

Health Indicators

Healthy Eating and Active Living

Good nutrition and physical activity are essential to good health. Benefits associated with a healthy diet and regular exercise include:

- decreased risk of chronic diseases such as type 2 diabetes, hypertension, and certain cancers.
- decreased risk of overweight and obesity.
- decreased risk of vitamin and mineral deficiencies.¹

A healthful diet includes a variety of nutrient-dense foods within and across the food groups, especially whole grains, fruits, vegetables, low-fat or fat-free dairy products, and lean protein sources. A healthful diet also limits the intake of saturated and trans

fats, cholesterol, added sugars, sodium, and alcohol.

Physical activity reduces risks of cardiovascular disease and diabetes beyond that produced by weight reduction alone. In addition, physical activity helps to:

- reduce high blood pressure.
- reduce risk for type 2 diabetes, heart attack, stroke, and several forms of cancer.
- reduce arthritis pain and associated disability.
- reduce risk for osteoporosis and falls.
- reduce symptoms of depression and anxiety.²

Expending calories through physical activity, combined

with reducing the number of calories consumed, creates a “calorie deficit” that results in weight loss. Most weight loss occurs because of decreased caloric intake. However, evidence shows weight loss is best maintained by engaging in regular physical activity.²

In 2008, the United States Department of Health and Human Services released guidelines for physical activity.³ Adults ages 18 to 64 years should engage in two hours and 30 minutes of moderate-intensity, or one hour and 15 minutes of vigorous-intensity, aerobic physical activity each week. Children and adolescents (ages 6 to 17 years) should engage in one hour of

Figure 1. Percent of adults 18 years and older who are obese (BMI ≥30), 1995 to 2010

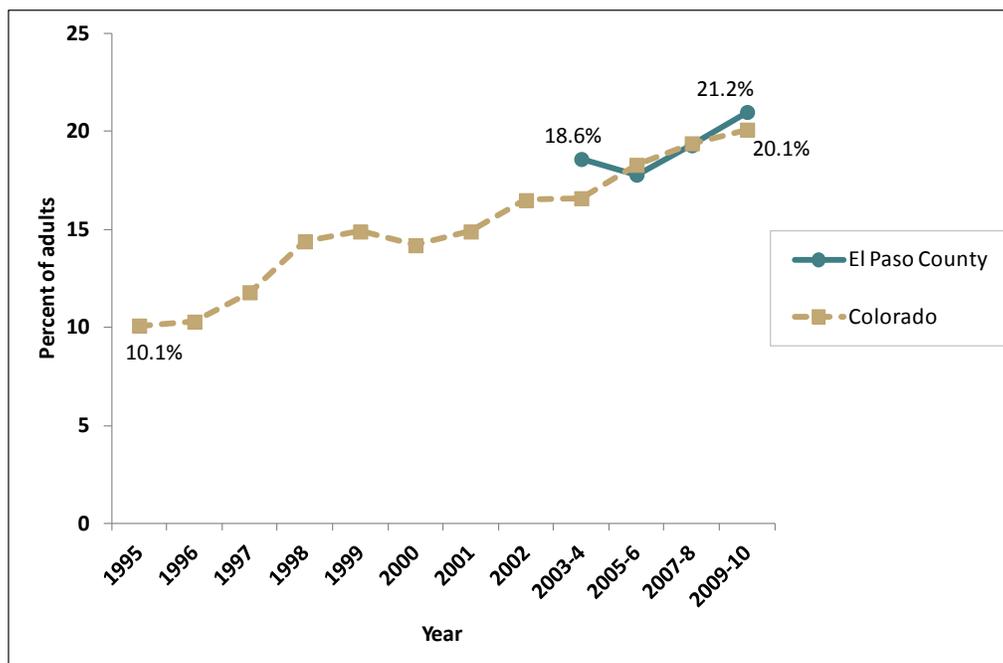
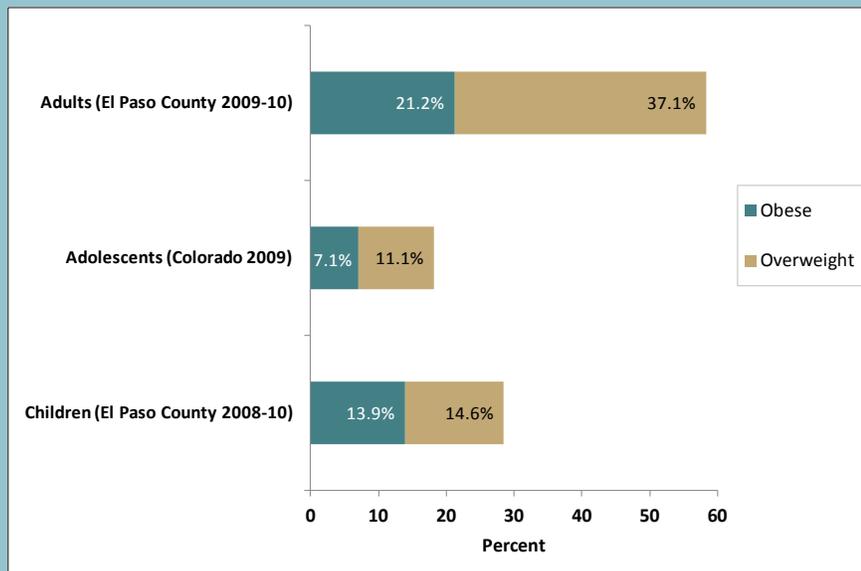


