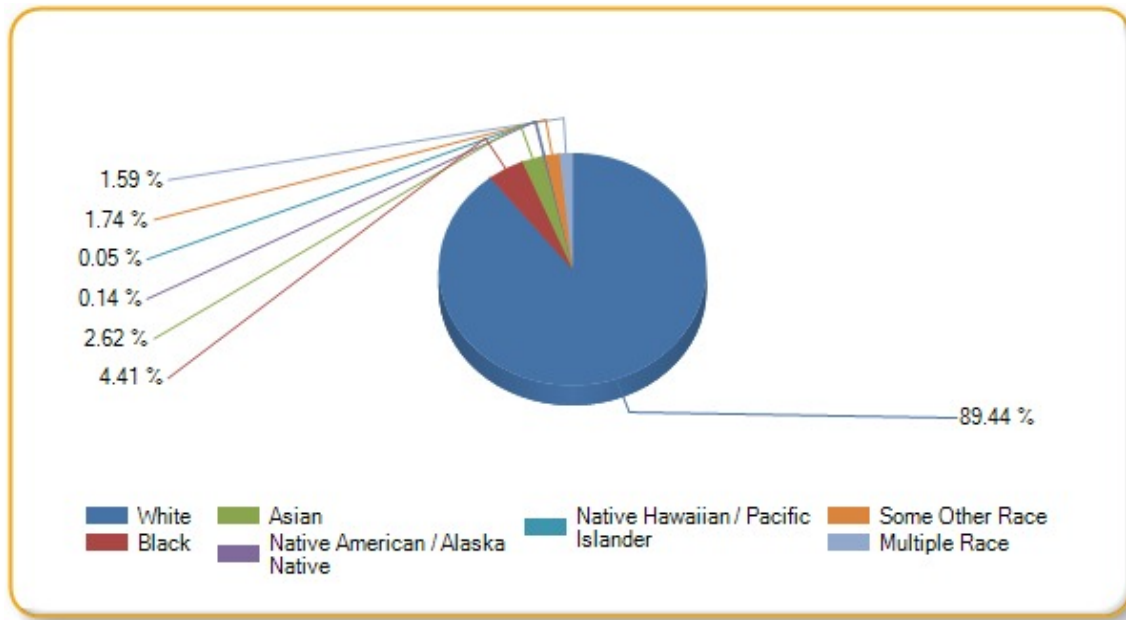


Total Population, by Race Alone

Report Area	White	Black	Asian	Native American / Alaska Native	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Races
Middlesex County, Connecticut	147,370	7,269	4,320	237	78	2,873	2,627
Connecticut	2,795,926	342,764	129,904	7,959	1,332	189,160	78,792
United States	224,895,696	37,978,752	14,185,493	2,480,465	491,673	16,603,808	7,329,381

Total Population, Percent by Race Alone

Report Area	White	Black	Asian	Native American / Alaska Native	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Races
Middlesex County, Connecticut	89.44%	4.41%	2.62%	0.14%	0.05%	1.74%	1.59%
Connecticut	78.85%	9.67%	3.66%	0.22%	0.04%	5.33%	2.22%
United States	73.99%	12.49%	4.67%	0.82%	0.16%	5.46%	2.41%

