

# Obesity and Diabetes Health Brief

## A Look into Obesity and Diabetes in Monterey County

(April 2020)

Adult obesity is described as having a body mass index (BMI) greater than 30 and is commonly the result of long-term imbalance between energy input (i.e. diet) and energy output (i.e. physical activity). People who have adult obesity, compared to those with a normal or healthy weight, are at increased risk for many serious diseases and health conditions, including high blood pressure, high cholesterol, heart disease, stroke, and diabetes among several others. With type 2 diabetes, your body doesn't use insulin well and can't keep blood sugar at normal levels. Too much blood sugar over time can also cause serious health conditions like vision loss, heart disease, and kidney disease. Monitoring the percentages of obesity and diabetes and the associated risk and protective factors in Monterey County is important for agencies, organizations, and collaboratives and planning for appropriate programs, services, and policy changes.

### Obesity and Diabetes Rates in Monterey County and California

#### Monterey County:

**61.5%**

of **Monterey County** adults aged 18 years and over in 2018 were **overweight or obese**.

**7.9%**

of **Monterey County** adults aged 18 years and over in 2017-2018 were diagnosed with **diabetes**.

#### California:

**60.1%**

of **California** adults aged 18 years and over in 2018 were **overweight or obese**.

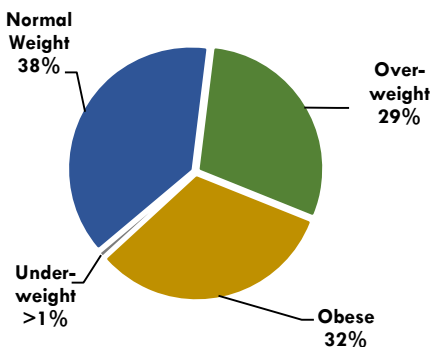
**10.4%**

of **California** adults aged 18 years and over in 2017-2018 were diagnosed with **diabetes**.

Source: California Health Interview Survey, 2017-2018.

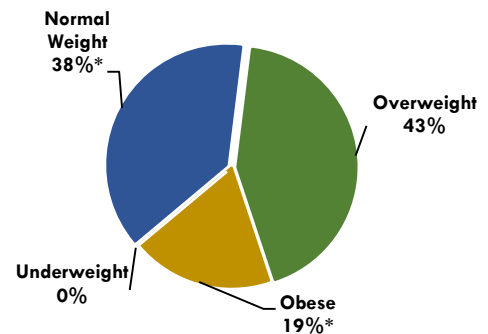
### Overweight and Obesity by Monterey County Age Group, 2017-2018

Weight Rankings for Adults:  
Monterey County Adults Ages 18-64, 2018



Note: This question was asked of respondents who were 18 years of age or older. Source: California Health Interview Survey, 2018.

Weight Rankings for Adults:  
Monterey County Adults Ages 65+, 2018

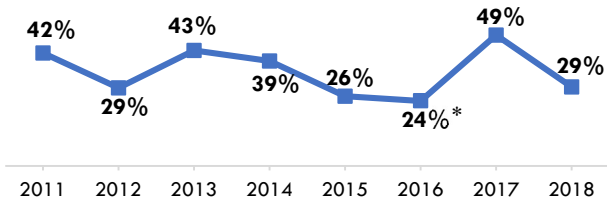


Note: This question was asked of respondents who were 65 years of age or older. Source: California Health Interview Survey 2018.

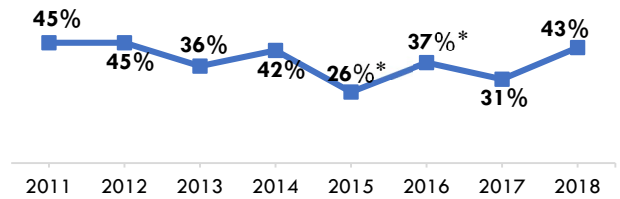
In 2018, 29% of Monterey County residents, aged between 18-64 years were overweight and 32% were obese. Age 65 or more years old were 43% overweight and 17% obese.

