The Weight of the State:
2009 Report on **Overweight** and **Obesity** in Colorado

Colorado Department
of Public Health
and Environment

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Letter from the Director of COPAN

Colorado is part of a national obesity epidemic. Although Colorado ranks as one of the leanest states in the country, data show there is cause for concern. The purpose of the *Weight of the State: 2009 Report on Overweight and Obesity in Colorado* is to explain how overweight and obesity are affecting the health of Colorado adults and children, and to describe related risk factors of physical inactivity, poor nutrition, and poverty.

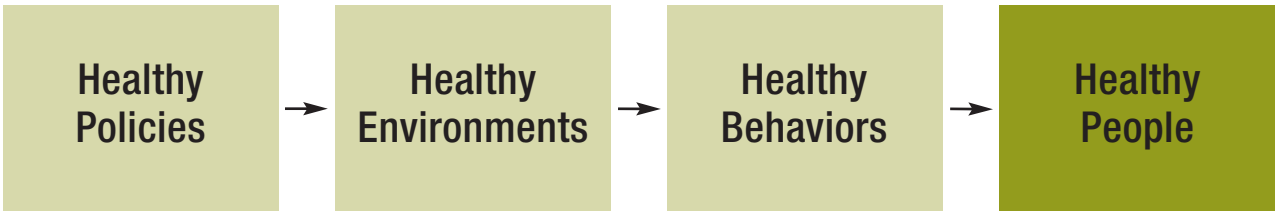
An increasing number of Colorado's residents, like the rest of the nation, fall into the categories of being overweight or obese. Obesity shortens the life span and decreases the quality of life with health complications including diabetes and heart disease. The cost of treating obesity and its related health conditions impacts all residents. In 2003, obesity cost Colorado taxpayers $874 million. And today, the costs are significantly higher.

The prevention and treatment of obesity is complex. It involves individual and community change, including developing and sustaining partnerships with schools, communities, work sites and health care systems. It's also important to understand how policy and environmental barriers play a role in obesity. For example, do people have easy access to affordable fresh fruits and vegetables? Are there alternative transportation options, including safe routes to walk and bike? Are trails and playgrounds available for active play? Does the absence or presence of local and state policies hinder healthier living?

Successfully addressing obesity will require a concerted effort at the state and local level. For example, parents can set good examples by reducing television and screen time, and playing outside with their children. Policymakers can support land use and zoning changes that open access to local food production and the development of parks and trails. Health care providers, work sites, and community leaders can champion breastfeeding, fitness, and healthier meals. Schools can support daily physical activity and eating more fruits and vegetables. Working in tandem on these many levels, including monitoring the data and focusing efforts in areas of the greatest need, the trend of overweight and obesity in Colorado can be reversed.

Sincerely,

Eric Aakko, MS CHES
Director, Colorado Physical Activity and Nutrition Program
Colorado Department of Public Health and Environment



Source for graphic: Keener, D, Goodman, K, et al. (2009). Recommended community strategies and measurements to prevent obesity in the United States: Implementation and measurement guide. Atlanta, GA: USDHHS, CDC.

Executive Summary

Weight of the State: 2009 Report on Overweight and Obesity in Colorado is a comprehensive look at obesity-related behaviors and outcomes for the state and its counties. The report provides data specific to populations within Colorado based on age, sex, race/ethnicity, education, and income levels and data specific to geographic regions that are disproportionately affected by the obesity epidemic. The report identifies policies that have been enacted to prevent obesity, provides recommended community interventions to prevent obesity and highlights successful community activities targeted to prevent obesity in Colorado.

Obesity in the United States has reached epidemic proportions. Because obesity and overweight contribute significantly to outcomes such as heart disease, stroke and diabetes, and increase a person's risk for disability, eliminating this epidemic is of vital public health importance. Obesity is a leading contributor to rising economic costs in terms of direct and indirect health care expenses both in Colorado and in the rest of the nation.

Highlights from the Report

Although Colorado is one of the leanest states in the nation, the prevalence of obesity is increasing.

- From 1995 through 2008, the prevalence of adult obesity in Colorado increased from 10.1 to 19.1 percent.

More than half of the adults in Colorado were overweight or obese.

- In 2008, 36.2 percent of adult Coloradans were overweight and 19.1 percent were obese; 55.3 percent were either overweight or obese, which translates to 2.1 million adult Coloradans.

Overweight and obesity varied among different groups.

- In 2008, overweight and obesity were highest among adults who:
  - were ages 45–64 years (39.0 percent overweight and 22.8 percent obese);
  - were non-Hispanic Blacks (36.8 percent overweight and 26.6 percent obese) and Hispanics (40.8 percent overweight and 25.5 percent obese);
  - did not complete high school (37.9 percent overweight and 22.1 percent obese) and graduated high school or obtained a GED (35.1 percent overweight and 23.8 percent obese); and
  - lived in southeast counties (26 to 27 percent obese).

Children and adolescents both had a higher prevalence of overweight or obesity than the *Healthy People 2010* objective of 5 percent.

- The prevalence of overweight and obesity among children ages 2–14 years was 15.1 and 13.6 percent, respectively, in 2008.
- The prevalence of overweight and obesity among adolescents in high school (grades 9–12) was 10.3 and 9.8 percent, respectively, in 2005.

Coloradans had behaviors related to healthy weight that could be improved or maintained to prevent obesity.

Physical Activity

- In 2007, 55.1 percent of adults participated in 30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week.
- In 2008, 18.9 percent of adults were physically inactive.
- In 2008, 55.7 percent of children ages 5–14 years reportedly spent seven or more hours per week participating in physical activities.
- Of children ages 5–14 years who were not home schooled in 2008, 21.3 percent walked, bicycled, or skateboarded to school everyday during a typical school week.
- In 2008, 95.9 percent of children ages 5–14 years used a computer or played video games for two hours or less per day and 81.9 percent of children ages 2–14 years watched television for two hours or less per day.
- In 2005, 37.2 percent of adolescents in high school met the recommendation of physical activity at least 60 minutes per day on at least 5 of the past 7 days.
- In 2007, 25.8 percent of adults ate at least five servings of fruits and vegetables.

- In 2008, 9.7 percent of children ate at least two fruit and three vegetable servings per day, and 81.4 percent of children ate fast food fewer than two times per week.
- In 2006, 82.5 percent of women who gave birth initiated breast-feeding, and 30.5 percent of women who gave birth were still breast-feeding their child at 12 months after birth.

Differences in the prevalence of obesity and physical activity exist among different regions of Colorado.

- The southeast region of Colorado has the highest prevalence of obesity and physical inactivity.

The Colorado Physical Activity and Nutrition Program (COPAN) at the Colorado Department of Public Health and Environment works with many internal and external partners to help communities reduce obesity by increasing awareness of the problem; sharing best practices; and promoting health through education on the lifelong benefits of healthy eating and physical activity, and through policy and environmental change. COPAN also relies on strategic partnerships and collaboration with a host of communities, agencies, work sites, schools and health care organizations to successfully promote lifelong wellness. By incorporating social and environmental policies into obesity prevention, communities can reduce barriers to good health, prevent obesity and reduce the burden of obesity among community members.

Acknowledgements

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CHAPTER 1

Introduction

During the past decade, overweight and obesity have reached epidemic proportions in the United States. Coloradans have kept pace with this national trend. Since 1995, the prevalence of obesity in Colorado has nearly doubled. More than half of the state's population is either overweight or obese, and these trends are not decreasing. People who are overweight or obese have higher risks of serious, chronic diseases and conditions, such as type 2 diabetes, heart disease, stroke, hypertension, high blood cholesterol, cancer and breathing problems. Chronic diseases such as these leave the affected individuals vulnerable to a lifetime of disease, and burden the health care system with ongoing medical monitoring, intervention and hospitalization.

Healthy People 2010 is a set of national objectives for disease prevention and health promotion. Because it is important to decrease the prevalence of overweight and obesity and increase the prevalence of physical activity, the *Healthy People 2010* framework includes 25 associated objectives. According to this framework, physical activity and overweight/obesity are two of the 10 "leading health indicators" that represent the most significant preventable threats to health in the United States. Strategies that address these indicators can have a profound effect on increasing quality of life, increasing years of healthy life and eliminating health disparities.[1] The *Healthy People 2010* objectives related to physical activity and overweight/obesity include the following:

- Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness three or more days per week for 20 or more minutes per occasion. (**Target:** 85 percent)
- Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day. (**Target:** 30 percent)
- Reduce the proportion of children and adolescents who are overweight or obese. (**Target:** 5 percent)
- Reduce the proportion of adults who are obese. (**Target:** 15 percent)

For the complete list of objectives, see Appendix F.

Purpose of the Report

The purpose of this report is to summarize current knowledge of the problem of overweight and obesity in Colorado. The specific goals of this report are to

1) define overweight and obesity;
2) describe how overweight and obesity affect health outcomes;
3) provide estimates of the costs associated with overweight and obesity;
4) characterize overweight and obesity in Colorado by identifying geographic areas and groups of adults and youth with higher prevalence; and
5) explain current efforts in Colorado to prevent and reduce overweight and obesity, such as using policy to change built and social environments.

This report uses the data available from national and state data sets, including the Behavioral Risk Factor Surveillance System, the National Health and Nutrition Examination Survey, the Youth Risk Behavioral Surveillance System, the Colorado Child Health Survey, the National Immunization Survey and the Pregnancy Risk Assessment Monitoring System. A description of each of these public health data sets is provided in Appendix A.

Measuring Overweight and Obesity

The World Health Organization defines overweight and obesity as "abnormal or excessive fat accumulation that may impair health."[2] Body mass

index (BMI) is a widely used measure of overweight and obesity because it's an inexpensive, convenient and reliable measure to estimate body fatness. BMI is calculated as weight in kilograms divided by height in meters squared. Among adults 20 years of age and older, BMI ranges for overweight and obesity (Table 1) are based on increased risks of disease, death or other health complications.[3] Healthy weight (reduced body fat) is associated with reduced risks for related health complications.

Table 1. Adult Body Mass Index (BMI) Ranges for Underweight, Healthy Weight, Overweight, and Obese

BMI Category	BMI Range
Underweight	Less than 18.5
Healthy Weight	18.5 to 24.9
Overweight	25 to 29.9
Obese	30.0 or greater

Source: National Institutes of Health, 1998

Calculation of BMI is the same for all people, but the definitions of underweight, healthy weight, overweight and obese for children and adolescents ages 2–20 years (Table 2) are different than those for adults. This is because body fatness changes with age and is different for boys and girls. The Centers for Disease Control and Prevention growth charts for the year 2000 provide BMI-for-age percentiles for boys ages 2–20 years and BMI-for-age percentiles for girls ages 2–20 years. BMI categories are based on those percentiles (Table 2).

Table 2. Child and Adolescent Body Mass Index (BMI) Ranges for Underweight, Healthy Weight, Overweight, and Obese

BMI Category	BMI Range
Underweight	Less than 5th percentile
Healthy Weight	5th through 84th percentiles
Overweight	85th through 94th percentiles
Obese	95th percentile or greater

Source: Centers for Disease Control and Prevention

In this report, the adult definitions for underweight, normal weight, overweight and obese were used for people 18 years of age and older.

Causes of Overweight and Obesity

Body weight is determined by a complex combination of factors, including genetic, metabolic, behavioral, environmental, cultural and socioeconomic factors. For most people, overweight or obesity is caused by consuming more calories than are expended.[4] In other words, the cause of overweight or obesity for most people is excess calorie consumption and/or inadequate physical activity. Two general behavioral trends in the United States have an effect on overweight and obesity within the population: 1) a shift in diet toward energy-dense foods high in fat and sugars but low in vitamins and micronutrients, and 2) a trend toward decreased physical activity due, in part, to changes in both workplace behaviors and modes of transportation.[5] Compounding these behavioral trends of unhealthy dietary habits and sedentary lifestyles are other environmental, cultural and socioeconomic factors. For example, processed convenience foods have high amounts of sugar, fat and salt, and are easily accessible and inexpensive. Also, Americans spend most of their time engaged in behaviors that expend very little energy.[6]

Health Risks

Being overweight or obese increases a person's risks for serious health outcomes, including premature death. In the Surgeon General's 2001 report on overweight and obesity, it was estimated that, each year in the United States, approximately 300,000 deaths are associated with overweight and obesity.[7] In that report, former Surgeon General David Satcher stated, "Left unabated, overweight and obesity may soon cause as much preventable disease and death as cigarette smoking."

Other health risks associated with overweight and obesity include: type 2 diabetes, heart disease, stroke, hypertension, gallbladder disease, osteoarthritis, sleep apnea, asthma, breathing problems, cancer (endometrial, colon, kidney, gallbladder and postmenopausal breast cancer), high blood cholesterol, complications of pregnancy, menstrual irregularities and psychological disorders such as depression.[8] The risk of these health

conditions increases as a person's body weight increases relative to his or her height. While these obesity-related health risks historically have been seen as a problem for adults, today they are appearing more and more in children. Pediatricians are increasingly likely to treat what once were strictly considered maladies of the middle aged—type 2 diabetes, hypertension, high blood cholesterol and psychological disorders such as depression—in obese children and adolescents. Furthermore, overweight children are more likely than healthy weight children to become overweight or obese adults.[9] By identifying and reducing the burden of obesity among children, adolescents and adult populations, we directly reduce the burden of many of these debilitating chronic diseases and conditions. Prevention of overweight and obesity is important, as is treatment among people who are already overweight or obese.

Economic Costs

Overweight and obesity, and their associated health conditions, have direct and indirect economic costs. The resultant, direct costs of health care to prevent, diagnose and treat these conditions have risen. Not as obvious are the indirect costs such as the value of income lost from decreased productivity, restricted activity, absenteeism and bed days and the value of future income lost by premature death, which all contribute to the end price of this epidemic.[10]

Most of these costs are attributable to three health conditions associated with overweight and obesity: type 2 diabetes, heart disease and hypertension.[11] A recent study estimated the direct medical costs of obesity, with the following national results:[12]

- The estimated total dollar amount of medical costs attributable to obesity in the United States increased from $74.2 billion in 1998 to $146.6 billion in 2006.
- The estimated percentage of total medical spending attributable to obesity in the United States has increased from 6.5 to 9.1 percent during 1998–2006.
- Per capita medical spending for obese people was $1,429 (42 percent) greater than spending for healthy weight people in 2006.
- An estimated 42 percent of obesity-related medical expenditures were paid by Medicaid and Medicare in 2006.

In Colorado, medical spending attributable to obesity was estimated at $874 million dollars in 2003, with $139 million in Medicare costs and $158 million in Medicaid costs.[13] These estimates for Colorado and the United States likely underestimate the true costs of overweight and obesity because they do not include the indirect costs of obesity or the direct or indirect costs of overweight.

CHAPTER 2

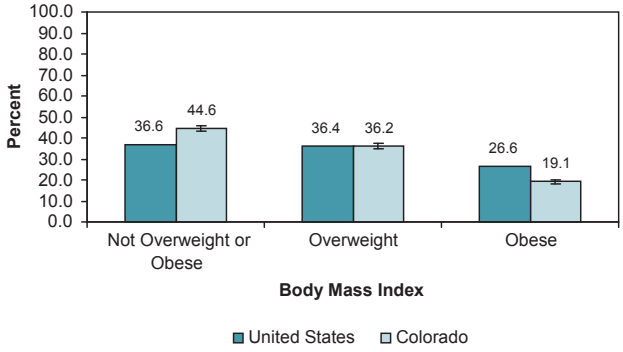
Burden of Overweight and Obesity by Age and Demographics

What's an epidemic? An epidemic occurs when the number of new cases of a certain disease or condition in a given human population and during a given period exceeds what is expected based on recent experience. Obesity now is classified as an epidemic. The number and percent of adults, adolescents and children who are overweight or obese is higher than ever.