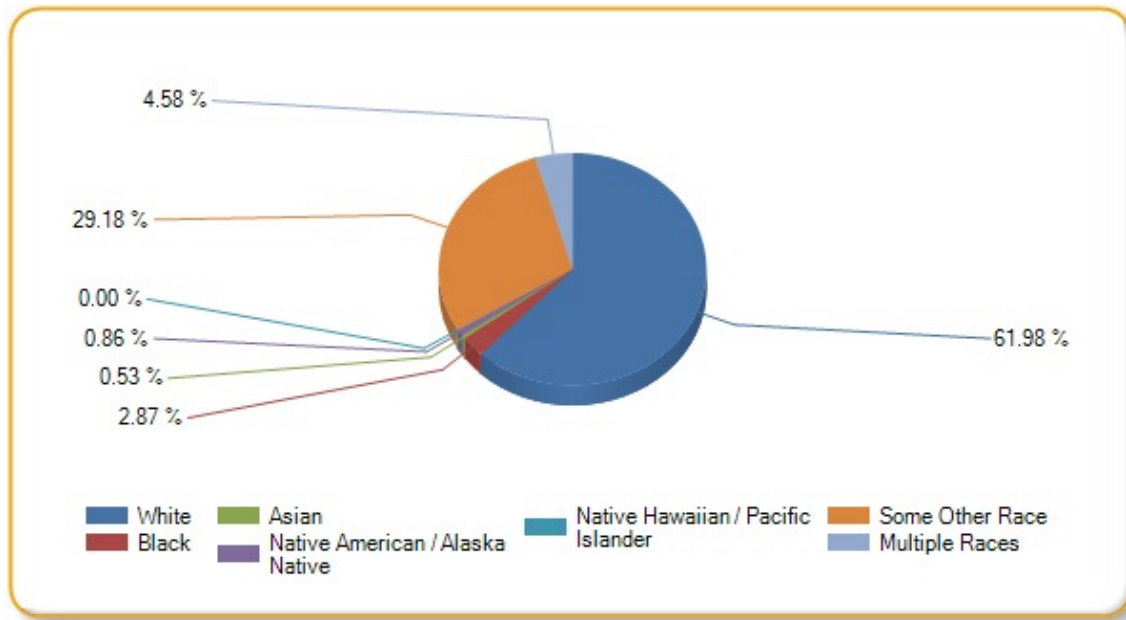


Hispanic Population, Total by Race

Report Area	White	Black	Asian	Native American / Alaska Native	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Races
Middlesex County, Connecticut	4,535	210	39	63	0	2,135	335
Connecticut	228,921	15,826	1,020	2,305	45	174,306	24,688
United States	28,322,928	856,327	163,519	431,681	32,898	15,918,139	2,002,041

Hispanic Population, Percent by Race

Report Area	White	Black	Asian	Native American / Alaska Native	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Races
Middlesex County, Connecticut	61.98%	2.87%	0.53%	0.86%	0%	29.18%	4.58%
Connecticut	51.20%	3.54%	0.23%	0.52%	0.01%	38.98%	5.52%
United States	59.34%	1.79%	0.34%	0.90%	0.07%	33.35%	4.19%