Figure 2. Percent of population with unhealthy weight, El Paso County and Colorado 2008 to 2010



“An estimated 37.1 percent of the adult population in El Paso County were overweight and 21.2 percent were obese in 2009 to 2010.”

physical activity every day. Both age groups are advised to participate in muscle-strengthening activities at least twice weekly.

How is it measured?

Diet is measured in a variety of ways, and one indicator of a healthy diet is reported fruit and vegetable consumption. Barriers that restrict access to healthier food exist for some populations related to geography, income, and education levels. Measuring the locations of neighborhood grocery stores and farmers’ markets compared to the density of fast food restaurants may explain patterns of food consumption and the availability of more or less nutritional foods in a particular setting.

Perhaps the most telling indicators of diet and physical activity are the outcome measures for overweight and obesity, high cholesterol,

hypertension, and diabetes. Overweight and obesity are labels for ranges of weight that are greater than what is generally considered healthy for a given height, and have been linked to increased risk of certain health problems.

For estimating prevalence of unhealthy weight at the population level, measures of weight and height are used to calculate “body mass index” (BMI). BMI is used because, for most people, it correlates with their amount of body fat.

- An adult who has a BMI between 25 and 29.9 is considered overweight.
- An adult who has a BMI of 30 or higher is considered obese.

A common source of adult BMI data is the Behavioral Risk Factor Surveillance System which is a state-based health survey of adults 18 years and older. For adolescents and

children, BMI calculations are compared to percentiles of BMI-for-age ranges. The percentile indicates the relative position of the child’s BMI among children of the same sex and age in the United States. Adolescent BMI data is extracted from the state-based Youth Risk Behavior Survey of high school students. For younger children, BMI data is derived from the Colorado Child Health survey. Data for overweight and obese children and adolescents are available at the state level.

Physical activity is measured by quantifying the duration and relative intensity levels of various activities in which people engage. At the population level, these measures are commonly obtained from the aforementioned health surveys.

How are we doing in El Paso County?

Although Colorado continues to rank as one of the leanest states in terms of weight indicators, it has not escaped the national obesity epidemic. The proportion of Colorado adults who are obese has more than doubled in the past 15 years—from 10.1 percent in 1995 to 21.4 percent in 2010—meaning more than one of every five Colorado adults are obese (Figure 1).^{4,5} An estimated 37.1 percent of the adult population in El Paso County were overweight and 21.2 percent were obese in 2009 to 2010 (Figure 2).⁶

Disparities exist for people who are overweight and obese based on income, education, gender, and race (Figure 3). There is a trend, although not statistically significant, for black adults to have higher prevalence of obesity as compared to white or Hispanic adults. Also, obesity is more common among people in households earning less than \$25,000 per year and, interestingly, is higher in people who graduated high school or have a more advanced degree.⁶