Adults

In 2008, the adult prevalence of obesity was 19.1 percent in Colorado and 26.6 percent in the United States (Figure 1). The adult prevalence of overweight was approximately equal in Colorado (36.2 percent) and the United States (36.4 percent). In Colorado, 55.3 percent of adults were overweight or obese in 2008. Of 3.8 million adult Coloradans in 2008,[14] approximately 719,000 were obese and 1.4 million were overweight (2.1 million were overweight or obese).[14]

Figure 1. Adult Prevalence of Not Overweight or Obese, Overweight and Obesity—United States and Colorado, 2008

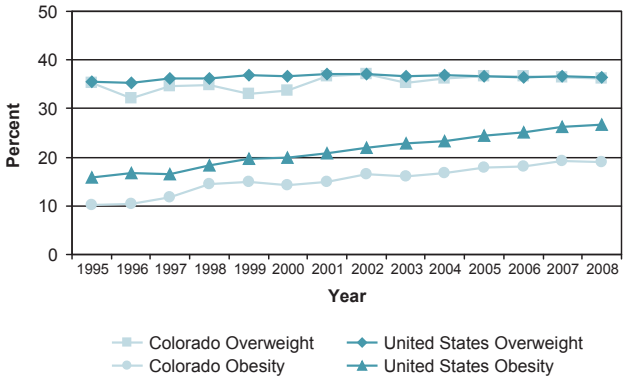


Data source: Behavioral Risk Factor Surveillance System
Prevalence estimates for the United States are the median prevalence of all 50 states and D.C. for 2008.

From 1995 through 2008, the prevalence of adult obesity in Colorado increased from 10.1 to 19.1 percent (an 89 percent increase), which means that the prevalence of obesity almost doubled during this 14-year period (Figure 2). Similarly, the prevalence of obesity in the United States increased from 15.9 to 26.6 percent (a 67 percent increase) during the same period.

The prevalence of overweight has been relatively stable from 1995 through 2008. There has been little change in prevalence in either Colorado or the United States. It is important to note that more than one-third of the adult population is overweight, and the prevalence is not decreasing. The number and percent of adults who either are overweight or obese (and at increased risk of health complications) is growing. Subsequently, the economic costs of overweight and obesity also will continue to grow.

Figure 2. Trends in Adult Overweight and Obesity—United States and Colorado, 1995–2008



Data source: Behavioral Risk Factor Surveillance System
Scale is enlarged to show detail. The maximum value on the y-axis is 50 percent.
Prevalence estimates for the United States are the median prevalence of all 50 states and D.C. for a given year.

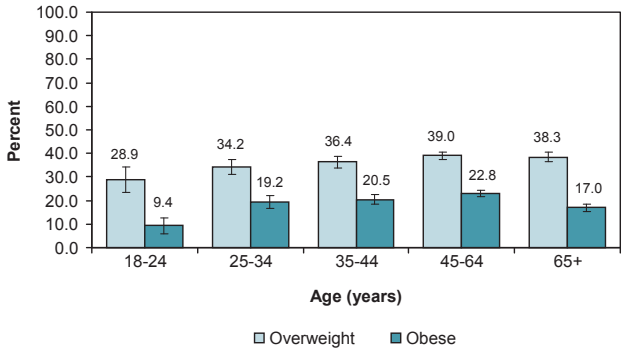
The rise in obesity prevalence is complex; it cannot be attributed to just one factor. Observers and researchers list multiple reasons. High-caloric convenience food is widely available and inexpensive. Most people hold jobs requiring little physical exertion. Most people do not eat the recommended daily number of fruits and vegetables. Eating out at restaurants, where portions generally are larger, is more common.[15] And most Americans, and similarly most Coloradans, do not meet the recommended levels of physical activity. The behavioral factors associated with overweight and obesity in Colorado will be discussed further in Chapter 3.

Adult obesity prevalence in Colorado varies by several demographic factors, following the same general patterns as U.S. adult obesity prevalence by age, sex, race/ethnicity, highest education level achieved and annual household income. These

demographic differences within Colorado are shown in the following figures.

The youngest adult age group, 18–24 years, had a significantly lower prevalence of obesity in Colorado in 2008 compared with older age groups (Figure 3). Though the estimates of obesity prevalence for the middle age groups appear to increase for adults 25–34, 35–44 and 45–64 years of age, these estimates were not significantly different from each other. Adults ages 65 years and older had significantly lower obesity prevalence than adults ages 45–64 years.

Figure 3. Adult Prevalence of Obesity by Age—Colorado, 2008

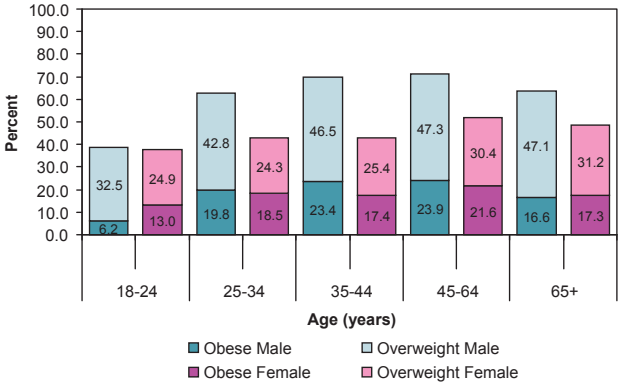


Data source: Behavioral Risk Factor Surveillance System

In Colorado, though adult males appeared to have a slightly higher prevalence of obesity than females in 2008, this difference was not statistically significant. The estimated prevalence of obesity was 19.8 percent for males (95 percent confidence interval: 18.3–21.2 percent) and 18.4 percent for females (95 percent confidence interval: 17.2–19.6 percent).

The pattern of obesity prevalence among females in each adult age group was similar to the prevalence among males in each age group (Figure 4) and similar to the age-specific results presented in Figure 3. However, of note is that only 6.2 percent of the young males ages 18–24 years old were obese, compared with 13.0 percent of the young adult females. The male-female difference in total prevalence of overweight or obesity was largest for age groups older than 18–24 years.

Figure 4. Adult Prevalence of Overweight and Obesity by Age and Sex—Colorado, 2008

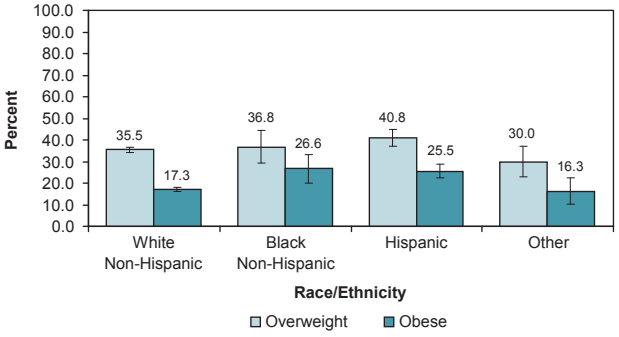


Data source: Behavioral Risk Factor Surveillance System

In Colorado in 2008, the obesity prevalence was significantly lower among non-Hispanic White adults compared with non-Hispanic Black or Hispanic adults (Figure 5). Though the estimated prevalence of obesity was highest among Black adults (26.6 percent), this estimate was not significantly different than the prevalence for Hispanic adults (25.5 percent). The prevalence of overweight did not differ significantly between racial/ethnic groups.

The "other" race category combined several races, such as Asian, Pacific Islander, American Indian and Alaskan Native, because only a small percentage of the Colorado population identified themselves as such. Therefore, separate estimates for these small racial groups were unreliable and could not be reported. However, it is difficult to interpret the result for "other" race because it includes a combination of different races with different genetic and other risk factor profiles. The estimated prevalence of obesity was lowest for the "other" group, though not significantly.

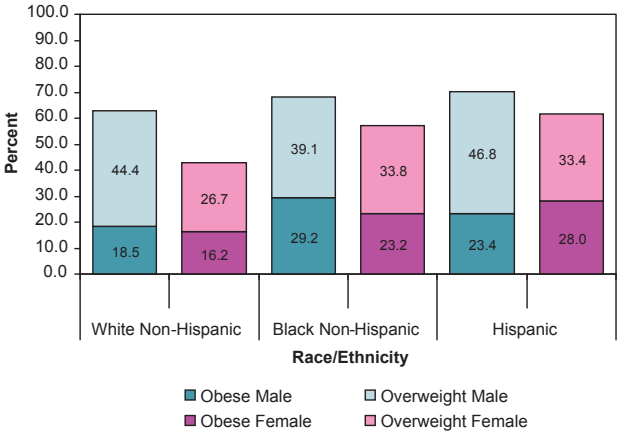
Figure 5. Adult Prevalence of Overweight and Obesity by Self-Reported Race/Ethnicity—Colorado, 2008



Data source: Behavioral Risk Factor Surveillance System
Definitions of racial/ethnic groups are provided in Appendix A.

In Colorado in 2008, adult males and females reporting the same race/ethnicity had similar prevalence of obesity (Figure 6). In contrast, the prevalence of overweight was consistently higher for males than for females reporting the same race/ethnicity. Non-Hispanic White females had the lowest total prevalence of overweight or obesity (42.9 percent).

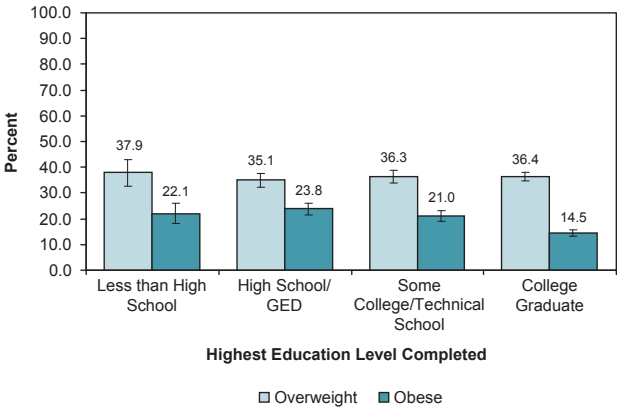
Figure 6. Adult Prevalence of Overweight and Obesity by Self-Reported Race/Ethnicity and Sex—Colorado, 2008



Data source: Behavioral Risk Factor Surveillance System

In Colorado in 2008, college graduates had a significantly lower prevalence of obesity than adults with lower levels of education (Figure 7). Adult obesity prevalence was not significantly different between Coloradans who completed some college or technical school, high school or GED, or less than high school level education. Regardless of their education, more than one-third of adult Coloradans were overweight and more than one-half were either overweight or obese in 2008.

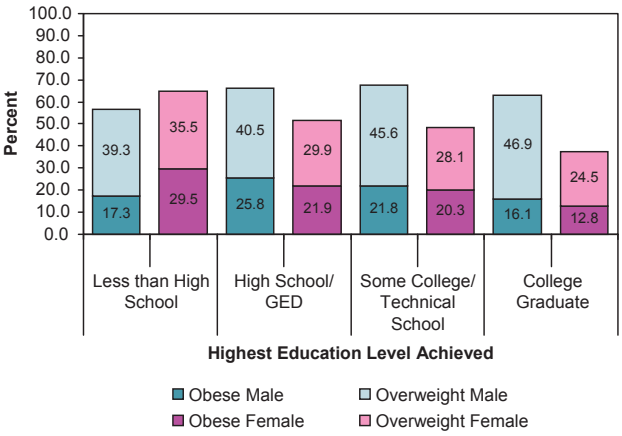
Figure 7. Adult Prevalence of Overweight and Obesity by Highest Education Level Achieved—Colorado, 2008



Data source: Behavioral Risk Factor Surveillance System

The above pattern shifts slightly when the subgroups defined by education are further defined by sex within each education level (Figure 8). The prevalence of obesity among adult females with less than a high school education was significantly higher than their male counterparts and significantly higher than adult females with either some college or a college degree. The prevalence of overweight was higher for adult males at every educational level compared with their female counterparts.

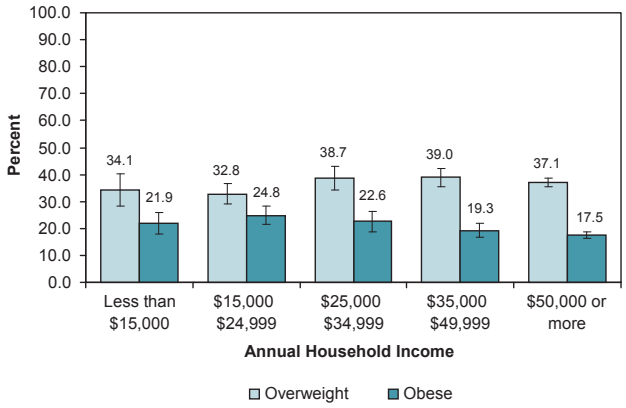
Figure 8. Adult Prevalence of Overweight and Obesity by Highest Education Level Achieved and Sex—Colorado, 2008



Data source: Behavioral Risk Factor Surveillance System

Overall, the prevalence of overweight and the prevalence of obesity did not vary significantly between income groups (Figure 9).

Figure 9. Adult Prevalence of Overweight and Obesity by Annual Household Income—Colorado, 2008



Data source: Behavioral Risk Factor Surveillance System

The prevalence of obesity for adult males and females in Colorado was not different in 2008, and the prevalence of obesity for subgroups defined by income did not vary significantly. However, when the subgroups are defined by both sex and annual household income, there were differences (Figure 10). Adult females had a significantly lower prevalence of obesity than adult males within the income group of $50,000 or more (14.2 and 20.3 percent, respectively). Adult females had a significantly lower prevalence of overweight than their adult male counterparts within each income group above $15,000. (In these groups, the female prevalence of obesity was higher, but not significantly.)

Figure 10. Adult Prevalence of Overweight and Obesity by Annual Household Income and Sex—Colorado, 2008

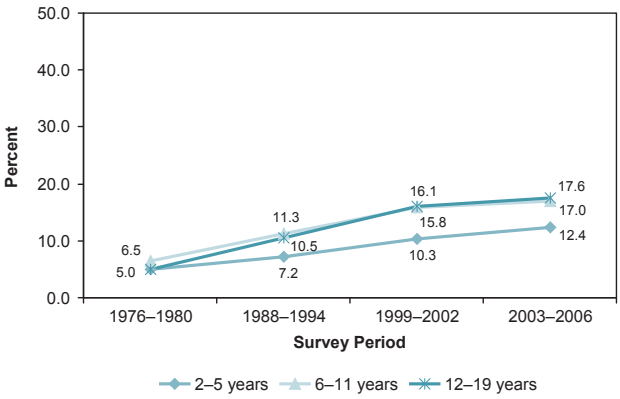
Data source: Behavioral Risk Factor Surveillance System

In summary, adult Coloradans ages 18–24 years, non-Hispanic Whites, college graduates, and adults in households that earned $50,000 or more annually had the lowest prevalence of obesity. The estimated prevalence of overweight for adult males compared with females was higher, even for subgroups of males and females defined by age, race/ethnicity, education or annual household income. In comparison, females had a higher obesity prevalence than males in the following subgroups: ages 18–24 years, less than high school education and all income groups less than $50,000.

Children and Adolescents

In the United States, the prevalence of obesity among children and adolescents has increased similar to the prevalence in the adult population. Since the period 1976–1980, the prevalence of obesity increased from 5.0 to 12.4 percent for children ages 2–5 years, from 6.5 to 17.0 percent for children ages 6–11 years, and from 5.0 to 17.6 percent for adolescents ages 12–19 years (Figure 11).[16] The prevalence estimates have continued to move further from the Healthy People 2010 target prevalence of 5 percent and generally are two to three times the target. In addition to the risk of becoming obese adults, obese children and adolescents are at risk of developing risk factors for heart disease, such as high blood pressure, high cholesterol and type 2 diabetes.

Figure 11. Prevalence of Obesity among Children and Adolescents by Age—United States, 1976–2006



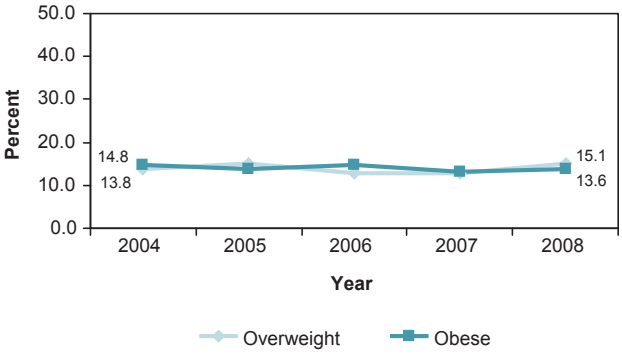
Data source: National Health and Nutrition Examination Survey
Scale is enlarged to show detail. The maximum value on the y-axis is 50 percent.