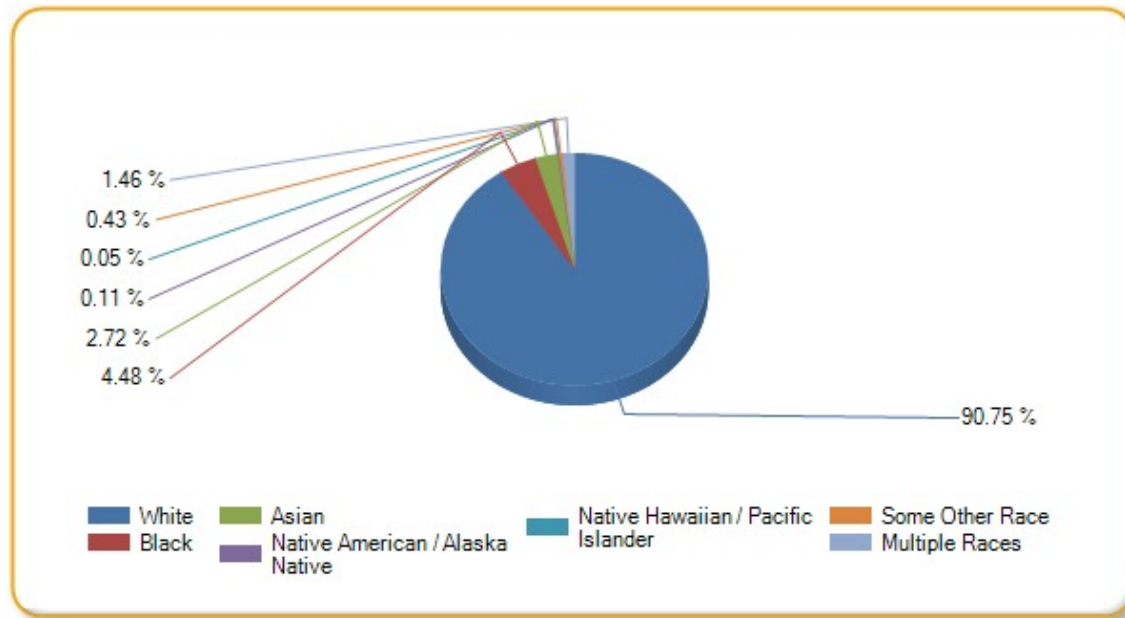


Non-Hispanic Population, Total by Race

Report Area	White	Black	Asian	Native American / Alaska Native	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Races
Middlesex County, Connecticut	142,835	7,059	4,281	174	78	738	2,292
Connecticut	2,567,005	326,938	128,884	5,654	1,287	14,854	54,104
United States	196,572,768	37,122,424	14,021,974	2,048,784	458,775	685,669	5,327,340

Non-Hispanic Population, Percent by Race

Report Area	White	Black	Asian	Native American / Alaska Native	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Races
Middlesex County, Connecticut	90.71%	4.48%	2.72%	0.11%	0.05%	0.43%	1.46%
Connecticut	82.84%	10.55%	4.16%	0.18%	0.04%	0.74%	1.75%
United States	76.71%	14.49%	5.47%	0.80%	0.18%	1.10%	2.08%



Physical Environment

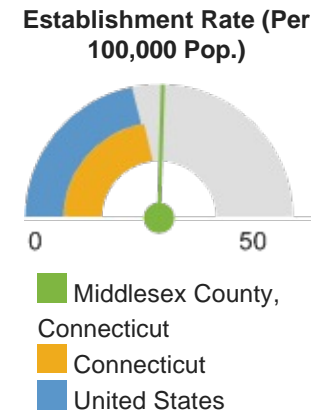
A community's health also is affected by the physical environment. A safe, clean environment that provides access to healthy food and recreational opportunities is important to maintaining and improving community health.

Grocery Store Access

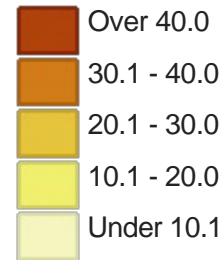
This indicator reports the number of grocery stores per 100,000 population. Grocery stores are defined as supermarkets and smaller grocery stores primarily engaged in retailing a general line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry. Included are delicatessen-type establishments. Convenience stores and large general merchandise stores that also retail food, such as supercenters and warehouse club stores are excluded. This indicator is relevant because it provides a measure of healthy food access and environmental influences on dietary behaviors.

Report Area	Total Population, 2010 Census	Number of Establishments	Establishment Rate (Per 100,000 Pop.)
Middlesex County, Connecticut	165,676	42	25.35
Connecticut	3,574,097	814	22.77
United States	308,495,938	67,357	21.83

Note: This indicator is compared with the state average. No breakout data available.
 Data Source: [U.S. Census Bureau, County Business Patterns, 2010](#). Source geography: County.



Grocery Stores (Per 100,000 Pop.), By County, US Census County Business Patterns, 2010

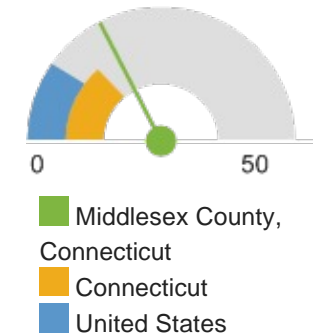


Recreation and Fitness Facility Access

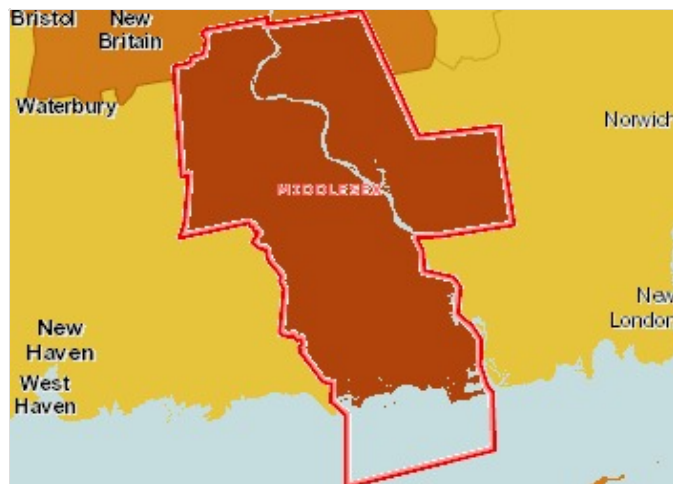
This indicator reports the number per 100,000 population of recreation and fitness facilities as defined by North American Industry Classification System (NAICS) Code 713940. This indicator is relevant because access to recreation and fitness facilities encourages physical activity and other healthy behaviors.