People who are overweight or obese are at risk for poor health outcomes including hypertension, high cholesterol, and non-gestational diabetes. In El Paso County, the number of adults with these conditions has increased substantially in the past decade, paralleling trends in obesity. Between 2003 and 2009, hypertension among adults has risen from 14.7 percent to 19.2 percent, and high cholesterol rose from 25.5 percent to 34.5 percent among those who had their

cholesterol levels checked.⁵ The prevalence of non-gestational diabetes increased from 3.8 percent among adults in 2003-2004 to 5.4 percent in 2009-2010, representing a 42 percent increase overall. Figure 4 illustrates that people with unhealthy BMI are substantially more likely to suffer from hypertension, high cholesterol, and non-gestational diabetes.⁷

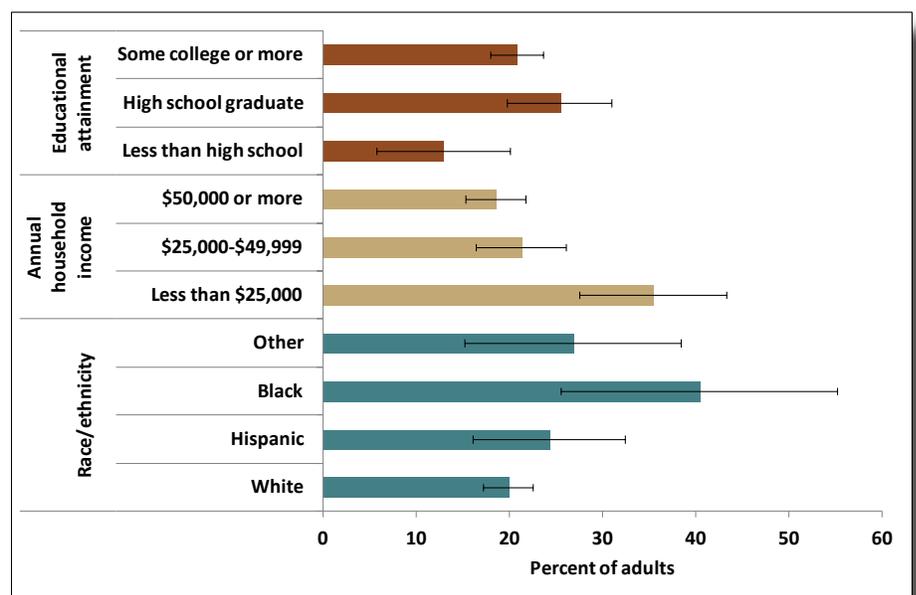
As shown in Figure 2, 28.5 percent of El Paso County children ages 2 to 14 years were of excessive weight, which is not significantly different than the state average of 25.8 percent (2008 to 2010).⁸ Additionally, almost one in five Colorado high school students were at an unhealthy weight in 2009.⁹

Eating, physical activity, and sedentary behaviors of children and youth impact the risk of being overweight and obese.

Statewide, nearly two-thirds of children under 14 years of age regularly eat fast food and a substantial proportion engage in sedentary activities for two or more hours per average school day (Table 1).¹⁰

The United States Preventive Services Task Force presented evidence that breastfeeding provides substantial health benefits for children, with improved health outcomes related to the duration and exclusivity of breastfeeding.¹¹ For example, children who were not breastfed were more likely to have asthma, type 2 diabetes, and obesity. Interestingly, data shows that in El Paso County nearly 90 percent of new mothers initiate breastfeeding after birth, although nearly one-third of those mothers do not continue breastfeeding beyond 2 months (Figure 5).¹²

Figure 3. Percent of adults 18 years and older who are obese (BMI ≥30), by selected characteristics, El Paso County 2009 to 2010



Note: Error bars represent the 95% margin of error for each value.