## Overweight and Obesity Prevalence by Monterey County Age Group, 2011-2018

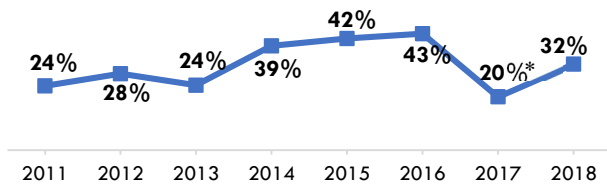
**Overweight Prevalence by Age Group:  
Monterey County Adults Ages 18-64, 2011 - 2018**



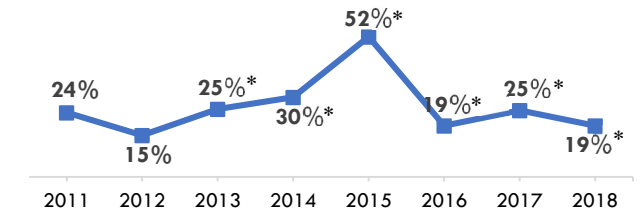
**Overweight Prevalence by Age Group:  
Monterey County Adults Ages 65+, 2011 - 2018**



**Obesity Prevalence by Age Group:  
Monterey County Adults Ages 18-64, 2011 - 2018**



**Obesity Prevalence by Age Group:  
Monterey County Adults Ages 65+, 2011 - 2018**

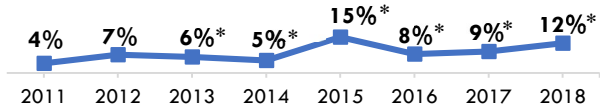


\*Indicates a statistically unstable value. Note: This question was asked of respondents who were 18 years of age or older.  
Source: California Health Interview Survey, 2011-2018.

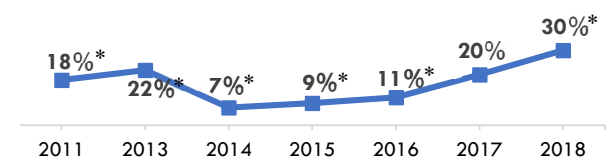
Comparing 2011 to 2018, the percentage of Monterey County adults ages 18 to 64 who were overweight decreased from 42% to 29%. Overweight adults over the age of 65 slightly decreased from 45% in 2011 to 43% in 2018. Within that same time period, the percentage of Monterey County adults, ages 18-64, who were obese increased from 24% to 32%. However, for adults over the age of 65 who were obese decreased from 24% to 19%.

## Pre-Diabetes and Diabetes by Monterey County Age Groups, 2011-2018

**Pre-Diabetes Prevalence by Age Group:  
Monterey County Adults Ages 18-64, 2011 - 2018**

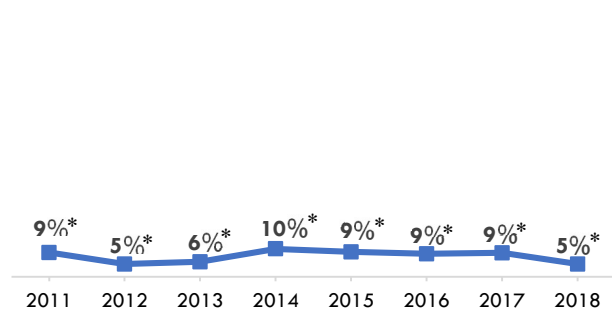


**Pre-Diabetes Prevalence by Age Group:  
Monterey County Adults Ages 65+, 2009 - 2018**

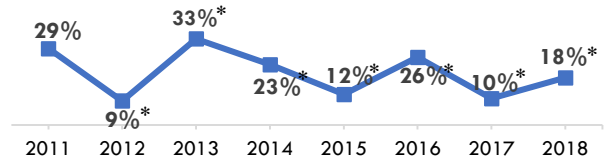


\*Indicates a statistically unstable value. Note: This question was asked of respondents who were 18 years of age or older.  
Source: California Health Interview Survey, 2011-2018. Note: question was not asked in 2012 for those aged 65 and over.