Report Area	Total Population, 2010 Census	Number of Establishments	Establishment Rate (Per 100,000 Pop.)
Middlesex County, Connecticut	165,676	29	17.50
Connecticut	3,574,097	489	13.68
United States	299,481,280	29,913	9.99

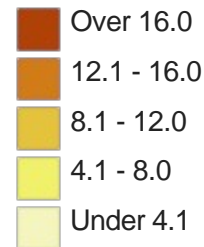
Establishment Rate (Per 100,000 Pop.)



Note: This indicator is compared with the state average. No breakout data available.
 Data Source: [U.S. Census Bureau, County Business Patterns, 2010](#). Source geography: County.



Recreation Facility Rate (Per 100,000 Pop.), By County, US Census County Business Patterns, 2010



Clinical Care

A lack of access to care presents barriers to good health. The supply and accessibility of facilities and physicians, the rate of uninsurance, financial hardship, transportation barriers, cultural competency, and coverage limitations affect access.

Rates of morbidity, mortality, and emergency hospitalizations can be reduced if community residents access services such as health screenings, routine tests, and vaccinations. Prevention indicators can call attention to a lack of access or knowledge regarding one or more health issues and can inform program interventions.

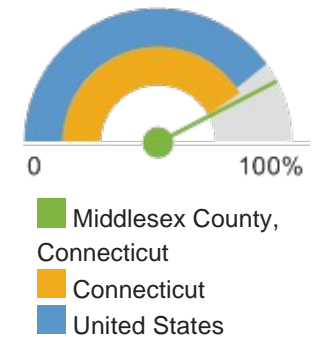
Diabetes Management (Hemoglobin A1c Test)

This indicator reports the percentage of diabetic Medicare patients who have had a hemoglobin A1c (hA1c) test, a blood test which measures blood sugar

levels, administered by a health care professional in the past year. This indicator is relevant because engaging in preventive behaviors allows for early detection and treatment of health problems. This indicator can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

Report Area	Total Medicare Enrollees (Age 65-75) with Diabetes	Number Patients Tested	Percent Patients Tested
Middlesex County, Connecticut	1,620	1,379	85.12%
Connecticut	34,665	28,791	83.05%
United States	5,408,188	4,343,573	80.31%

Percent Patients Tested

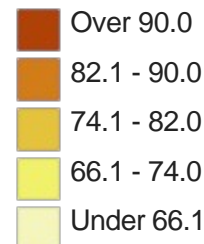


Note: This indicator is compared with the state average. No breakout data available.

Data Source: [Dartmouth Atlas of Healthcare, Selected Measures of Primary Care Access and Quality, 2003-2007](#). Source geography: County.



Pct. Diabetic Medicare Patients Screened, By County, Dartmouth Atlas, 2003-2007



Health Behaviors

Health behaviors such as poor diet, a lack of exercise, and substance abuse contribute to poor health status.

Inadequate Fruit/Vegetable Consumption (Adult)

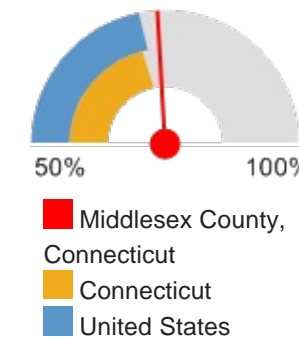
This indicator reports the percentage of adults aged 18 and older who self-report consuming less than 5 servings of fruits and vegetables each day. This indicator is relevant because current behaviors are determinants of future health, and because unhealthy eating habits may illustrate a cause of significant health issues, such as obesity and diabetes.