In Colorado in 2008, 15.1 percent of children 2–14 years of age were overweight and 13.6 percent were obese (Figure 12). The majority of children 2–14 years of age (60.2 percent) were healthy weight, and 11.1 percent of children 2–14 years of age were underweight. The prevalence of obesity for male and female children was not significantly different. The prevalence for males was 14.4 percent (95 percent confidence interval: 12.6–16.2 percent), and the prevalence for females was 12.1 percent (95 percent confidence interval: 10.4–13.8 percent).

From 2004 through 2008, the prevalence of overweight and obesity among children ages 2–14

years remained stable in Colorado. Historical data are not available to assess trends over a longer period, so it is not possible to determine if childhood obesity trends in Colorado follow national trends. In other words, the obesity prevalence might or might not have increased since the 1980s or 1990s.

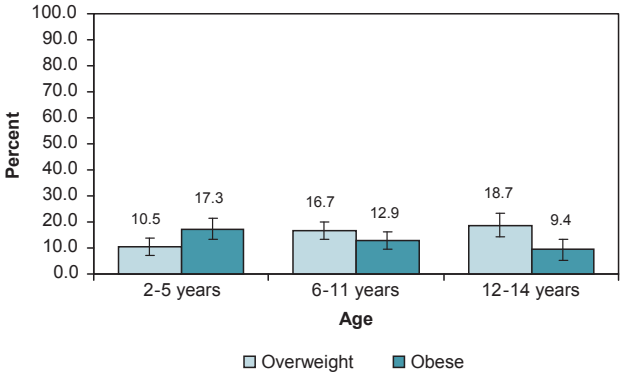
Figure 12. Prevalence of Overweight and Obesity among Children Ages 2–14 Years—Colorado, 2004–2008



Data source: Colorado Child Health Survey
Scale is enlarged to show detail. The maximum value on the y-axis is 50 percent.

In 2008, the prevalence of childhood obesity did not differ significantly by age (Figure 13). Approximately the same percentage of children in each age group were either overweight or obese: 27.8 percent of children ages 2–5 years, 29.6 percent of children ages 6–11 years and 28.2 percent of children ages 12–14 years.

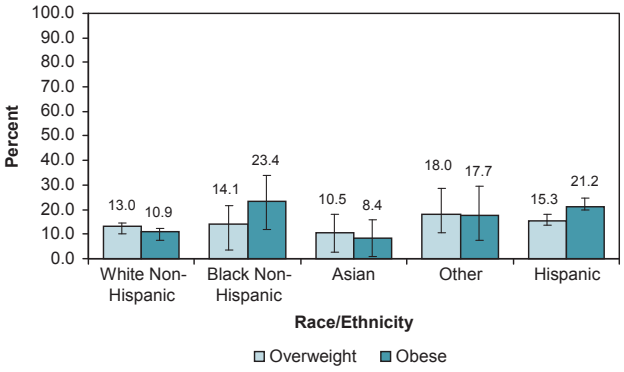
Figure 13. Prevalence of Childhood Overweight and Obesity by Age—Colorado, 2008



Data source: Colorado Child Health Survey

The prevalence of obesity among non-Hispanic White children (10.9 percent) was significantly lower than the prevalence for non-Hispanic Black children (23.4 percent) or Hispanic children (21.2 percent) during the combined years 2006–2008 (Figure 14). Asian children also had a lower obesity prevalence (8.4 percent) than Hispanic children. The obesity prevalence for children who were non-Hispanic Black, Hispanic or other race/ethnicity was not significantly different. The prevalence of overweight across race/ethnicity groups was not significantly different, a finding that might be due to the small proportion of these racial/ethnic groups in the total child population in Colorado.

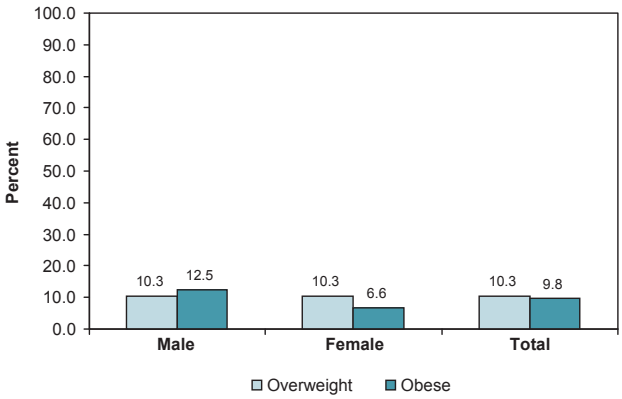
Figure 14. Prevalence of Overweight and Obesity among Children Ages 2–14 Years by Parent-Reported Race/Ethnicity—Colorado, 2006–2008 (Combined Years)



Data source: Colorado Child Health Survey

The prevalence of overweight and obesity among adolescents in high school in Colorado is available only for 2005. It is estimated that 10.3 percent of adolescents were overweight and 9.8 percent were obese in 2005 (Figure 15). Therefore, 20.1 percent were either overweight or obese. Males and females had a similar prevalence of overweight (10.3 percent and 10.3 percent, respectively), and males had a higher prevalence of obesity than females (12.5 percent and 6.6 percent, respectively).

Figure 15. Prevalence of Overweight and Obesity among Adolescents in High School (Grades 9–12) by Sex—Colorado, 2005



Data source: Colorado Youth Risk Behavioral Surveillance System (YRBS)

Although Colorado's adult population had a lower prevalence of obesity than the U.S. adult population, this was not true for children ages 2–5 years. The prevalence of obesity among children has increased in the United States since the period 1976–1980. In Colorado, the prevalence did not increase from 2004 through 2008, but estimates in this time frame were on par with U.S. estimates for 2003–2006. Prevention and treatment of childhood obesity could help ensure that Colorado's adult obesity prevalence does not increase further and remains lower than the U.S. adult obesity prevalence.

CHAPTER 3

Behavioral Risk Factors Associated with Overweight and Obesity

Physical activity, nutrition and breast-feeding are three behavioral factors that can reduce a person's risk of obesity. Therefore, their converse factors—physical inactivity, poor nutrition and choosing not to breast-feed—are "modifiable" risk factors. Unlike age or genetic factors, physical inactivity, poor nutrition and choosing not to breast-feed are behaviors that individuals and populations can change to reduce the risks of overweight and obesity. If overweight and obesity are reduced in the population, the associated health complications and their economic costs also will be reduced.

Parental behaviors in the home environment have been shown to impact a child's health behaviors for life.[18] A 2007 study in Colorado that analyzed data from the Colorado Child Health Survey and the Behavioral Risk Factor Surveillance System had the following results:[19]

- Children with obese parents were more than twice as likely to be overweight or obese compared with other children.
- Children with obese parents were more likely to consume sugary beverages or fast food compared with other children.
- Children in families who reported eating at least one meal together daily were five times more likely to eat five servings of fruits and vegetables per day compared with other children.
- Children with a parent who reported engaging in vigorous physical activity were nearly twice as likely to be on a sports team compared with other children.

Built environments also play a role in levels of physical activity. The term "built environments" refers to "aspects of a person's surrounding which are human-made or modified, as compared with naturally occurring aspects of the environment."[20] Without easy access to safe places to be active, both children and adults are less likely to meet physical activity requirements. Likewise, easy access to grocery stores where fresh fruits and vegetables are offered plays a vital part in one's ability to eat the recommended servings of fruits and vegetables each day. In the following chapter, physical activity and nutrition, as well as the other integral behavioral factors such as breast-feeding, are demographically assessed to determine at-risk populations for overweight and obesity.

Physical Activity

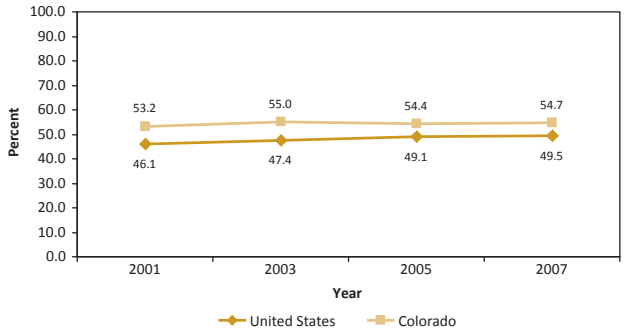
Physical activity helps people lose or maintain weight; reduces high blood pressure; reduces risk for type 2 diabetes, heart attack, stroke and several forms of cancer; reduces arthritis pain and associated disability; reduces risk for osteoporosis and falls; and reduces symptoms of depression and anxiety.[21] This long list of benefits shows that participation in physical activity across ones's life span has long-term health benefits, while participation in physical activity at any age also provides short-term benefits.

Adults

In 2008, 18.9 percent of Colorado adults were physically inactive, which was defined as not participating in any leisure-time physical activity in the past 30 days.[22] This means that 81.1 percent of adult Coloradans reported physical activity at least one time in the previous 30 days. However, in 2007, only 55.1 percent of adults reported a higher activity level of 30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week. The age-adjusted prevalence of participating in this level of moderate or vigorous physical activity has historically been higher in Colorado than the United States and has remained stable since 2001, with no significant increase or decrease (Figure 16). For physical inactivity, Colorado's prevalence decreased from 21.3 to 18.9 percent from 1998 through 2008.[23] A lower prevalence of physical inactivity means that more people are active.

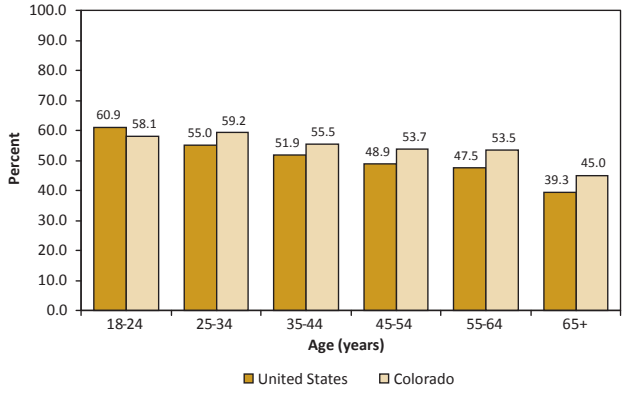
Colorado followed patterns of physical activity levels that were similar to the United States by age (Figure 17) and by both education and race/ethnicity.[24] Within each demographic group, Colorado's prevalence of moderate or vigorous physical activity was a few percentage points higher than that of the United States. One exception was that the prevalence for adults ages 18–24 years was slightly higher in the United States.

Figure 16. Age-adjusted* Adult Prevalence of Moderate or Vigorous Physical Activity—United States and Colorado, 2001–2007 (Odd Years)**



Data source: Behavioral Risk Factor Surveillance System
**Prevalence estimates are age-adjusted to the 2000 U.S. standard population. The population age distributions of Colorado and the United States differ, and age-adjusted prevalence accounts for this difference when comparing the prevalence of an age-related factor, physical activity level, in the two populations.*
***30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week*

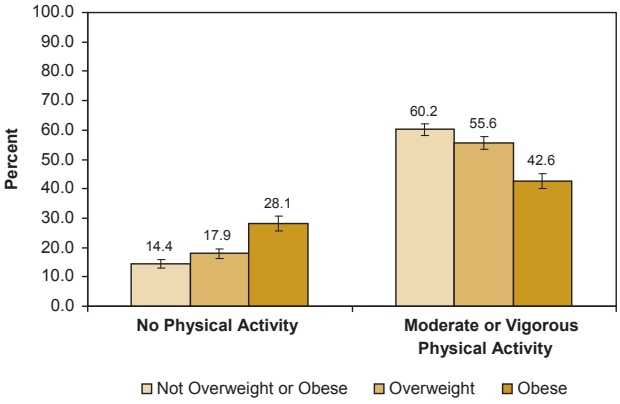
Figure 17. Adult Prevalence of Moderate or Vigorous Physical Activity* by Age—United States and Colorado, 2007



Data source: Behavioral Risk Factor Surveillance System
**30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week*

In Colorado, adults who were not overweight or obese were more likely to participate in moderate or vigorous physical activity (60.2 percent) compared with overweight (55.6 percent) or obese adults (42.6 percent) (Figure 18). Adults who were not overweight or obese were less likely to be physically inactive (14.4 percent) compared with overweight (17.9 percent) or obese adults (28.1 percent).

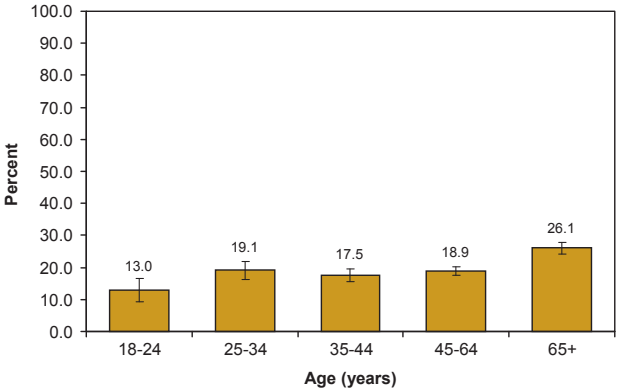
Figure 18. Adult Prevalence of No Physical Activity* and Moderate or Vigorous Physical Activity by Body Mass Index—Colorado, 2007**



Data source: Behavioral Risk Factor Surveillance System
**No leisure-time physical activity in the past 30 days*
***30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week*

Physical inactivity varied by age (Figure 19). Younger adult age groups had significantly lower prevalence of being inactive compared with adults ages 65 years and older. Adults ages 18–24 years also had significantly lower prevalence of inactivity than adults ages 45–64 years.

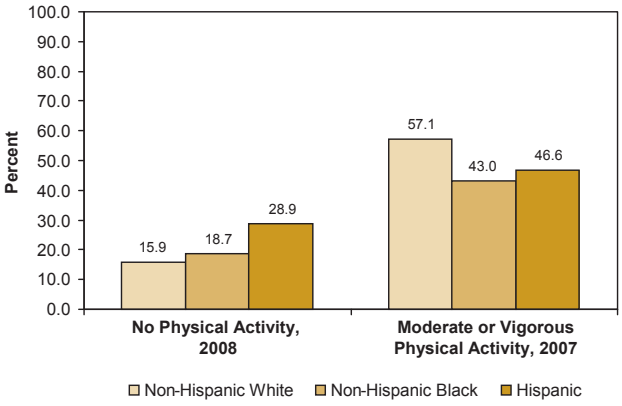
Figure 19. Adult Prevalence of No Physical Activity* by Age—Colorado, 2008



Data source: Behavioral Risk Factor Surveillance System
**No leisure-time physical activity in the past 30 days*

Physical activity levels also varied by race/ethnicity (Figure 20). Non-Hispanic Blacks and Hispanics were more likely to be physically inactive and less likely to participate in moderate or vigorous physical activity compared with non-Hispanic Whites.

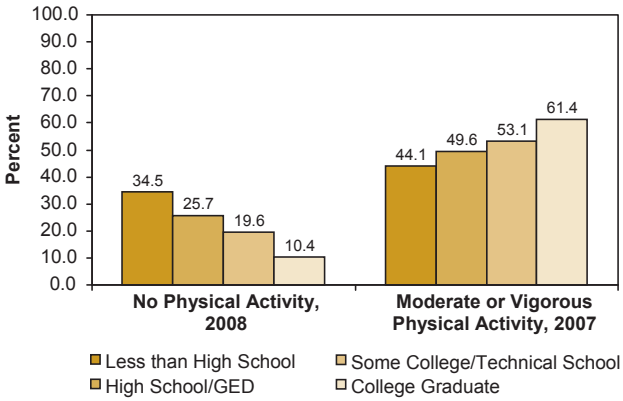
Figure 20. Adult Prevalence of No Physical Activity* (2008) and Moderate or Vigorous Physical Activity (2007) by Race/Ethnicity—Colorado**



Data source: Behavioral Risk Factor Surveillance System
**No leisure-time physical activity in the past 30 days*
***30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week*

Adults with lower education levels had lower physical activity levels (Figure 21). As education level increased, physical inactivity decreased. Adults who did not complete high school had more than three times the prevalence of physical inactivity compared with college graduates (34.5 and 10.4 percent, respectively). Similarly, adults who did not complete high school were least likely to participate in moderate or vigorous activity (44.1 percent). More than half of adults who attended or graduated from college participated in moderate or vigorous activity (53.1 and 61.4 percent, respectively).