**Diabetes Prevalence by Age Group:  
Monterey County Adults Ages 18-64, 2011 - 2018**



**Diabetes Prevalence by Age Group:  
Monterey County Adults Ages 65+, 2011 - 2018**

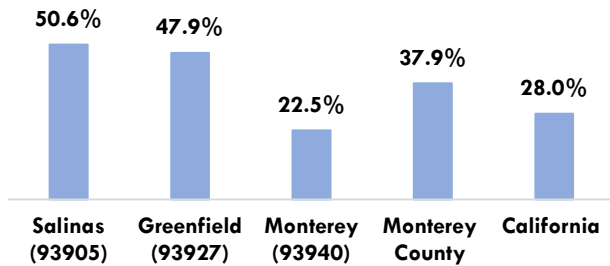


\*Indicates a statistically unstable value. Note: This question was asked of respondents who were 18 years of age or older.  
Source: California Health Interview Survey, 2011-2018.

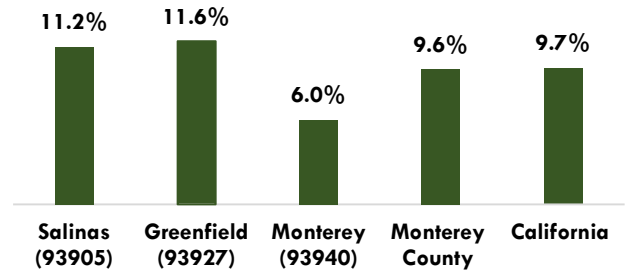
Comparing 2011 to 2018, the rate of pre-diabetes in adults ages 18 to 64 increased from 4% to 12%. The percentage of adults diagnosed as pre-diabetic also increased for adults ages 65 and over, from 18% to 30%. Within the same timeframe the percentage of Monterey County adults ages 18 to 64 who were ever diagnosed with diabetes decreased from 9% to 5%. The percentage of adults aged over 65 years of age who were diagnosed with diabetes also decreased from 29% to 18%.

### Adult Obesity and Diabetes by Geographical Location, 2016

**Adults who are Obese:  
By Geographical Location, Ages 18 and over, 2016**



**Adults diagnosed with Diabetes:  
By Geographical Location, Ages 18 and over, 2016**



Data Source: AskCHIS Neighborhood Edition, 2016.

For the purpose of this report, specific geographical ZIP code locations of East Salinas/Alisal (93905), Greenfield (93927), Monterey (93940), in addition to County and state data to highlight the disproportional rates of obesity and diabetes, such as:

- In 2016, 50.6% of adults aged 18 years or older with a BMI greater than 30 were considered obese in 22.5% in Monterey (93940), compared to 47.9% in Greenfield (93927), and 50.6% in East Salinas/Alisal (93905) compared with 37.9% in Monterey County and 28% in California.
- In 2016, 11.2% of adults ages 18 years or older were diagnosed with diabetes in East Salinas/Alisal (93905) in comparison with 11.6% in Greenfield, 6.0% in Monterey, 9.6% in Monterey County and 9.7% in California.

## Risk Factors for Adult Obesity and Diabetes

Both obesity and diabetes mellitus are important independent risk factors for the development of cardiovascular disease. Obesity is the leading risk factor for type 2 diabetes. However, there are distinction between the two regarding certain risk factors. Other risk factors that are in common between both conditions include:

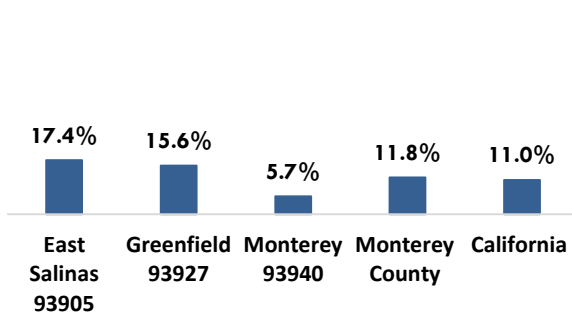
- Diet
- Lack of physical activity
- Health behaviors
- Genetics
- Drug and Alcohol consumption
- Environmental (access to safe recreation areas, safe sidewalks)

These risk factors are social determinants of health that can be attributed to health inequities among sub-populations in Monterey County. For example, food insecurity has an adverse effect on healthy nutritional intake, as does the high cost of healthier food options. Lack of physical activity may be caused by the lack of accessible safe recreational areas to engage in daily physical activity. Other social risk factors include low income, racial/ethnic prejudices, health inaccessibility, poor educational attainment and unhealthy environments.