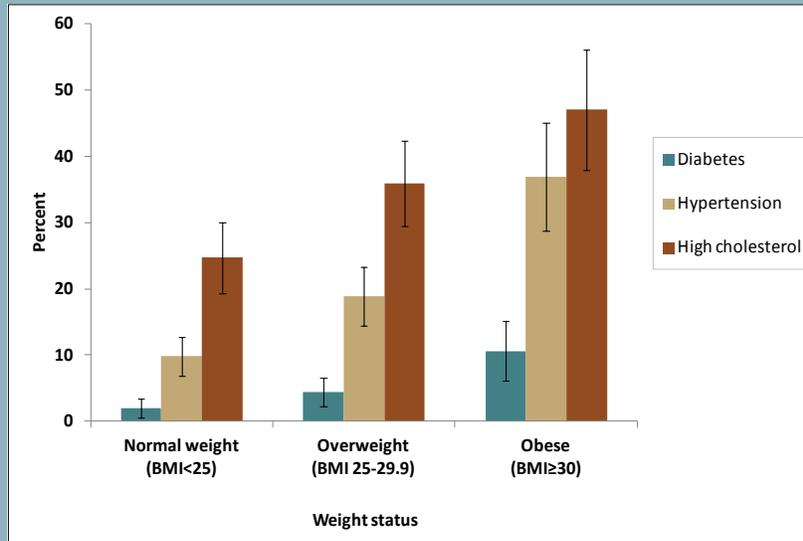
Physical activity measures indicate that many adults are meeting recommended guidelines. In El Paso County in 2009, 57.0 percent of adults reported engaging in two hours and 30 minutes of moderate physical activity (e.g., brisk walking) or one hour of vigorous physical activity (e.g., running) per week.¹³ In contrast, fewer children and youth are meeting the recommendation for daily physical activity. Only 38.0 percent of Colorado

children ages 5 to 14 met the recommended weekly amount of moderate physical activity in 2010.¹⁰ Just over one-quarter of Colorado high school students met the recommended weekly amounts of exercise in 2009 (Table 1).⁹

Geographic characteristics of a community may have barriers for healthy eating. For example, where people live impacts the availability of nearby full-service

grocery stores with fresh fruits and vegetables, which can then influence food choices. In 2008, only 44 percent of zip codes in El Paso County had some form of healthy food outlet (defined as a grocery store, produce stand, or farmer's market). This value was below the range found in neighboring Colorado counties and the state average of 59 percent, and well below the national benchmark of 92 percent (Table 2).¹⁴ ■

Figure 4. Percent of adults 18 years and older with co-existing conditions based on weight status, El Paso County 2009



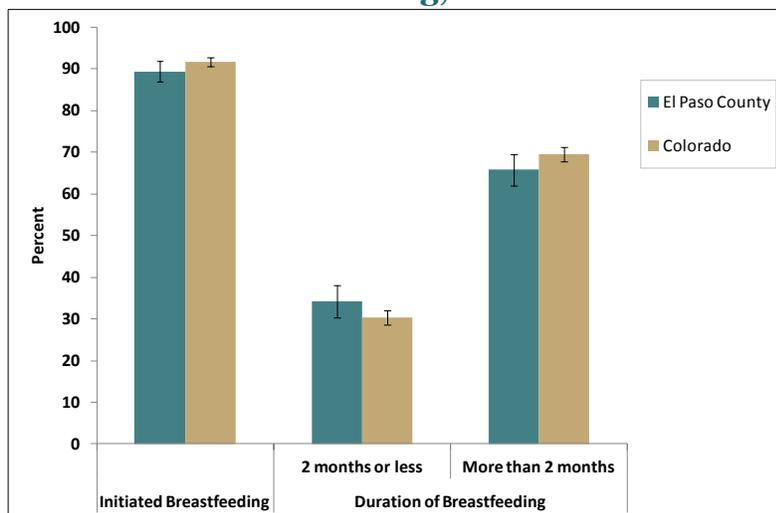
Note: Error bars represent the 95% margin of error for each value.

Table 1. Percent of children and adolescents engaging in selected eating and recreational behaviors, Colorado 2009 and 2010

	Ages 1-14 years (2010)	Ages 15-19 years (2009)
Consuming less than recommended daily amount of fruit and vegetables ^a	81.3%	75.6%
Eating fast food one or more times per week ^b	63.3%	n/a
Engaging in recommended daily physical activity ^c	38.0% (ages 5-14)	26.9%
Watching TV or videos two or more hours on average school day ^d	34.1% (ages 5-14)	45.6%
Playing video games or using computer two or more hours on average school day ^d	11.0% (ages 5-14)	35.2%

^a Five or more servings per day.
^b Food is paid for at a counter or drive thru, before being eaten.
^c 60 minutes of physical activity per day.
^d Unrelated to school
n/a: Measure unavailable for age group

Figure 5. Percent of new mothers who breastfed their infant and duration of breastfeeding, 2008 to 2010



Note: Error bars represent the 95% margin of error for each value.