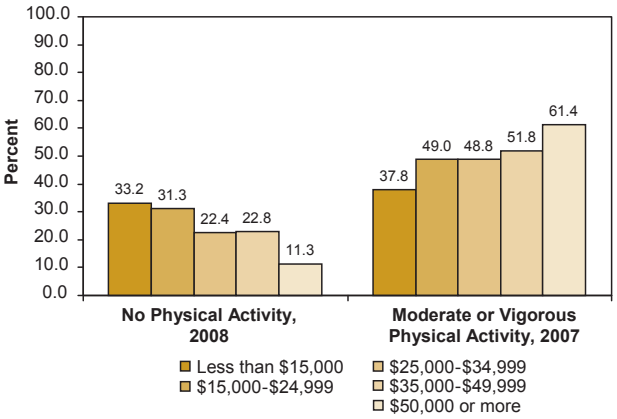
Figure 21. Adult Prevalence of No Physical Activity* (2008) and Moderate or Vigorous Physical Activity (2007) by Highest Education Level Achieved—Colorado**



Data source: Behavioral Risk Factor Surveillance System
**No leisure-time physical activity in the past 30 days*
***30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week*

Physical activity levels by annual household income followed a similar pattern as that seen by education level (Figure 22). Adults with lower household incomes had a higher prevalence of physical inactivity and lower prevalence of participating in moderate or vigorous physical activity. Nearly one-third of adults who lived in households that earned less than $25,000 did not participate in any leisure-time physical activity.

Figure 22. Adult Prevalence of No Physical Activity* (2008) and Moderate or Vigorous Physical Activity (2007) by Annual Household Income—Colorado**



Data source: Behavioral Risk Factor Surveillance System
**No leisure-time physical activity in the past 30 days*
***30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week*

Younger adults, adults who are not overweight or obese, non-Hispanic Whites, adults with higher education levels, and adults who lived in households with higher annual incomes were more likely to be physically active. The overall prevalence of physical activity in Colorado has not changed significantly in recent years (2001–2007). Trends should continue to be monitored, as changes in behavior due to policy and public health intervention might take several years to manifest in population-based data such as those presented here.

Community Highlight

In 2007, Lifestyle Challenge participants in Fort Collins, Colorado, reported an increase of approximately 100 minutes of physical activity per week and lost more than 1,000 pounds! This successful work site wellness program promotes physical activity, healthy eating and weight management. Company teams are encouraged to compete against each other for the greatest amount of weight lost and the greatest amount of physical activity minutes. The Lifestyle Challenge is part of a larger, communitywide coalition in Fort Collins to reduce and prevent obesity known as CanDo—Coalition for Activity and Nutrition to Defeat Obesity.[25]

Children and Adolescents

Physical activity also plays a beneficial role among children and adolescents. Some of the benefits include building and maintaining healthy bones, muscles, and joints; controlling weight; building lean muscle; reducing fat; improving sense of self-image and autonomy; and fostering healthy social and emotional development.[26] In addition, recent studies have shown that other benefits include reduced blood pressure and improved mental alertness and academic performance.[27] Children and adolescents should participate in physical activity for one or more hours per day, according to the Centers for Disease Control and Prevention (CDC).[28]

In Colorado in 2008, 55.7 percent of children ages 5–14 years met the CDC recommendation, reportedly spending seven or more hours per week participating in physical activities (Table 3). One way to meet or exceed the weekly recommended level of physical activity is to make one's daily routine more physically active. For children who attend school (are not home schooled), this could include active ways to get to school. However, of children ages 5–14 years who were not home schooled in 2008, only 21.3 percent walked, bicycled, or skateboarded to school everyday during a typical school week in 2008. Another 9.7 percent of children walked, bicycled, or skateboarded to school at least one day but not everyday during a typical school week. This latter group of children represents a potentially receptive group to increasing active ways to get to school. It is unknown if the 69.1 percent of children who are not home schooled and ride the bus or are driven to school daily could choose active ways to get to school.

Table 3. Prevalence of Physical Activities among Children Ages 5–14 Years—Colorado, 2008

		Percent	95 Percent Confidence Interval
Hours/week the child plays sports or some other physical activity*	None	0.4	0.1–0.8
	1 to <3	7.4	5.6–9.2
	3 to <6	36.4	33.2–39.7
	7 or more	55.7	52.4–59.1
Days/week the child walks, bicycles, or skateboards to school**	1	2.2	1.1–3.3
	2	2.8	1.8–3.8
	3	2.9	1.8–4.0
	4	1.8	0.8–2.7
	5	21.3	18.3–24.3
	Ride the bus	23.7	20.9–26.6
	Driven to school	43.3	40.0–46.7
	None	2.1	1.0–3.1

Data source: Colorado Child Health Survey

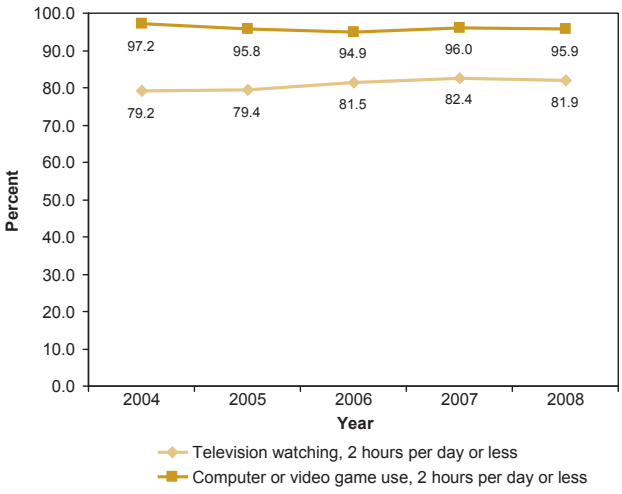
**In a typical week*
***During the school year, in a typical week; Estimate includes only children who were not home schooled*

Activities such as watching television and spending time in front of a computer can reduce the amount of physical activity in which children and adolescents participate. The American Academy of Pediatrics recommends that parents restrict television watching for their children to two hours per day or less.[29] The academy also recommends that infants younger than 2 years of age view no television.

From 2004 through 2008, the prevalence of television watching for two hours per day or less remained relatively stable in Colorado (Figure 23). The prevalence of computer or video game use for two hours per day or less also remained stable during the same period. In 2008, most children ages 2–14 years watched television for two hours per day or less (95.9 percent), and most children ages 5–14 years used a computer or played video games for two hours per day or less (81.9 percent).

Although most children spent less than two hours watching television and less than two hours on a computer or playing video games, the total time spent in sedentary activities in front of a screen (television, computer or video game) could have been more than two hours per day. Limiting the time children spend in these sedentary activities would provide more time to be physically active.

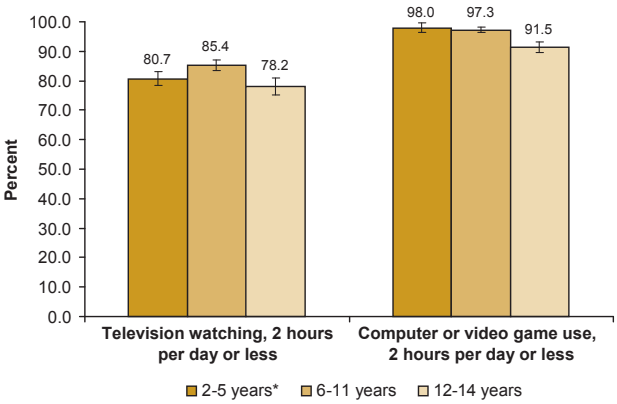
Figure 23. Prevalence of Television Watching (Children Ages 2–14 Years) and Computer or Video Game Use (Children Ages 5–14 Years)—Colorado, 2004–2008



Data source: Colorado Child Health Survey

Children ages 6–11 years were significantly more likely to watch television for two hours per day or less compared with either younger children or older children (Figure 24). Twenty-two percent of children ages 12–14 years watched more than two hours of television per day. For computer or video game use, children ages 5 years or 6–11 years were significantly more likely than children ages 12–14 years to participate in these activities for two hours per day or less.

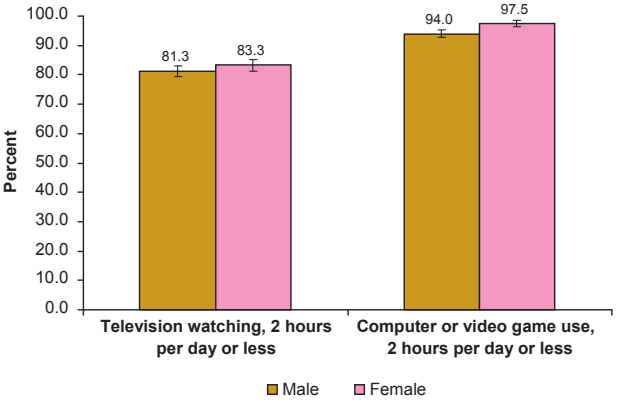
Figure 24. Prevalence of Television Watching (Children Ages 2–14 Years) and Computer or Video Game Use (Children Ages 5–14 Years) by Age—Colorado, 2006–2008 (Combined Years)



Data source: Colorado Child Health Survey
**For computer or video game use, this age group includes only children age 5 years*

Male and female children did not spend significantly different amounts of time watching television, but they did differ in computer and video game use (Figure 25). Females were significantly more likely than males to use a computer or play video games for two hours per day or less (97.5 and 94.0 percent, respectively).

Figure 25. Prevalence of Television Watching (Children Ages 2–14 Years) and Computer or Video Game Use (Children Ages 5–14 Years) by Sex—Colorado, 2006–2008 (Combined Years)

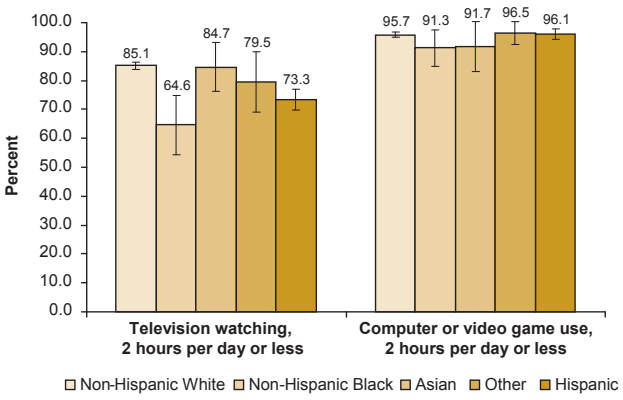


Data source: Colorado Child Health Survey

Non-Hispanic Whites and Asians were significantly more likely to watch television for two hours per day or less compared with non-Hispanic Blacks

(Figure 26). Non-Hispanic Whites also were significantly more likely to watch two hours of television or less compared with Hispanics. Computer or video game use did not differ significantly between the racial/ethnic groups compared.

Figure 26. Prevalence of Television Watching (Children Ages 2–14 Years) and Computer or Video Game Use (Children Ages 5–14 Years) by Race/Ethnicity—Colorado, 2006–2008 (Combined Years)



Data source: Colorado Child Health Survey

Over one-third (37.2 percent) of adolescents in high school in Colorado met the currently recommended level of physical activity in 2005 (Table 4). This prevalence was not significantly different than the prevalence of meeting physical activity recommendations among all adolescents in the United States in 2005. One way for adolescents to meet the current physical activity recommendation is through classes at school. Slightly more than half of the adolescents in high school in Colorado and the United States attended any physical education classes. The prevalence of attending physical education classes did not significantly differ between Colorado and the United States (54.2 versus 50.4 percent). However, adolescents in Colorado had a significantly lower prevalence of attending physical education classes daily (16.6 versus 33.0 percent). Colorado adolescents compared favorably to all adolescents in the United States in two areas: adolescents in Colorado had a higher prevalence of having exercised for more than 20 minutes during an average physical education class (91.5 versus 84.0 percent) and a lower prevalence of no vigorous or moderate physical activity (5.4 versus 9.6 percent).

Increasing the frequency of physical education classes in Colorado is one possible way to increase the adolescent prevalence of meeting physical activity recommendations.

Table 4. Prevalence of Physical Activities among Adolescents in High School (Grades 9–12)—United States and Colorado, 2005

	United States Percent (CI*)	Colorado Percent (CI)
Met currently recommended levels of physical activity✦	35.8 (33.9–37.7)	37.2 (32.3–42.1)
No vigorous or moderate physical activity✦✦	9.6 (8.7–10.5)	5.4 (4.3–6.5)
Attended physical education classes ❖	54.2 (49.4–59.0)	50.4 (39.7–61.1)
Attended physical education classes daily❖❖	33.0 (27.7–38.3)	16.6 (9.8–23.4)
Exercised or played sports >20 minutes during an average physical education class✖	84.0 (81.0–87.0)	91.5 (87.9–95.1)

Data source: Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance—United States, 2005. Surveillance Summaries, June 9, 2006. MMWR 2006;55 (No. SS-5).

* *95 percent confidence interval*

✦ *Were physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes/day on ≥5 of the 7 days preceding the survey.*

✦✦ *During the 7 days preceding the survey.*

❖ *On one or more days in an average week when they were in school.*

❖❖ *5 days in an average week when they were in school.*

✖ *Among the students who attended physical education classes.*

Community Highlight

As an advocate for active community environments, LiveWell Fountain based in Fountain, Colorado, supported the coordination of two Bicycle Safety Rodeos in the summer of 2008. The rodeos provided elementary school-aged children with the knowledge, skills and resources to bicycle in a safe manner. With support of volunteers, groups and local businesses, rodeo organizers donated and fit helmets, performed basic bicycle maintenance, registered bicycles, and provided participants with safety lessons including a parking lot skills test. The rodeo events are one component of Fountain's continued effort to encourage children to get more physical exercise by riding to and from school safely.[30]

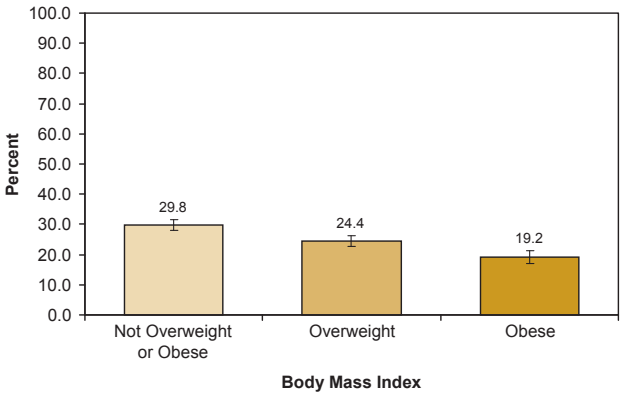
Nutrition

Poor nutrition is another modifiable risk factor for reducing the risks of overweight, obesity and their complications. Weight is gained when the number of calories consumed is larger than the number of calories expended by daily physical activities. Consuming at least the recommended amount of fruits and vegetables decreases the risk for obesity.[31] This is especially true if fruits and vegetables are substituted for foods that are high in fat and calories. Fruits and vegetables are low in fat and calories and provide essential vitamins, minerals and fiber that are important to good health.[32] Eating the recommended amount of fruits and vegetables also decreases the risk of diabetes and cardiovascular disease and might even lower the risk of cancers of the gastrointestinal tract.[33] Like physical activity, healthy eating is important for people of all ages.

Adults

In Colorado, the prevalence of adults eating the recommended amount of fruits and vegetables varied by body mass index category (Figure 27). Adults who were not overweight or obese were significantly more likely to report eating five or more servings of fruits and vegetables per day compared with overweight or obese adults. Overweight adults were significantly more likely to eat five or more servings of fruits and vegetables per day compared with obese adults; less than one in five obese adults ate this recommended amount of fruits and vegetables.