Geographical differences in health behaviors are present in the root causes of obesity and diabetes, such as:

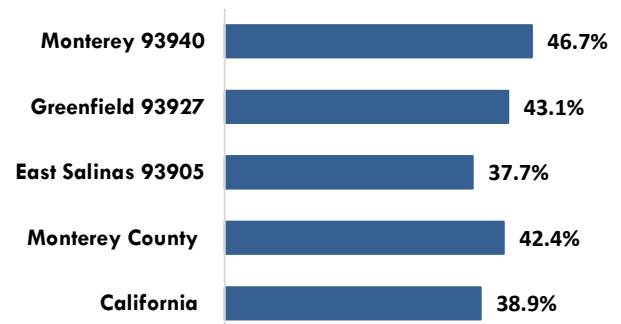
- Sugary drink consumption of more than one glass per day for adults aged 18 years and over in East Salinas/Alisal (93905) was 17.4%, compared to 15.6% in Greenfield (93927), 5.7% in Monterey (93940), 11.8% in Monterey County and 11.0% in California (2016).
- The city of East Salinas/Alisal (93905) and Greenfield (93927) had more than double the rate of sugary drink consumption of one or more times per day, compared to Monterey (93940), (2016).
- The city of East Salinas (93905) and Greenfield (93927) had a higher rates of sugary drink consumption compared to Monterey County and California (2016).
- In East Salinas/Alisal (93905), 37.7% of adults aged 18 years and over walked at least 150 minutes a day, compared to 43.1% in Greenfield (93927), 46.7% in Monterey (93940), 42.4% in Monterey County, and 38.9% in California (2016).
- In East Salinas/Alisal (93905), 19.3% of adults aged 18 years and over had incomes less than 200% of the federal poverty level compared to 16.7% in Greenfield (93927), 1.9% in Monterey (93940), 10.0% in Monterey County, and 7.0% in California (2016).
- In East Salinas/Alisal (93905), 13.8% of children ages 5-17 engaged in regular physical activity, compared to 18.6% in Monterey (93940), 13.8% in Monterey County and 16.5% in California. Data was not available for Greenfield (93927), (2016).

**Sugar Drink Consumption, 1 or more times per day:  
Monterey County Adults Ages 18+, 2016**



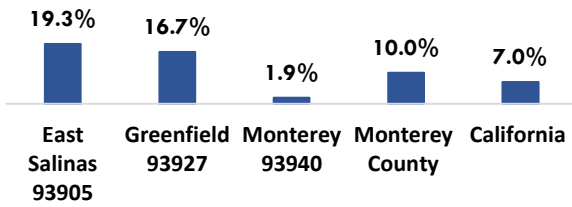
Data Source: AskCHIS Neighborhood Edition, 2016.

**Walked at least 150 minutes a week:  
Monterey County Adults Ages 18+, 2016**



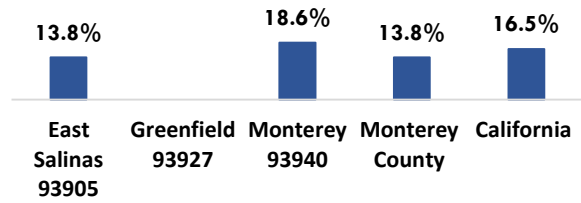
Data Source: AskCHIS Neighborhood Edition, 2016.

**Food Insecurity:  
Monterey County Adults ages 18+, 2016**



Data Source: AskCHIS Neighborhood Edition, 2016.