Table 2. Accessibility of healthy food outlets based on zip code in selected Colorado counties, 2008

Place	Percent of zip codes with access to at least one healthy food outlet*
Colorado	59%
Adams County	83%
Arapahoe County	83%
Denver County	70%
Douglas County	69%
El Paso County	44%
Jefferson County	83%
Larimer County	73%
Pueblo County	82%
Weld County	52%
National Benchmark	92%

* Healthy food outlet is defined as a grocery store or produce stand/farmers' market

¹Centers for Disease Control and Prevention [Internet]. Nutrition Resources for Health Professionals. Available from: www.cdc.gov/nccdphp/dnpao/index.html.

²Centers for Disease Control and Prevention [Internet]. Physical Activity for a Healthy Weight. Available from: www.cdc.gov/healthyweight/physical_activity/index.html.

³U.S. Department of Health and Human Services [Internet]. 2008 Physical Activity Guidelines [Oct 2008]. Available from: www.health.gov/paguidelines/guidelines/default.aspx#toc.

⁴Centers for Disease Control and Prevention [Internet]. 1995-2002 Behavioral Risk Factor Surveillance System: Prevalence and Trends Data. Available from: <http://apps.nccd.cdc.gov/brfss/>.

⁵Colorado Department of Public Health and Environment [Internet]. Colorado Health Information Dataset: 2003-2010 Behavioral Risk Factor Surveillance System. Available from: www.chd.dphe.state.co.us/cohid/topics.aspx?q=Behavioral_Risk_Factors.

⁶Colorado Department of Public Health and Environment (CDPHE). 2009-2010 Behavioral Risk Factor Surveillance System. Provided by CDPHE Health Statistics on Aug 30, 2011.

⁷Colorado Department of Public Health and Environment (CDPHE). 2009 Behavioral Risk Factor Surveillance System. Provided by CDPHE Health Statistics on July 14, 2011.

⁸Colorado Department of Public Health and Environment (CDPHE). 2008-2010 Colorado Child Health Survey Data. Provided by CDPHE Health Statistics on March 29, 2012.

⁹Colorado Department of Public Health and Environment [Internet]. Adolescent Health Data: 2009 Youth Risk Behavior Survey. Available from: www.chd.dphe.state.co.us/topics.aspx?q=Adolescent_Health_Data.

¹⁰Colorado Department of Public Health and Environment [Internet]. Maternal and Child Health Data: 2010 Colorado Child Health Survey. Available from: www.chd.dphe.state.co.us/topics.aspx?q=Maternal_Child_Health_Data.

¹¹U.S. Preventive Services Task Force. *Primary Care Interventions to Promote Breastfeeding: U.S. Preventive Services Task Force Recommendation Statement*. Originally published in *Ann Intern Med* 2008;149:560-4. AHRQ Publication No. 09-05126-EF-2, October 2008. Available from: www.uspreventiveservicestaskforce.org/uspstf08/breastfeeding/brfeedrs.htm.

¹²Colorado Department of Public Health and Environment [Internet]. Colorado Health Information Dataset: 2008-2010 Pregnancy Risk Assessment Monitoring System. Available from: www.chd.dphe.state.co.us/cohid/topics.aspx?q=Pregnancy_Risk_Assessment_Data.

¹³Centers for Disease Control and Prevention [Internet]. 2009 Selected Metropolitan/Micropolitan Area Risk Trends: Behavioral Risk Factor Surveillance System City and County Data. Available from: <http://apps.nccd.cdc.gov/BRFSS-SMART/SelMMSAPrevData.asp>.

¹⁴Robert Wood Johnson Foundation [Internet]. 2011 County Health Rankings. Available from: www.countyhealthrankings.org/colorado/el-paso.