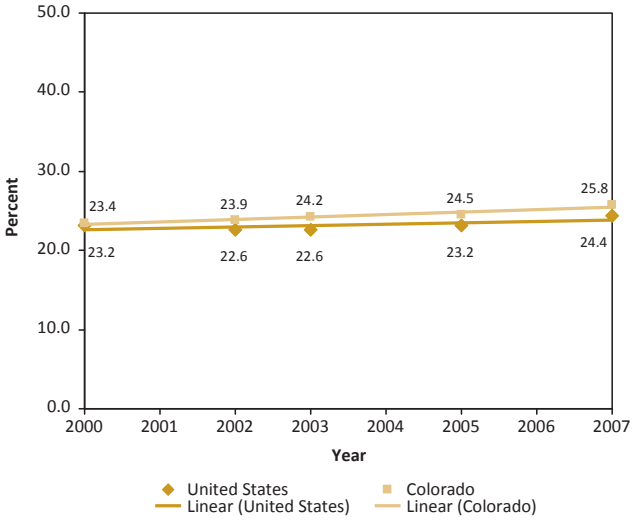
Figure 27. Adult Prevalence of Recommended Fruit and Vegetable Consumption* by Body Mass Index—Colorado, 2007.



Data source: Behavioral Risk Factor Surveillance System
**Five or more servings of fruits and vegetables per day*

In Colorado, 25.8 percent of adults consumed the recommended five or more servings of fruits and vegetables per day in 2007 (Figure 28). This is similar to the U.S. prevalence of 24.4 percent. The adult prevalence of consuming at least the recommended five fruits and vegetables per day remained stable from 2000 through 2007 in both Colorado and the United States.

Figure 28. Adult Prevalence of Recommended Fruit and Vegetable Consumption*—United States and Colorado, 2000–2007



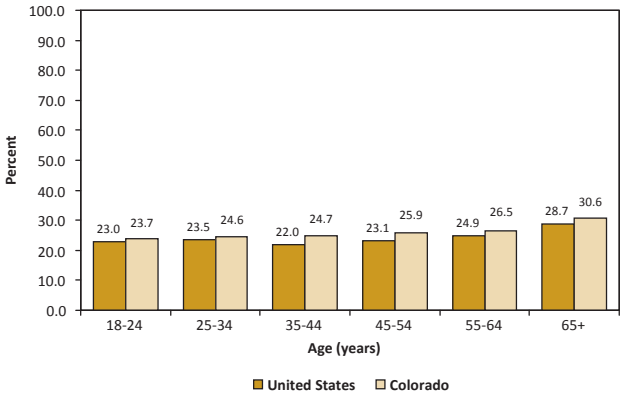
Data source: Behavioral Risk Factor Surveillance System
Scale is enlarged to show detail. The maximum value on the y-axis is 50 percent.
Prevalence estimates for the United States are the median prevalence of all 50 states and D.C. for a given year.
**Five or more servings of fruits and vegetables per day*

The following figures (Figures 29–32) assess fruit and vegetable consumption by age, income, education and race/ethnicity.

- In general, as age, education and income increased, so did fruit and vegetable consumption.
- The prevalence of eating five or more servings of fruits and vegetables per day was highest among adults ages 65 years and older, college graduates, adults in households with an annual income of $50,000 or more, and non-Hispanic Whites and "other" races.
- The prevalence of eating five or more servings of fruits and vegetables per day was higher in Colorado compared with the United States for all

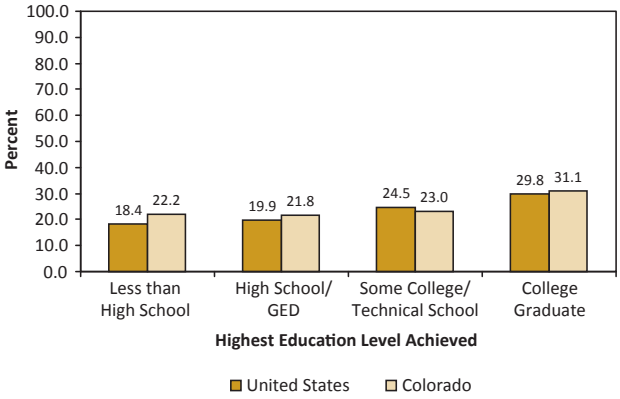
populations except non-Hispanic Blacks, adults in households with an annual income of less than $15,000 and adults with some college/technical school education.

Figure 29. Adult Prevalence of Recommended Fruit and Vegetable Consumption* by Age Group—United States and Colorado, 2007



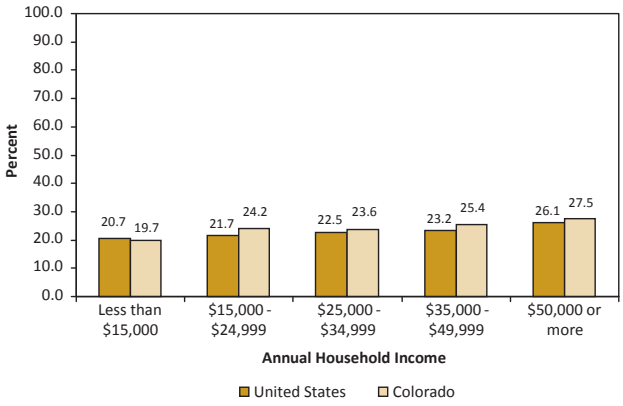
Data source: Behavioral Risk Factor Surveillance System
Prevalence estimates for the United States are the median prevalence of all 50 states and D.C. for a given year.
**Five or more servings of fruits and vegetables per day*

Figure 30. Adult Prevalence of Recommended Fruit and Vegetable Consumption* by Highest Education Level Achieved—United States and Colorado, 2007



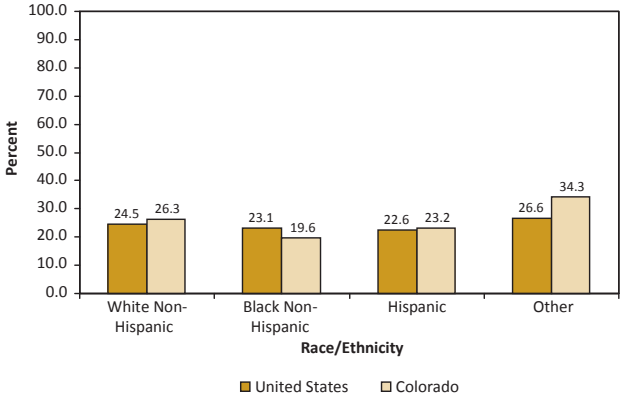
Data source: Behavioral Risk Factor Surveillance System
Prevalence estimates for the United States are the median prevalence of all 50 states and D.C. for a given year.
**Five or more servings of fruits and vegetables per day*

Figure 31. Adult Prevalence of Recommended Fruit and Vegetable Consumption* by Annual Household Income—United States and Colorado, 2007



Data source: Behavioral Risk Factor Surveillance System
Prevalence estimates for the United States are the median prevalence of all 50 states and D.C. for a given year.
**Five or more servings of fruits and vegetables per day*

Figure 32. Adult Prevalence of Recommended Fruit and Vegetable Consumption* by Race/Ethnicity—United States and Colorado, 2007



Data source: Behavioral Risk Factor Surveillance System
Prevalence estimates for the United States are the median prevalence of all 50 states and D.C. for a given year.
**Five or more servings of fruits and vegetables per day*

Community Highlight

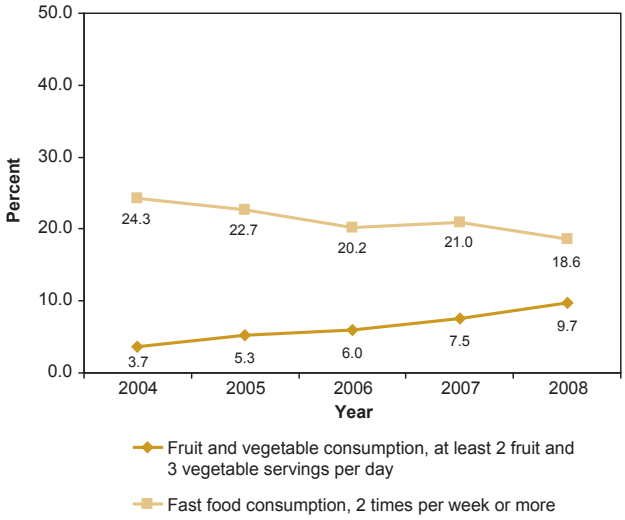
In Alamosa, Colorado, locavores abound! Defined as individuals seeking out locally produced food, locavores in Alamosa can pick up seasonal fruits and vegetables from more than 19 vendors and local producer participants. In an effort to increase availability of the market to low-income families, LiveWell Alamosa, in collaboration with Healthy Habits, provided farmers-market vouchers to families participating in the Women, Infant and Children nutrition program and to older adults in the South Central Seniors agency. These vouchers in the form of coupons enabled participants to purchase $15 worth of fruits and vegetables at the farmers market. The voucher program proved a success, as it significantly increased accessibility to fresh fruits and vegetables among participants.[34]

Children and Adolescents

Proper nutrition in childhood is vital to healthy growth and development and fosters lifelong healthy eating habits. Two related *Healthy People 2010* objectives for nutrition in childhood are 1) increasing the proportion of people age 2 years and older who consume at least two daily servings of fruit to 75 percent and 2) increasing the proportion of people age 2 years and older who consume at least three daily servings of vegetables, with at least one-third being dark green or orange vegetables, to 50 percent.[35] Many children in Colorado consume the recommended amount of fruit, especially because of consumption of fruit juice. However, in 2008, only 9.7 percent of children ages 2–14 years ate at least two servings of fruit and three servings of vegetables (dark green, orange or other color) per day.

Since 2004, the prevalence of children consuming at least two servings of fruit and three servings of vegetables per day increased from 3.7 to 9.7 percent in Colorado (Figure 33). Children are eating more fruits and vegetables, and they also are eating less fast food. The prevalence of children eating fast food two or more times per week decreased from 24.3 to 18.6 percent from 2004 through 2008.

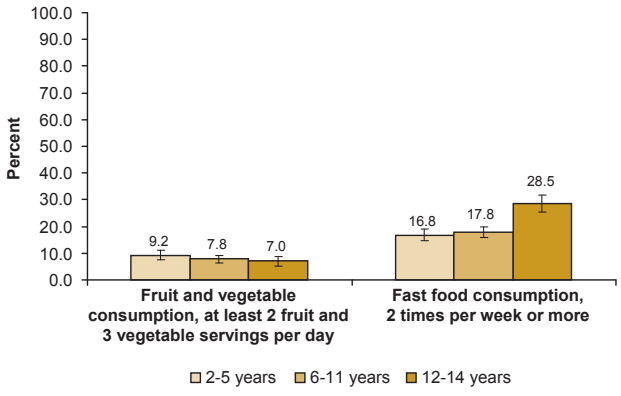
Figure 33. Prevalence of Fruit and Vegetable Consumption and Fast Food Consumption among Children Ages 2–14 Years—Colorado, 2004–2008



Data source: Colorado Child Health Survey
Scale is enlarged to show detail. The maximum value on the y-axis is 50 percent.

Fruit and vegetable consumption did not differ between children of various age groups (Figure 34). Fast food consumption was significantly higher among children ages 12–14 years (28.5 percent) compared with children ages 2–5 years (16.8 percent) or 6–11 years (17.8 percent).

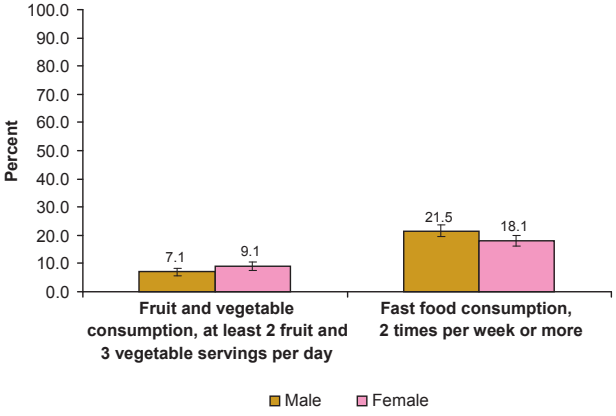
Figure 34. Prevalence of Fruit and Vegetable Consumption and Fast Food Consumption among Children Ages 2–14 Years by Age Group—Colorado, 2006–2008 (Combined Years)



Data source: Colorado Child Health Survey

The prevalence of fruit and vegetable consumption and the prevalence of fast food consumption did not differ significantly by sex (Figure 35).

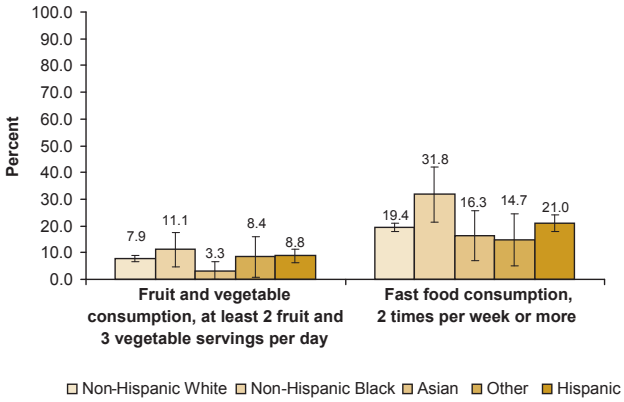
Figure 35. Prevalence of Fruit and Vegetable Consumption and Fast Food Consumption among Children Ages 2–14 Years by Sex—Colorado, 2006–2008 (Combined Years)



Data source: Colorado Child Health Survey

Racial/ethnic groups did not vary significantly in prevalence of recommended fruit and vegetable consumption (Figure 36). The only significant difference in fast food consumption between racial/ethnic groups was that non-Hispanic Blacks were more likely than non-Hispanic Whites to eat fast food two times per week or more (31.8 and 19.4 percent, respectively).

Figure 36. Prevalence of Fruit and Vegetable Consumption and Fast Food Consumption among Children Ages 2–14 Years by Race/Ethnicity—Colorado, 2006–2008 (Combined Years)



Data source: Colorado Child Health Survey

Community Highlight

The Youth Farmers Market in Denver, Colorado, was started to address the issue of "food deserts." These are areas where residents have limited food choices, and are more apt to purchase groceries at convenience stores, corner markets and fast-food restaurants rather than grocery stores. This market was started at Fairview Elementary as a way to provide fresh and inexpensive produce to the community. The garden also provides students with an opportunity to learn about gardening and using math skills. Plus, participation in the garden increases self-esteem. Adults serve as mentors, and the children learn about sustainability and the importance of having fresh fruits and vegetables as part of a nutritious diet. As part of the Denver Urban Garden LiveWell initiative, Youth Farmer's markets now are available in four neighborhoods in urban Denver.[36]

Breast-feeding

Breast-feeding an infant lays the foundation for providing ideal nutrition for a lifetime. Beyond strengthening the immune system, breast milk decreases the incidence and/or severity of infectious diseases such as bacteremia, diarrhea, respiratory and ear infections, urinary tract infections and late-onset sepsis in preterm infants.[37] Studies suggest that breast-feeding is associated with reduced rates of sudden infant death syndrome in the first year of life and the development of type 1 (insulin-dependent) and type 2 (non-insulin-dependent) diabetes, some cancers, high blood cholesterol and asthma, in addition to overweight and obesity later in life.[38] For new mothers, breast-feeding reduces the risks of breast and ovarian cancer later in life and reduces the prevalence of obesity by helping mothers return to their pre-pregnancy weight faster.[39] Because of its extremely important role in reducing overweight and obesity in both mother and child, breast-feeding is considered a strategy to reduce obesity.