**Regular Physical Activity:  
Monterey County Children Ages 5-17, 2016**

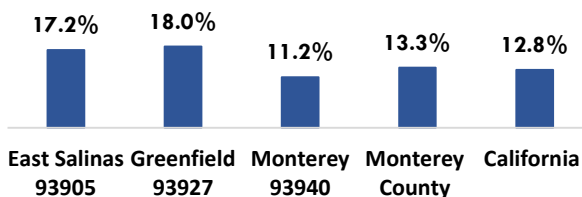


Data Source: AskCHIS Neighborhood Edition, 2016. Note: Data not available for Greenfield (93927).

**Social Determinants of Health**

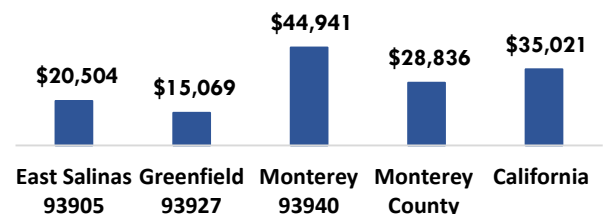
Social and economic factors can affect health outcomes, such as: income, poverty, educational attainment, inaccessibility to health insurance, environmental factors (including where someone lives), and not healthcare services inequities. For example, income affects whether or not an individual has the available funds to purchase healthy foods options (food security). Food insecurity is the lack of sustainable intake of foods, specifically nutritious food, not those high in sodium and saturated fats. Educational attainment may affect an individual's income due to the level of education an individual may have because the as you will see below, those who graduated high school or more, were more likely to have a higher income than those who did not graduated high school. Educational attainment can also contribute to access to healthcare insurance. Many positions that required higher education offer health insurance options and the means to pay for health-related costs as opposed to other positions that require less educational attainment. These factors also may determine the environmental aspects in terms of the neighborhood in which an individual resides, neighborhoods with safe access for recreational use which may encourage physical activity. A higher income may allow individuals to live in safer neighborhoods that do not experience as much violence and lack recreational open spaces for physical activities. Identifying where there is a lack in social and economic opportunities can help determine where health disparities are and what actions can be taken to narrow the gap in health inequities to produce positive health outcomes.

**Persons Living in Poverty:  
Monterey County Residents, 2018**



Data Source: US Census, 2018

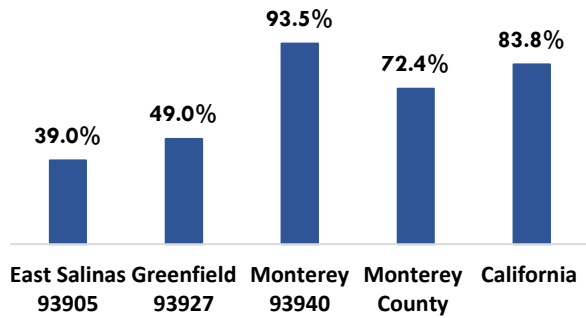
**Per Capita Income in the Past 12 months:  
Monterey County Residents, 2018**



Data Source: US Census, 2018

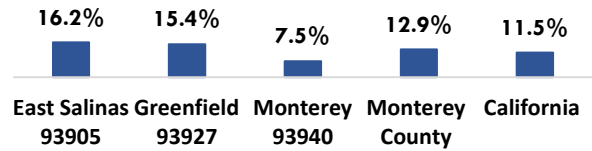
- In 2018, Greenfield had the lowest per capita income of \$15,069, compared to East Salinas at \$20,504, Monterey at \$44,941, Monterey County at \$28,836, and California at \$35,021.
- For 2018 the per capita income was closely related to the poverty levels. Persons below the poverty line in East Salinas/Alisal was 17.2%, in comparison with 18% in Greenfield, 11.2% in Monterey, 13.3% in Monterey County, and 12.8% in California.

**Educational Attainment, High School Graduate or higher:  
By Geographical Location, 2017**



Data Source: U.S. Census (2017).

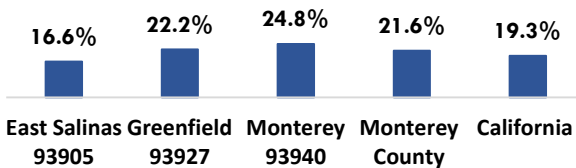
**Currently Uninsured:  
Adults ages 18-64, By Geographical Location, 2016**



Data Source: AskCHIS Neighborhood Edition, 2016.