Report Area	Total Population (Age 18)	Population Consuming Few Fruits or Vegetables	Percent Consuming Few Fruits or Vegetables
Middlesex County, Connecticut	128,366	94,990.84	74%
Connecticut	2,672,367	1,909,771.85	71.46%
United States	227,267,677	163,541,452.90	71.96%

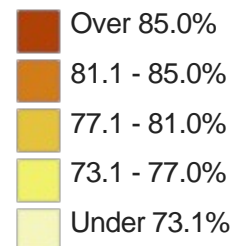
Note: This indicator is compared with the state average. No breakout data available.

Data Source: [Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2003-2009](#). Source geography: County.

Percent Consuming Few Fruits or Vegetables



Pct. of Adults (Age 18) Consuming Few Fruits/Vegetables, By County, CDC BRFSS 2004-2010



Physical Inactivity (Adult)

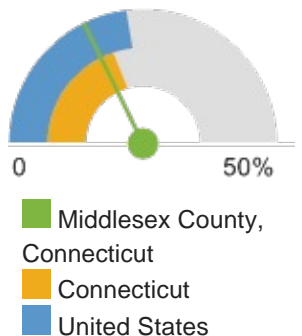
This indicator reports the percentage of adults aged 18 and older who self-report no leisure time for activity, based on the question: "During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?". This indicator is relevant because current behaviors are determinants of future health and this indicator may illustrate a cause of significant health issues, such as obesity and poor cardiovascular health.

Report Area	Total Population (Age 18)	Number Physically Inactive	Percent Physically Inactive
Middlesex County, Connecticut	128,366	22,720.78	17.70%
Connecticut	2,672,367	539,599.91	20.19%
United States	227,267,677	52,442,306.05	23.08%

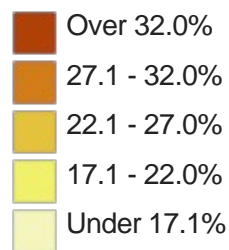
Note: This indicator is compared with the state average. No breakout data available.

Data Source: [Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010](#). Source geography: County.

Percent Physically Inactive



Pct. of Adults (Age 18) Performing No Physical Activity, By County, CDC BRFSS 2004-2010

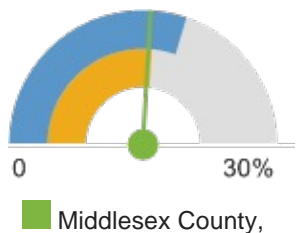


Tobacco Usage (Adult)

This indicator reports the percentage of adults aged 18 and older who self-report currently smoking cigarettes some days or every day. This indicator is relevant because tobacco use is linked to leading causes of death such as cancer and cardiovascular disease.

Report Area	Total Population (Age 18)	Number Cigarette Smokers	Percent Cigarette Smokers
Middlesex County, Connecticut	128,366	20,025	15.60%
Connecticut	2,672,367	426,087	15.94%
United States	227,267,677	41,378,420	18.21%

Percent Cigarette Smokers



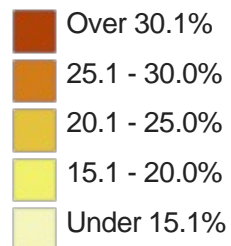
Note: This indicator is compared with the state average. No breakout data available.

Data Source: [Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010](#). Source geography: County.

Connecticut
Connecticut
United States



Pct. of Adults (Age 18) Smoking Cigarettes, By County, CDC BRFSS 2004-2010



FOOTNOTES

Total Population

Data Background:

The American Community Survey (ACS) is a nationwide, continuous survey designed to provide communities with reliable and timely demographic, housing, social, and economic data. The ACS samples nearly 3 million addresses each year, resulting in nearly 2 million final interviews. The ACS replaces the long-form decennial census; however, the number of household surveys reported annually for the ACS is significantly less than the number reported in the long-form decennial census. As a result, the ACS combines detailed population and housing data from multiple years to produce reliable estimates for small counties, neighborhoods, and other local areas. Negotiating between timeliness and accuracy, the ACS annually releases current, one-year estimates for geographic areas with large populations; three-year, and five-year estimates are also released each year for additional areas based on minimum population thresholds.

Citation: [U.S. Census Bureau: A Compass for Understanding and Using American Community Survey Data \(2008\)](#).

For more information about this source, including data collection methodology and definitions, refer to the [American Community Survey](#) website.