To date, research indicates two major reasons why breast-feeding might reduce one's risk for future overweight or obesity. First, breast-fed infants learn to self-regulate intake of milk. Secondly, human milk contains less protein than formulas, resulting in a normal, physiologic insulin response.[40] Research is finding that the effects of breast-feeding are stronger when infants receive breast milk for a longer period of their first year of life and without other liquids or solid food. For example, the longer the duration of breast-feeding, the lower the risk of childhood overweight. One study found that for each month that an infant is breast-fed (up to 9 months of age), the odds of childhood overweight decreased by 4 percent.[41]

The American Academy of Pediatrics recommends mothers breast-feed infants exclusively (i.e., no liquids or solids other than breast milk) for approximately six months and further recommends maintenance of breast-feeding for one year or more.[42] Table 5 provides data from the breast-feeding report card; data are collected annually for each state as part of the Centers for Disease Control National Immunization Survey.[43] Measured outcomes include breast-feeding initiation (ever breast-fed), breast-feeding duration at 6 and 12 months, and exclusive breast-feeding at 3 and 6 months. Colorado is exceeding the Healthy People 2010 target goals and ranks among the top 10 states for each of the breast-feeding measures.

Table 5. Prevalence of Choosing to Breast-feed—United States and Colorado

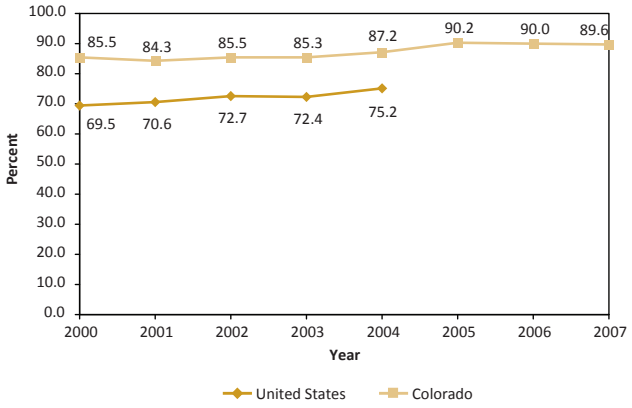
Breast-feeding Outcomes	United States Percent	Colorado Percent	*Healthy People 2010* Goal Percent	Colorado's State Ranking
Ever breast-fed	73.9	82.5	75.0	9
Breast-feeding at 6 months	43.4	59.5	50.0	3
Breast-feeding at 12 months	22.7	30.5	25.0	8
Exclusive breast-feeding at 3 months	33.1	49.2	40.0	3
Exclusive breast-feeding at 6 months	13.6	22.6	17.0	4

Data source: National Immunization Survey, 2006 birth cohort

Although breast-feeding data from the National Immunization Survey are collected by each state, a limitation of the study is memory recall as the survey is conducted approximately two years after delivery. One surveillance system assessing breast-feeding closer to the birth of the child is the Pregnancy Risk Assessment Monitoring System (PRAMS). PRAMS is conducted with new mothers two to four months after delivery.

The prevalence of women initiating breastfeeding was higher in Colorado than in the United States from 2000–2004 and was consistently higher than the Healthy People 2010 target of 75 percent from 2000–2007 (Figure 37). Colorado's prevalence of breastfeeding initiation was 89.6 percent in 2007, which was not significantly different than the prevalence during 2004–2006 but was significantly higher than the prevalence during 2000–2003. The prevalence trend was not evaluated for the United States.

Figure 37. Prevalence of Choosing to Have Ever Breastfed—United States* (2000–2004) and Colorado (2000–2007)



Data source: Pregnancy Risk Assessment Monitoring System (PRAMS)
**U.S. prevalence estimates were calculated using data from 25 states that achieved a weighted response rate of at least 70 percent for three consecutive years from 2000 through 2004. The total number of states varied from year to year. U.S. data were not available for 2005–2007.*

Community Highlight

Working with staff at St. Anthony's Summit Medical Center in Frisco, Colorado, LiveWell Summit County has improved lactation outreach efforts through the "10 Steps to Successful Breast-feeding" lactation program. Identified by the World Health Organization as best practice, the 10 steps program is a thorough and comprehensive program to promote and sustain breast-feeding among new mothers. Embracing this program, new mothers in Summit County are fully equipped with the information to confidently embrace breast-feeding as an important component to newborn health.[44]

CHAPTER 4

Overweight and Obesity and Coexisting Chronic Conditions

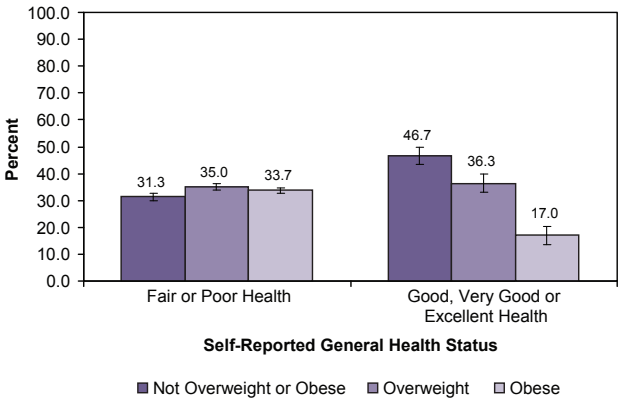
Obesity has been characterized as a chronic disease, in and of itself.[45] As mentioned previously, body mass index (BMI) categories for overweight and obesity are based on the evidence relating BMI levels to risk of disease, other health complications and death. Additionally, at the biologic, individual and societal level, excess weight and coexisting conditions complicate weight loss; maintenance of healthy weight; and the prevention, treatment and reduction of conditions associated with overweight and obesity. The overall burden of overweight and obesity includes the burden of coexisting chronic conditions. Ultimately, the goal in reducing the burden is good health, well-being and prolonged life.

In Chapter 1, the health complications associated with overweight and obesity were defined. These included type 2 diabetes, heart disease, stroke, hypertension, gallbladder disease, osteoarthritis, sleep apnea, asthma, breathing problems, cancer (endometrial, colon, kidney, gallbladder and postmenopausal breast cancer), high blood cholesterol, complications of pregnancy, menstrual irregularities and psychological disorders such as depression.[46] In Chapter 4, the prevalence of overweight and obesity is assessed by several of these obesity-related health conditions. The frequent coexistence of obesity and these negative health outcomes is made clear. For example, a person with diabetes is more likely to be obese than a person who does not have diabetes. Similarly, the prevalence of diabetes is higher among obese adults and overweight adults than among adults who are not overweight or obese. In Colorado, 36.2 percent of adults were overweight and 19.1 percent of adults were obese in 2008. This chapter provides examples of how different these numbers look for sub-populations of adults in the state who have other chronic conditions or poor quality of life.

Self-Reported General Health

Obesity can affect a person's quality of life. One measure of quality of life is self-reported general health status. Adults who reported fair or poor general health were more likely to be overweight or obese than those who reported good to excellent health (68.7 and 53.3 percent, respectively) (Figure 38). The difference in obesity prevalence is large: 33.7 percent, or one in three adults who reported fair or poor general health, were obese.

Figure 38. Prevalence of Not Overweight or Obese, Overweight and Obese by Self-Reported General Health Status—Colorado, 2008



Data source: Behavioral Risk Factor Surveillance System

Other measures of poor quality of life include not being able to participate in activities because of any impairment or health problem, self-reported number of physically unhealthy days and self-reported number of mentally unhealthy days. The prevalence of these measures was higher among obese adults than others in Colorado.

- 28.6 percent of obese adults reported daily activity limitations compared with 15.7 percent of adults who are not overweight or obese.
- 14.2 percent of obese adults reported 14 or more physically unhealthy days in the past month compared with 7.7 percent of adults who are not overweight or obese.
- 13.1 percent of obese adults reported 14 or more mentally unhealthy days in the past month compared with 8.3 percent of adults who are not overweight or obese.

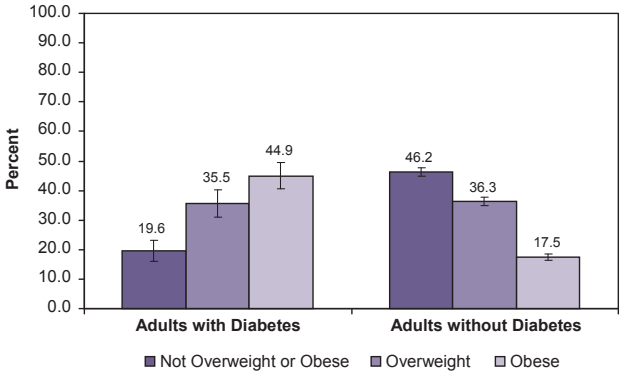
(Data source: 2008 Behavioral Risk Factor Surveillance System)

Diabetes

Obesity is a risk factor for type 2 diabetes, which, in turn, increases an individual's risk of heart disease and stroke, kidney disease, eye and foot complications, and nerve damage.[47] The prevalence of diabetes has more than doubled in Colorado in the past 15 years from 2.7 to 6.0 percent during 1993–2008. The prevalence of diabetes in 2008 was 2.6 percent among adults who were not overweight or obese, 5.8 percent among overweight adults and 13.8 percent among obese adults (data source: 2008 Behavioral Risk Factor Surveillance System).

Four out of five adult Coloradans with diabetes were either overweight or obese in 2008 (80.4 percent). This means that only one in five adults with diabetes is not overweight or obese. The difference in obesity prevalence among adults with or without diabetes is dramatic: 44.9 percent compared with 17.5 percent (Figure 39).

Figure 39. Prevalence of Not Overweight or Obese, Overweight, and Obese by Diabetes Status—Colorado, 2008

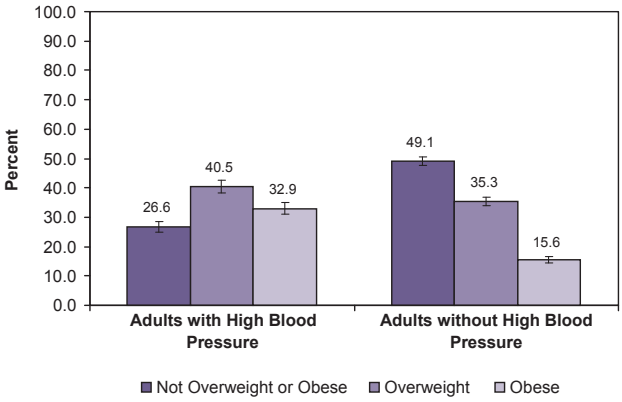


Data source: Behavioral Risk Factor Surveillance System

High Blood Pressure, High Blood Cholesterol and Angina or Coronary Heart Disease

Being overweight or obese increases the risks of high blood pressure, high blood cholesterol, angina and coronary heart disease.[48] Adults with high blood pressure in Colorado were more likely to be overweight (40.5 percent) or obese (32.9 percent) compared with adults who did not have high blood pressure (35.3 and 15.6 percent, respectively) (Figure 40).

Figure 40. Prevalence of Not Overweight or Obese, Overweight, and Obese by High Blood Pressure Status—Colorado, 2007

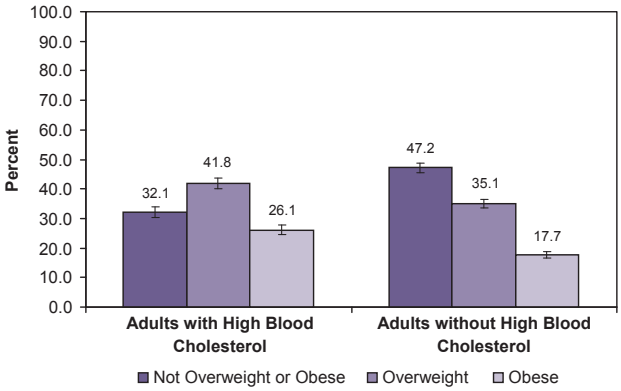


Data source: Behavioral Risk Factor Surveillance System

When obesity increases in a population, the prevalence of the related health complications also is likely to increase. This has shown true in Colorado, as the trends in high blood cholesterol have slowly

increased over the past decade from 27.9 to 33.5 percent from 1997 through 2007. Adults with high blood cholesterol were more likely to be overweight (41.8 percent) or obese (26.1 percent) compared with adults who did not have high blood cholesterol (35.1 and 17.7 percent, respectively) (Figure 41).

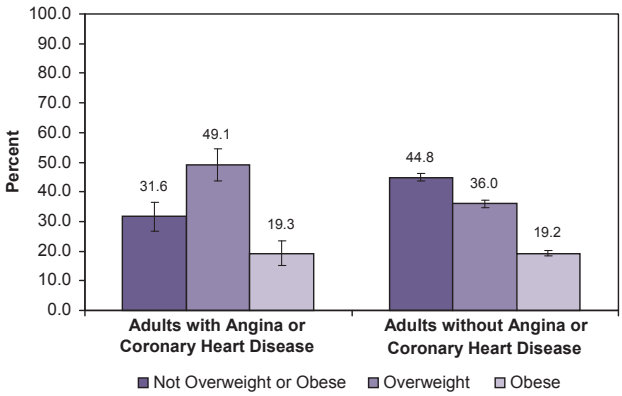
Figure 41. Prevalence of Not Overweight or Obese, Overweight, and Obese by High Blood Cholesterol Status—Colorado, 2007



Data source: Behavioral Risk Factor Surveillance System

The differences in overweight and obesity are less evident among adults with and without heart disease. Heart disease is a complex disease with several risk factors, including overweight and obesity, family history of heart disease, tobacco smoke and stress. The high prevalence of these competing risk factors makes overweight and obesity just one of several important risk factors for heart disease. In Colorado, 68.4 percent of adults with angina or coronary heart disease were overweight or obese, while 55.2 percent of adults who did not have angina or coronary heart disease were overweight or obese (Figure 42).

Figure 42. Prevalence of Not Overweight or Obese, Overweight, and Obese by Angina or Coronary Heart Disease Status—Colorado, 2007



Data source: Behavioral Risk Factor Surveillance System

Public health interventions that target overweight and obesity have the purpose of increasing healthy weight in the population to also decrease type 2 diabetes, high blood pressure, high blood cholesterol, heart disease, poor quality of life, depression, breathing problems, certain cancers, poor birth outcomes, disability and all the other obesity-related health conditions. Preventing obesity is important in both childhood and adulthood. Preventing obesity early in life has the important consequences of reducing adult obesity and reducing the related health conditions that can occur both during childhood and later in adulthood. The childhood obesity epidemic has caused a concurrent epidemic of childhood type 2 diabetes, a disease that until recently was typically seen only in adults. Overweight and obese children have a higher risk of being obese adults; this risk increases as the age of the overweight or obese child increases, such that 60 percent or more of overweight or obese adolescents will become obese adults.[49]

CHAPTER 5

Burden of Overweight and Obesity by Geographic Region

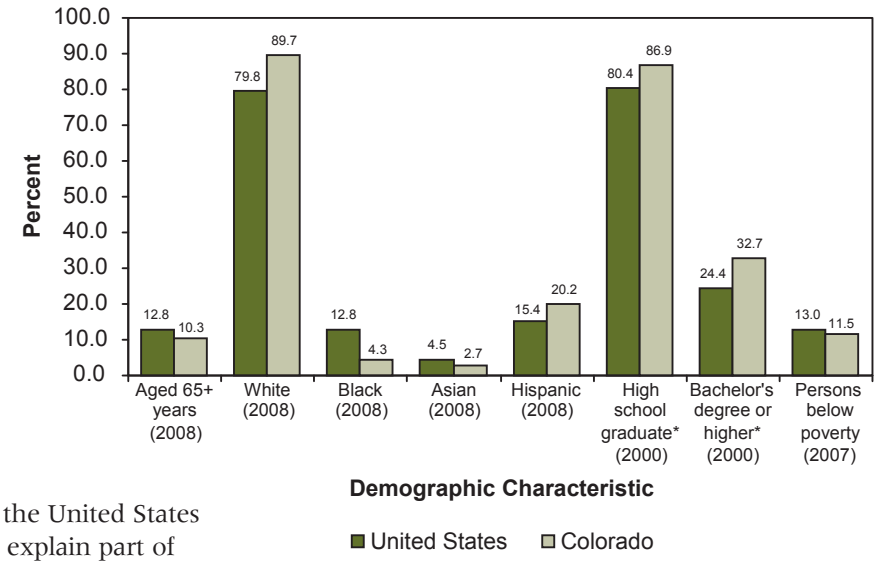
From a population perspective, the factors influencing overweight and obesity are complex, involving cultural, socioeconomic and environmental factors. It also is difficult to measure and describe all these complex factors. Among all states in the United States, Colorado leads the nation with the lowest percentage of its adult population who are obese. Yet it is important to remember three points:

1) The prevalence of obesity in Colorado is high and getting worse, putting a huge number of Coloradans at risk of health complications.
2) Colorado differs from other states and the United States as a whole with regard to demographic characteristics that are associated with obesity.
3) There are county and regional differences in obesity prevalence within the state of Colorado.