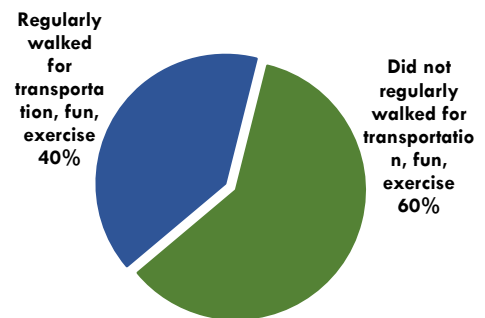
- In 2017, there were educational attainment differences among the different geographical locations. The percentage in East Salinas/Alisal (93905) being a high school graduate or higher was 39.0%, compared to 49.0% in Greenfield (93927), 93.5% in Monterey (93940), 72.4% in Monterey County, and 83.8% in California.
- In 2016, adults 18-64 that were currently uninsured was 16.2% in East Salinas/Alisal (93905), compared to 15.4% in Greenfield (93927), 7.5% in Monterey (93940), 12.9% in Monterey County, and 11.5% in California.
- In 2016, adults aged 18 and over experienced delayed prescriptions/medical services was 16.6% in East Salinas/Alisal (93905), 22.2% in Greenfield (93927), 24.8% in Monterey (93940), 21.6% in Monterey County and 19.3% in California.
- In 2017, 39.9% of adults in Monterey County aged 18-65 regularly walked for transportation, fun or exercise, compared to 60.1% who did not regularly walk for transportation, fun, or exercise.

**Delayed Prescriptions/Medical Services :  
By Geographical Location Adults ages 18+, 2016**



Data Source: AskCHIS Neighborhood Edition, 2016.

**Regularly Walked for Transportation, Fun, Exercise:  
Monterey County Adults Ages 18-65, 2017**



Data Source: California Health Interview Survey, 2017.

On the next page are suggested implementation strategies that support healthy living in county communities

## **Decrease Diabetes & Obesity**

### **Implement Environmental Change Strategies that Support Healthy Living**

Increase Accessibility to Bike/Walking Paths & Parks  
Increase Access to Affordable Healthy Food  
Enhance School Wellness Policies  
Increase & Enhance Worksite Wellness Programs

### **Provide Info & Resources that Empower People to Live Healthy Lives**

#### **Populations**

Increase and Enhance use of Community-based Promoters/Peer Educators  
Increase Awareness and Knowledge: Obesity Risk & Protective factors in Target  
Increase Participation in Chronic Disease Self-management  
Increase Acceptance and Practice of Breastfeeding  
Expand Enrollment of Medical Recipients in CalFresh

### **Websites for Healthy Eating**

CalFresh Healthy Living - [cachampionsforchange.cdph.ca.gov/en/Pages/default.aspx](http://cachampionsforchange.cdph.ca.gov/en/Pages/default.aspx)  
Leah's Pantry - [eatfresh.org](http://eatfresh.org)  
My plate - [choosemyplate.gov/](http://choosemyplate.gov/)  
Blue Zones Project - [info.bluezonesproject.com/montereycounty](http://info.bluezonesproject.com/montereycounty)  
Nutrition and Fitness Collaborative of the Central Coast - [mtyhd.org/nfccc](http://mtyhd.org/nfccc)

### **Websites for Diabetes Prevention Education**

Diabetes Education through Natividad Medical Center - [natividad.com/community/diabetes-education/](http://natividad.com/community/diabetes-education/)  
Diabetes and Prediabetes Education through Community Health Innovations - [communityhealthinnovations.org/what-we-do/diabetes-prevention-management/](http://communityhealthinnovations.org/what-we-do/diabetes-prevention-management/)  
National Diabetes Prevention Program through Central Coast YMCA - [centralcoastymca.org/programs/diabetes-prevention-program/](http://centralcoastymca.org/programs/diabetes-prevention-program/)  
Salinas Valley Medical Clinic Diabetes and Endocrine Center - [svmh.com/services/diabetes-endocrinology/](http://svmh.com/services/diabetes-endocrinology/)