Methodology:

Counts for population subgroups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2006-2010. Data are summarized to 2010 census tract boundaries. Population density is measured as the number of persons per square mile using following formula:

$$\text{Population Density} = [\text{Total Population}] / [\text{Geographic Unit Area (Square Miles)}]$$

Other indicator statistics are measured as a percentage of the total population using the following formula:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

For more information on the data reported in the American Community Survey, please see the complete [American Community Survey 2010 Subject Definitions](#).

Notes:

Race and Ethnicity

Indicator race and ethnicity statistics are generated from self-identified survey responses. Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Using the OMB standard, the race categories reported in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories reported are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. For more information, please review the documentation provided in the CHNA *Data and Indicators* FAQs.

Data limitations

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age, gender, race, or ethnicity distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on the population subgroup distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases,

colleges, or jails). For more information, please review the documentation provided on pages 46 and 47 of the [American Community Survey 2010 Subject Definitions](#).

Grocery Store Access

Data Background:

County Business Patterns (CBP) is an annual series that provides sub-national economic data by industry. Data for establishments are presented by geographic area, 6-digit NAICS industry, legal form of organization (U.S. and state only), and employment size class. Information is available on the number of establishments, employment during the week of March 12, first quarter payroll, and annual payroll. ZIP Code Business Patterns data are available shortly after the release of County Business Patterns. It provides the number of establishments by employment-size classes by detailed industry in the U.S.

County Business Patterns basic data items are extracted from the Business Register (BR), a database of all known single and multi-establishment employer companies maintained and updated by the U.S. Census Bureau. The BR contains the most complete, current, and consistent data for business establishments. The annual Company Organization Survey provides individual establishment data for multi-establishment companies. Data for single-establishment companies are obtained from various Census Bureau programs, such as the Economic Census, Annual Survey of Manufactures and Current Business Surveys, as well as from administrative record sources.

Citation: [U.S. Census Bureau: County Business Patterns \(2012\)](#).

For more information about this source, including data collection methodology and definitions, refer to the [County Business Patterns](#) website.

Methodology:

Industry counts for grocery stores* (NAICS codes 445110 and 445230) are acquired from the U.S. Census Bureau, County Business Patterns (2010) data file. Population figures are acquired from the U.S. Census Bureau, 2010 Decennial Census, Summary File 1. Establishment rates for each county are derived using the following formula:

$$\text{Rate} = [\text{Establishment Count}] / [\text{Population}] * 100,000$$

**Grocery stores as defined by NAICS codes 445110 are establishments engaged in selling a "general line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry". Examples include supermarkets, commissaries and food stores. Convenience stores are excluded. Fruit and vegetable grocers as defined by NAICS Code 445230 are those locations "primarily engaged in retailing fresh fruits and vegetables". Examples include permanent produce stands and fruit or vegetable markets.*

A complete list of NAICS codes and definitions is available using the NAICS Association's [free lookup service](#).

Recreation and Fitness Facility Access

Data Background:

County Business Patterns (CBP) is an annual series that provides sub-national economic data by industry. Data for establishments are presented by geographic area, 6-digit NAICS industry, legal form of organization (U.S. and state only), and employment size class. Information is available on the number of establishments, employment during the week of March 12, first quarter payroll, and annual payroll. ZIP Code Business Patterns data are available shortly after the release of County Business Patterns. It provides the number of establishments by employment-size classes by detailed industry in the U.S.

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Citation: [U.S. Census Bureau: County Business Patterns \(2012\)](#).

For more information about this source, including data collection methodology and definitions, refer to the [County Business Patterns](#) website.

Methodology:

Industry counts for recreational facilities* (NAICS code 713940) are acquired from the U.S. Census Bureau, County Business Patterns (2010) data file. Population figures are acquired from the U.S. Census Bureau, 2010 Decennial Census, Summary File 1. Establishment rates for each county are derived using the following formula:

$$\text{Rate} = \frac{[\text{Establishment Count}]}{[\text{Population}]} * 100,000$$

**Recreational facilities as defined by NAICS code 713940 are establishments engaged in operating facilities which offer “exercise and other active physical fitness conditioning or recreational sports activities”. Examples include athletic clubs, gymnasiums, dance centers, tennis clubs, and swimming pools.*

A complete list of NAICS codes and definitions is available using the NAICS Association’s [free lookup service](#).