Chapter 2 addresses the first point above. This chapter addresses the second and third points. The prevalence of overweight and obesity varies for different subpopulations defined by demographic characteristics, such as age, sex, race/ethnicity, education and median household income. Differences between Colorado and the United States in these demographic factors could explain part of the differences in the prevalence of overweight and obesity.

The 2008 population estimate for Colorado was 4.9 million people (approximately 1.6 percent of the U.S. population of 304.1 million), a 14.8 percent change in growth since 2000.[50] The age distribution among Coloradans was similar to the age distribution nationally, though fewer Coloradans were aged 65 years or older. As mentioned previously, the distribution of self-reported race/ethnicity, education level, median household income and poverty level differed in the two populations. Compared with the United States, Colorado had a higher percentage of its population describing themselves as White (89.7 versus 79.8 percent) and Hispanic or Latino (20.2 versus 15.4 percent), and a lower percentage describing themselves as Black (4.3 versus 12.8 percent) or Asian (2.7 versus 4.5 percent) in 2008. More Coloradans graduated from high school, 86.9 percent compared with 80.4 percent nationally, and 32.7 percent of Coloradans had a bachelor's degree or higher compared with the national estimate of 24.4 percent (data from 2000). The Colorado median household income was $55,517 per year compared with the United States median of $50,740 per year in 2007. In Colorado, the proportion of people below poverty was 11.5 percent in 2007 compared with the United States at 13.0 percent. These results are graphically presented below (Figure 43).

Figure 43. Population Demographic Characteristics—United States and Colorado

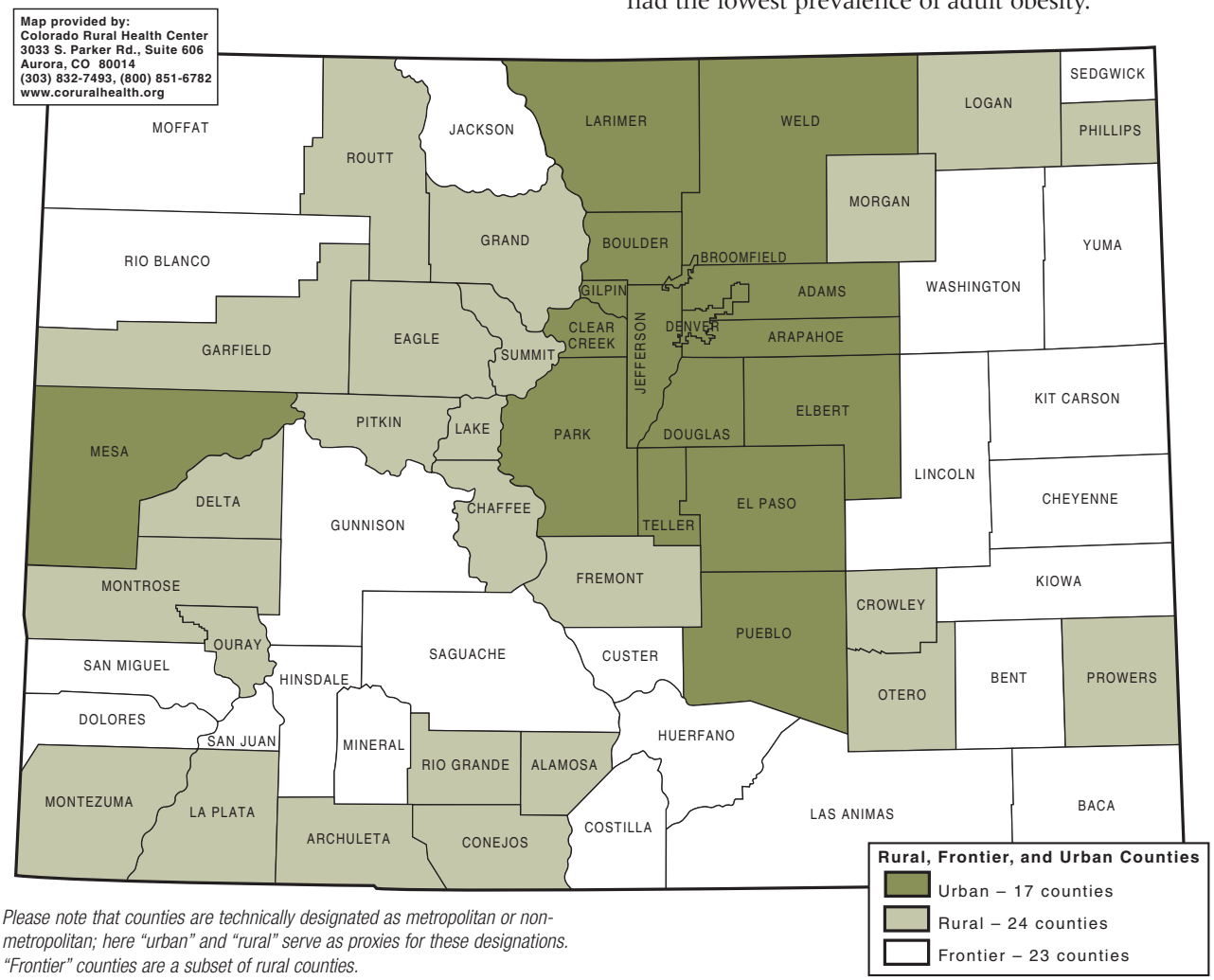


Data source: U.S. Census Bureau
**Percent of people ages 25 years and older*

Colorado is a large state geographically, encompassing approximately 103,000 square miles. The population density, or number of people per square mile, in Colorado was 41.5 people per square mile compared with 79.6 people per square mile in the United States in 2000.[51] The Colorado Rural Health Center (http://www.coruralhealth.org) defines counties as urban, rural or frontier based on population density. Frontier counties have the

lowest population density, fewer than six people per square mile. Colorado has 17 urban counties, 24 rural counties and 23 frontier counties (Figure 44). The Rocky Mountains divide the state, and the majority of Colorado residents live in the urban counties on the eastern side of the Rockies in a region known as the Front Range. The remaining Coloradans live in mountain towns, the Eastern Plains and the Western Plains regions. The sparse population distribution in rural and frontier counties in eastern and western Colorado creates challenges for obesity prevention and delivery of health services to these areas.[52]

Figure 44. Colorado's Rural, Frontier, and Urban Counties—July 2008



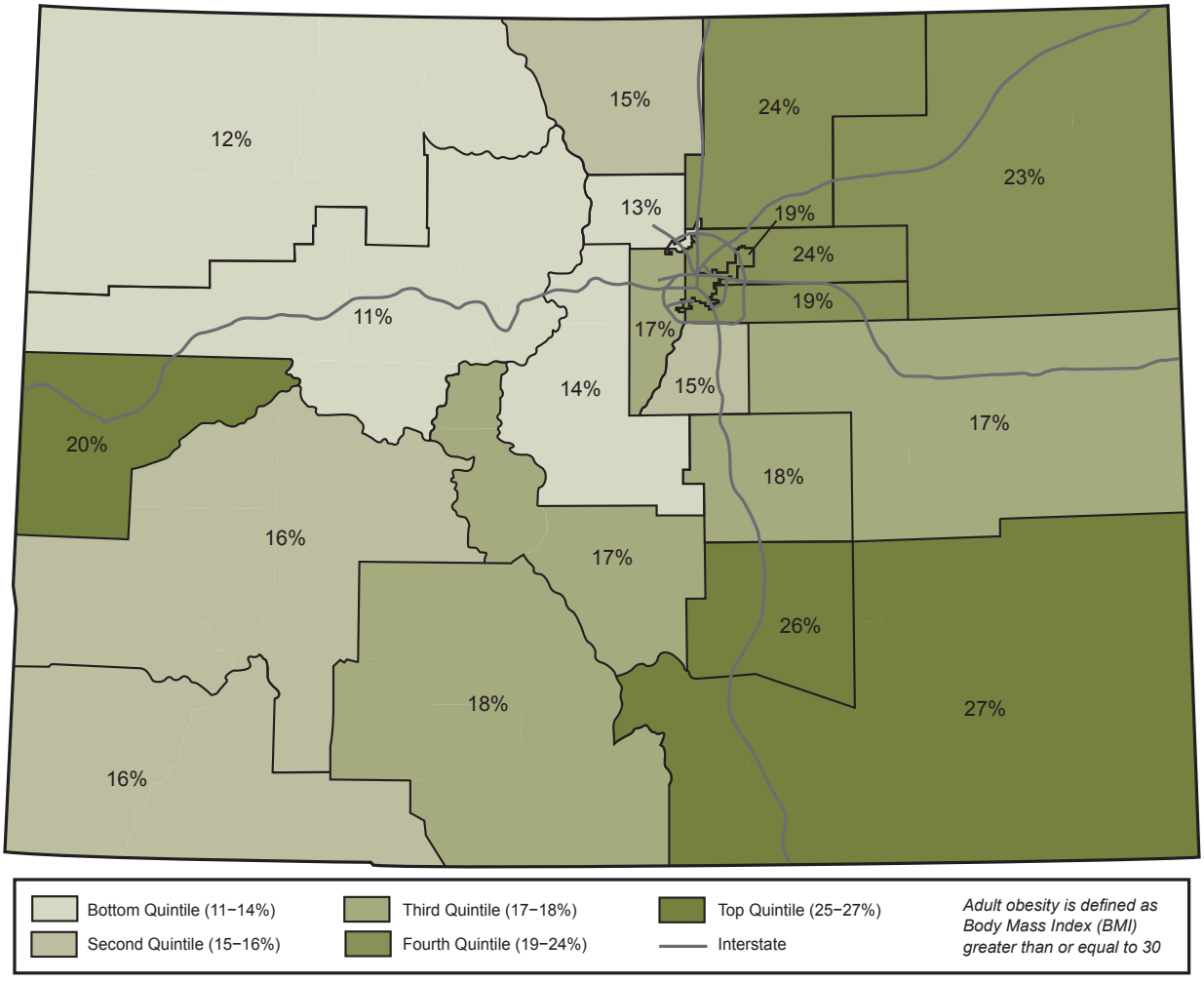
Please note that counties are technically designated as metropolitan or non-metropolitan; here "urban" and "rural" serve as proxies for these designations. "Frontier" counties are a subset of rural counties.

Compared with Colorado's 2008 adult obesity prevalence of 19.1 percent, the prevalence of adult obesity varied throughout different regions of Colorado. This regional variation is indicated in the following map (Figure 45) that shows adult obesity prevalence for the combined years of 2005 through 2007 by region. In general, Colordans residing in the eastern regions had a higher prevalence of adult obesity compared with Coloradans living in the Front Range and western Colorado regions. The southeastern-most region of Colorado (Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero and Prowers counties) had the highest prevalence of adult obesity in the state. The region comprising Eagle, Garfield, Grand, Pitkin and Summit counties had the lowest prevalence of adult obesity.

As mentioned previously in Chaper 4, obesity is a major risk factor for the development of diabetes in adults because having more body fat can increase insulin resistance. Continual insulin resistance can eventually contribute to the development of type 2 diabetes.[53] In the same way that adult obesity prevalence varies by region, the prevalence of diabetes also varies throughout the state, as shown in the map of adult diabetes prevalence for the combined years of 2005 through 2007 (Figure 46).

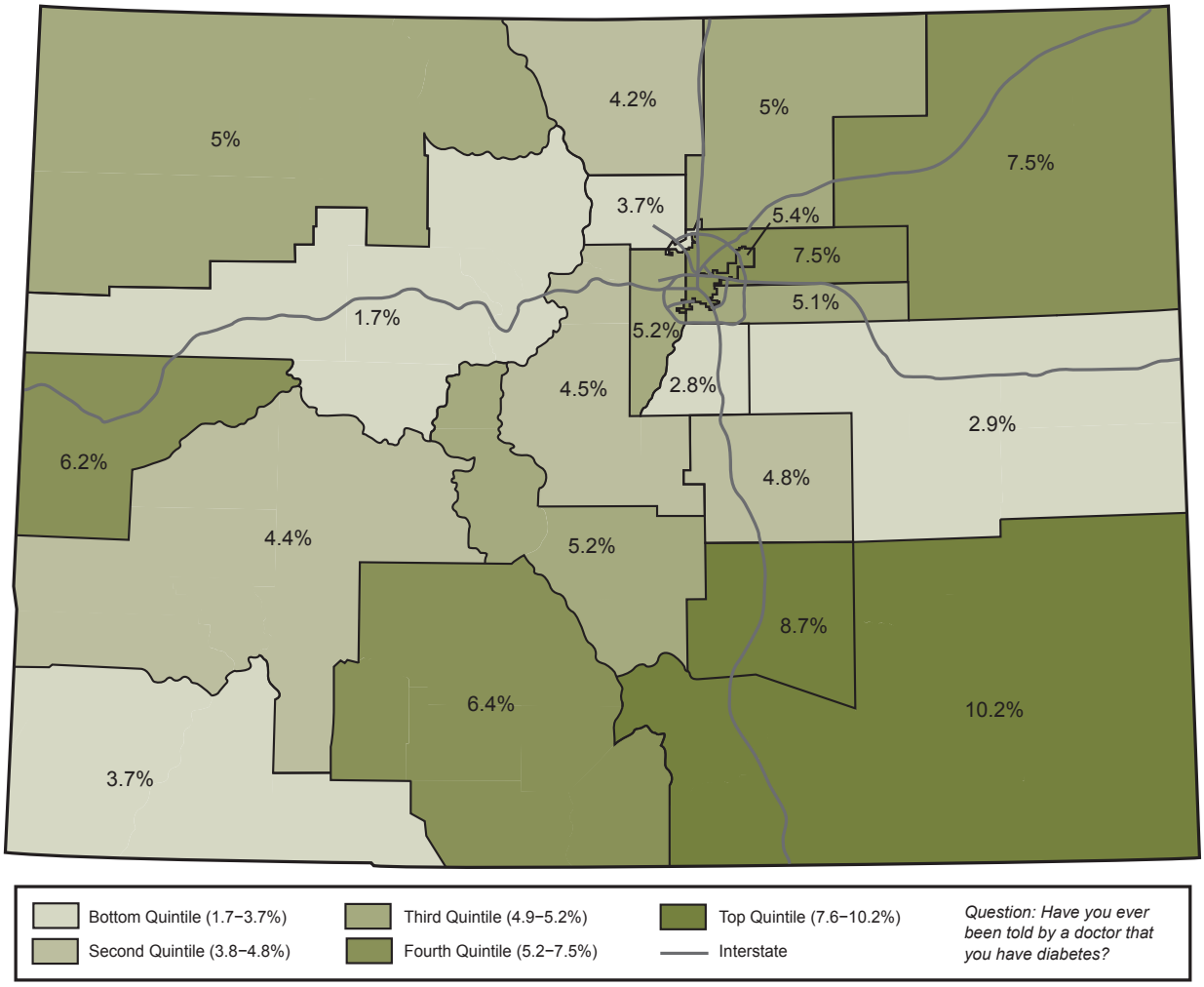
The adult diabetes prevalence was highest among residents in the southeastern region of Colorado (Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero and Prowers counties). Diabetes prevalence was lowest in Boulder and Douglas counties. In general, the regional variation in adult diabetes prevalence mirrored the regional variation in prevalence of adult obesity during the same period.

Figure 45. Prevalence of Adult Obesity by 21 Health Statistics Regions—2005–2007



Data source: Colorado Behavioral Risk Factor Surveillance System
Refer to Appendix A for definitions of health statistics regions and quintiles.