Diabetes Management (Hemoglobin A1c Test)

Data Background:

The Dartmouth Atlas of Healthcare is an online repository of health data and maps based on information included in the massive Medicare database maintained by the Center for Medicare and Medicaid Services (CMS). The project uses Medicare claims data in conjunction with other demographic data to provide information and analysis about national, regional, and local markets, as well as hospitals and their affiliated physicians. The Dartmouth Atlas of Health Care is produced and maintained by The Dartmouth Institute for Health Policy and Clinical Practice.

Citation: [The Dartmouth Atlas of Healthcare \(2012\)](#).

The Centers for Medicare and Medicaid Services paid claims files contain information from adjudicated medical service related claims and capitation payments. Four types of claims files representing inpatient, long term care, prescription drugs and non-institutional services are submitted by the states. These are claims that have completed the state's payment processing cycle for which the state has determined it has a liability to reimburse the provider from Title XIX funds. Claims records contain information on the types of services provided, providers of services, service dates, costs, types of reimbursement, and epidemiological variables.

Citation: [Centers for Medicare and Medicaid Services: Medicaid Statistical Information Statistics \(2012\)](#).

Methodology:

The data are drawn from the enrollment and claims data of the Medicare program and are restricted to the fee-for-service population over age 65; HMO patients are not included. The indicator is expressed as a proportion using the following formula:

$$\text{Percentage Tested} = \frac{[\text{Number Diabetics Tested}]}{[\text{Total Diabetics}]} * 100$$

When appropriate, statistical adjustments are carried out to account for differences in age, race and sex.

Access to the complete methodology is available in the Dartmouth Institute's [Report of the Dartmouth Atlas Project](#).

Inadequate Fruit/Vegetable Consumption (Adult)

Data Background:

The Behavioral Risk Factor Surveillance System (BRFSS) is

“... a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The BRFSS was initiated in 1984, with 15 states collecting surveillance data on risk behaviors through monthly telephone interviews. Over time, the number of states participating in the survey increased, so that by 2001, 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands were participating in the BRFSS.”

Citation: Centers for Disease Control and Prevention, Office of Surveillance, Epidemiology, and Laboratory Services. [Overview: BRFSS 2010](#).

The health characteristics estimated from the BRFSS pertain to the adult non-institutionalized population (age 18 years or older and living in households) and includes data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS survey data are analyzed by the CDC's National Center for Health Statistics (NCHS). Annual risk factor prevalence data are released for those geographic areas with 50 or more survey results and 10,000 or more total population (50 States, 170 Cities and Counties) in order to maintain the accuracy and confidentiality of the data. Multi-year estimates are produced by the NCHS to expand the coverage of data to approximately 2500 counties. These estimates are maintained in the [Health Indicator Warehouse](#), the official repository of the nation's health data. For more information on the BRFSS survey methods, or to obtain a copy of the 2010 questionnaire, please visit [the Behavioral Risk Factor Surveillance System](#) home page.

Methodology:

Indicator percentages are acquired for years 2005-2009 from Behavioral Risk Factor Surveillance System (BRFSS) prevalence data, which is housed in the Health Indicator Warehouse. Data are based on the percentage of respondents who report regularly consuming five or more servings of fruits or vegetables each week. Fried potatoes and chips are excluded. Percentages are age-adjusted and only pertain to the non-institutionalized population aged 18 and up. Population numerators (number of adults consuming 5 servings) are not provided in the Health Indicator Warehouse data tables and were generated using the following formula:

$$\text{[Population Consuming 5 Servings]} = \text{([Indicator Percentage]} / 100) * \text{[Total Population]}.$$

Adult population figures used in the data tables are acquired from the American Community Survey (ACS) 2006-2010 five year estimates. Additional detailed information about the BRFSS, including questionnaires, data collection procedures, and [data processing methodologies](#) are available on the BRFSS web site. For additional information about the multi-year estimates, please visit the [Health Indicator Warehouse](#).

Physical Inactivity (Adult)

Data Background:

The Behavioral Risk Factor Surveillance System (BRFSS) is

“... a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and

supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The BRFSS was initiated in 1984, with 15 states collecting surveillance data on risk behaviors through monthly telephone interviews. Over time, the number of states participating in the survey increased, so that by 2001, 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands were participating in the BRFSS."

Citation: Centers for Disease Control and Prevention, Office of Surveillance, Epidemiology, and Laboratory Services. [Overview: BRFSS 2010](#).

The health characteristics estimated from the BRFSS pertain to the adult non-institutionalized population (age 18 years or older and living in households) and includes data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS survey data are analyzed by the CDC's National Center for Health Statistics (NCHS). Annual risk factor prevalence data are released for those geographic areas with 50 or more survey results and 10,000 or more total population (50 States, 170 Cities and Counties) in order to maintain the accuracy and confidentiality of the data. Multi-year estimates are produced by the NCHS to expand the coverage of data to approximately 2500 counties. These estimates are maintained in the [Health Indicator Warehouse](#), the official repository of the nation's health data. For more information on the BRFSS survey methods, or to obtain a copy of the 2010 questionnaire, please visit [the Behavioral Risk Factor Surveillance System](#) home page.

Methodology:

Indicator percentages are acquired for years 2005-2009 from Behavioral Risk Factor Surveillance System (BRFSS) prevalence data, which is housed in the Health Indicator Warehouse. Percentages are generated based on the valid responses to the following question:

"During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?"

Respondents are considered to be physically inactive if they answer no to the question. Percentages are age-adjusted and only pertain to the non-institutionalized population aged 18 and up. Population numerators (number of adults) are not provided in the Health Indicator Warehouse data tables and were generated using the following formula:

$$[\text{Inactive Persons}] = ([\text{Indicator Percentage}] / 100) * [\text{Total Population}] .$$

Adult population figures used in the data tables are acquired from the American Community Survey (ACS) 2006-2010 five year estimates. Additional detailed information about the BRFSS, including questionnaires, data collection procedures, and [data processing methodologies](#) are available on the BRFSS web site. For additional information about the multi-year estimates, please visit the [Health Indicator Warehouse](#).

Tobacco Usage (Adult)

Data Background:

The Behavioral Risk Factor Surveillance System (BRFSS) is

"... a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The BRFSS was initiated in 1984, with 15 states collecting surveillance data on risk behaviors through monthly telephone interviews. Over time, the number of states participating in the survey increased, so that by 2001, 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands were participating in the BRFSS."

Citation: Centers for Disease Control and Prevention, Office of Surveillance, Epidemiology, and Laboratory Services. [Overview: BRFSS 2010](#).

The health characteristics estimated from the BRFSS pertain to the adult non-institutionalized population (age 18 years or older and living in

households) and includes data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS survey data are analyzed by the CDC's National Center for Health Statistics (NCHS). Annual risk factor prevalence data are released for those geographic areas with 50 or more survey results and 10,000 or more total population (50 States, 170 Cities and Counties) in order to maintain the accuracy and confidentiality of the data. Multi-year estimates are produced by the NCHS to expand the coverage of data to approximately 2500 counties. These estimates are maintained in the [Health Indicator Warehouse](#), the official repository of the nation's health data. For more information on the BRFSS survey methods, or to obtain a copy of the 2010 questionnaire, please visit [the Behavioral Risk Factor Surveillance System](#) home page.

Methodology:

Indicator percentages are acquired for years 2004-2010 from Behavioral Risk Factor Surveillance System (BRFSS) prevalence data, which is housed in the Health Indicator Warehouse. Data are based on the percentage of respondents answering the following question:

"Do you now smoke cigarettes every day, some days, or not at all?"

Respondents are considered smokers if they reported smoking every day or some days. Percentages are age-adjusted and only pertain to the non-institutionalized population aged 18 and up. Population numerators (number of adult smokers) are not provided in the Health Indicator Warehouse data tables and were generated using the following formula:

$$[\text{Adults Smokers}] = ([\text{Indicator Percentage}] / 100) * [\text{Total Population}] .$$

Adult population figures used in the data tables are acquired from the American Community Survey (ACS) 2006-2010 five year estimates. Additional detailed information about the BRFSS, including questionnaires, data collection procedures, and [data processing methodologies](#) are available on the BRFSS web site. For additional information about the multi-year estimates, please visit the [Health Indicator Warehouse](#).