Figure 46. Prevalence of Adult Diabetes by 21 Health Statistics Regions—2005–2007



Data source: Colorado Behavioral Risk Factor Surveillance System
Created by the EPE Branch
Refer to Appendix A for definitions of health statistics regions and quintiles.

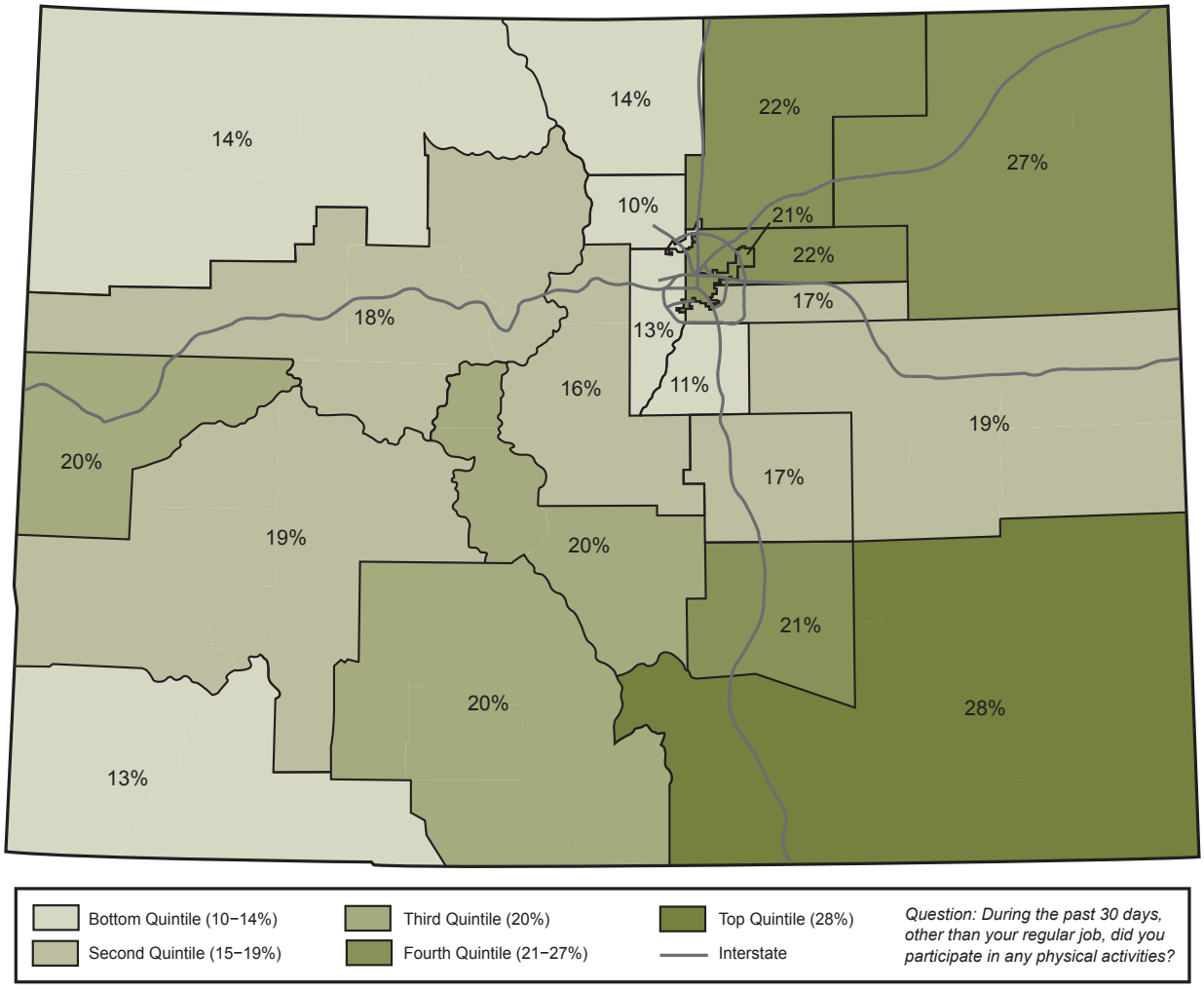
As mentioned in Chapter 3 on behavioral factors associated with obesity, the adult prevalence of physical inactivity was highest for obese adults (28.1 percent) and lowest for adults who were not overweight or obese (14.4 percent). Therefore, it is not surprising that adult physical inactivity varied throughout the state, given the variation in obesity prevalence. Regional differences in physical inactivity prevalence for the combined years of 2005 through 2007 are shown in the following map (Figure 47). Counties in the Eastern Plains had the highest prevalence of adult physical inactivity.

Similar to regional differences in obesity prevalence and diabetes prevalence, the southeastern region of the Eastern Plains had the highest prevalence of adult physical inactivity, and Boulder and Douglas counties had the lowest adult physical inactivity prevalence.

Variation in the age distribution of each region's population could explain part of the variation in the prevalence of inactivity, obesity and diabetes. Geographic variation in resources devoted to increasing physical activity and to preventing or decreasing obesity and the onset of diabetes also might explain some of the variation in prevalence across the state. These prevalence results have not been adjusted for age or any other potential

explanatory factor that could help identify the independent contribution of inactivity on obesity and the independent contribution of obesity on diabetes. However, the presented results help to identify populations within the state where public health programs to increase physical activity and other strategies to reduce both obesity and the risk of diabetes can be targeted.

Figure 47. Prevalence of Adult Physical Inactivity by 21 Health Statistics Regions—2005–2007



Data source: Colorado Behavioral Risk Factor Surveillance System
Created by the EPE Branch
Refer to Appendix A for definitions of health statistics regions and quintiles.

CHAPTER 6

Reducing the Burden of Overweight and Obesity

Colorado Physical Activity and Nutrition Program

In 2003, the Colorado Department of Public Health and Environment initiated the Colorado Physical Activity and Nutrition (COPAN) program. The COPAN program uses a comprehensive, community-based approach to promote healthy eating and physical activity as a means of preventing and reducing overweight, obesity and related chronic diseases in Colorado. Interventions are based on known best practices and follow the Centers for Disease Control and Prevention's recommended strategies and measurements to prevent obesity in the United States (To view this document, visit http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm; a complete list of all of the recommended strategies is located in Appendix D). COPAN promotes preventive strategies through healthy eating and active living, as detailed in the *Roadmap to Healthy Eating and Active Living*. (To view this document, visit www.livewellcolorado.org/assets/pdf/resources/COPAN-roadmap-6-17-09.pdf.) The roadmap recognizes the contribution community life plays in promoting physical activity and nutrition. For example, communities can promote physical activity by offering safe and accessible community environments. The roadmap focuses on 11 key community targets:

- Active community environments
- Child care
- Work sites
- Schools
- Healthy food purchases
- Community gardens
- Older adult sites
- Health care
- Breast-feeding
- Faith-based organizations
- Media and public awareness

Community Partnerships

Public-private partnerships are important for effective obesity prevention. The COPAN program at the state health department has a number of partners, each with a well-defined purpose. A sample of these partners includes the Colorado Health Foundation, Kaiser Permanente, the Colorado Department of Education and the Colorado Department of Transportation. In 2008, the Colorado Health Foundation, Kaiser Permanente, COPAN, and a number of other partners came together to create a new nonprofit organization: LiveWell Colorado. LiveWell Colorado was created to spearhead state and local partnerships to address obesity prevention by coordinating efforts, reducing duplication, streamlining program funding and promoting collaborations among stakeholders throughout Colorado. LiveWell Colorado's mission is: "to inspire and advance policy, environmental and lifestyle changes that promote health through the prevention and reduction of obesity." LiveWell Colorado is a strategic partner of COPAN. Currently in 2009, LiveWell Colorado supports 25 communities and COPAN provides additional content expertise to these communities. For more information about LiveWell Colorado, visit www.livewellcolorado.org.

Policy: Past and Present

The combination of change at both the individual and societal level directly influences the prevalence of obesity and overweight in the United States. To help curb the burden of obesity, a number of states have enacted policies to promote healthy eating in schools, increase access to healthy food, and foster the development of environments that support healthy eating and active living, breast-feeding and work site wellness. A complete list of policies specific to Colorado's effort to reduce the burden of obesity is located in Appendix B.

Using Policy to Change Built and Social Environments

The Centers for Disease Control and Prevention describes American society as "obesogenic, characterized by environments that promote increased food intake, non-healthful foods, and physical inactivity."[54] A look at current living and working environments might help explain why environments within the United States are obesogenic. Changes in the way people live and work have had a great impact on daily levels of physical activity. A good example exists in built environments, a term that refers to "aspects of a person's surrounding which are human-made or modified, as compared with naturally occurring aspects of the environment."[55] Policy and environmental change initiatives that make healthy choices in nutrition and physical activity available, affordable and easy likely will prove most effective in combating obesity.[56] By incorporating the built environment concept in planning and development, communities can promote health through the development of bicycle paths, the inclusion of sidewalks in subdivisions, rezoning for community gardens and local agriculture, and the allocation of parks and open spaces for recreation. An example of a built environment that does not support health promotion is a roadway that accommodates more and larger vehicles but does not accommodate more active forms of transport via pedestrian walkways and bike lanes. Developers, municipal planners and transportation experts working together can create built environments that play a significant role in promoting good health by offering safe choices for increasing physical activity and nutrition.

The social environment encompasses "socioeconomic or social characteristics of neighborhoods, including income, education, race/ethnicity, and social cohesion."[57] Similar to the concept of built environment, social environment has a direct impact on a community by reducing barriers to good health. Examples of ways to change social environments to reduce obesity and overweight include the creation of farmers markets at workplaces and low-income neighborhoods, and increasing access to grocery stores. A 2002 study by the University of North Carolina found there are three times as many supermarkets, which provide the cheapest and widest variety of foods, including fresh produce, in wealthier neighborhoods than in poorer ones.[58] By considering the built and social environment concepts in planning and development, communities can have a direct impact on the health of community members.

Community Highlight

Local Policy Change—Transportation

In 2005, Colorado Springs amended its Intermodal Transportation Plan to include a mandate that future construction of streets be "complete," meaning they accommodate multimodal travel by pedestrians, bikes, buses and cars (and integrate safety measures for all these modes of travel). Proponents of complete streets believe that increasing pedestrian and bike access as primary modes of travel reduces overweight/obesity levels, improves air quality and enhances the potential for mixed-land use, which frequently improves the economic health of a community by creating local commercial opportunities.[59]

Community Highlight

Local Policy Change—Community Plans

An example of local policy change is the Derby Master Plan developed by LiveWell Commerce City. This plan is the result of nine comprehensive assessments of more than 300 local residents to determine whether the neighborhood is walkable. This initiative included not only community planners, but also school-aged youth in Commerce City trained to advocate for policy change. The Derby Master Plan includes rezoning for mixed-use land and strong support for pedestrian development.[60]

Community Highlight

Local Policy Change—Community Gardens

In Teller County, the city of Cripple Creek is located at about 9,500 feet, and the vegetable growing season is short, if not impossible. However, through collaborative efforts of the local public health agency, Cripple Creek Parks and Recreation, the local school, the local extension office and others, a vacant school greenhouse was refurbished to grow vegetables and plants year-round. The greenhouse has soil containers that local seniors, adults and students use to grow a variety of vegetables and herbs. A donation of solar panels from the local mine in 2009 now provides electricity for heating.[61]

For additional highlights and summaries of local Colorado community initiatives, visit www.livewellcolorado.org and click on "Community Initiatives."

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APPENDIX A

Data Set Descriptions

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is sponsored by the Centers for Disease Control and Prevention and is the world's largest, ongoing telephone health survey system of adults 18 years of age and older. Beginning in 1984, the BRFSS purpose is to collect data on health risk behaviors, preventive health practices and health outcomes primarily related to chronic disease and injury. Using random-digit-dialing, BRFSS surveyors collect data from each state and the District of Columbia, Puerto Rico, the United States Virgin Islands and Guam. BRFSS data are used to track changes in trends, develop and evaluate prevention programs and prioritize resources. For more information on BRFSS, visit www.cdc.gov/brfss/.

There are a number of limitations of the BRFSS. Households without a land line phone are unable to participate in the survey, and some individuals refuse to participate. Answers are self-reported and are subject to the limitations of self-reported data collection. The physical activity question asks about physical activity during leisure times and excludes physical activity performed as part of an individual's job. Questions specific to diabetes, high blood pressure and high blood cholesterol require a clinical diagnosis and might exclude individuals who have a condition but have not been diagnosed.

Colorado Child Health Survey

The Colorado Child Health Survey (CHS) was initiated in 2004 to fill the health data gap in Colorado that exists for children ages 1–14. The purpose of this study is to monitor health conditions and behaviors among children. Topics include, but are not limited to, physical activity, nutrition, access to health and dental care, behavioral health, school health, sun safety and injury. Parents are identified after completing the Behavioral Risk Factor Surveillance System and, if willing to participate, they are called approximately 10 days later to complete the CHS. Approximately 1,000 surveys are completed each year. For more information on CHS, visit www.cdphe.state.co.us/hs/yrbs/childhealth.html.

Limitations of the CHS include the same selection and participant limitations as identified in the BFRSS. Additionally, the CHS is conducted by proxy, meaning parents are responding to questions specific to a child's health and behaviors contributing to their health. Parents might not accurately respond to questions about their child's health and behaviors.

National Health and Nutrition Examination Survey

The National Health and Nutrition Examination Survey (NHANES) is a program of studies sponsored by the Centers for Disease Control and Prevention. Beginning in the 1960s, the survey's purpose is to assess the health and nutritional status of adults and children in the United States. NHANES is unique because it combines an interview with a physical examination. The survey examines a nationally representative sample of about 5,000 people each year. Study results are used to guide health sciences research. Results directly and indirectly impact programs, services and policy. For more information on NHANES, visit www.cdc.gov/nchs/nhanes/about_nhanes.htm.

National Immunization Survey

In 1994, the National Immunization Survey (NIS) was started to monitor childhood immunization coverage. Sponsored by the National Center for Immunizations and Respiratory Diseases, the NIS is conducted using a list-assisted random-digit-dialing telephone survey followed by a mailed survey to the child's provider. Eligible children are between 19 and 35 months of age living in the United States at the time of the interview. Data collected relate to recommended vaccinations along with additional information on maternal breast-feeding. Data are used to estimate vaccination coverage rates and identify trends. For more information on the NIS, visit www.cdc.gov/nis/.

The major limitation of the National Immunization Survey is the recall of breast-feeding behaviors (frequency and duration), as many months or years might pass between breast-feeding cessation and survey participation.

Pregnancy Risk Assessment Monitoring System

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance project of the Centers for Disease Control and Prevention. The goal of the

PRAMS is to improve the health of mothers and infants by reducing adverse outcomes such as low birth weight, infant mortality and morbidity, and maternal morbidity. PRAMS provides state-specific data for planning and assessing health programs and for describing maternal experiences that might contribute to maternal and infant health. State-specific, population-based data are collected by mail regarding maternal attitudes and behaviors before, during and shortly after pregnancy. Women are sampled using data from each state's birth certificate file. For more information on PRAMS, visit www.cdc.gov/PRAMS/index.htm.

For the 2000-2004 PRAMS survey data included in "The Weight of the State: 2009 Report on Overweight and Obesity in Colorado," 25 out of 50 states contributed to the U.S. prevalence estimates. Because not all states were included or participated in the survey each year, care should be taken when comparing Colorado data to U.S. data. U.S. data are representative only of the states that were included. The number of states included in prevalence estimates varied from year to year, and a trend analysis could not be performed. A limitation of PRAMS data is that it provides estimates of breast-feeding behavior early on in an infant's life but not estimates of breast-feeding behavior past 20 weeks (about 5 months).

Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS) is a national school-based survey supported by the Centers for Disease Control and Prevention. The goal of the YRBSS is to monitor priority health-risk behaviors and health outcomes that contribute to death, disability and social problems among high school-aged adolescents. Started in 1991, the YRBSS is conducted every two years in select public and private schools across the United States. For more information on the YRBSS, visit www.cdc.gov/HealthyYouth/yrbs/index.htm.

A main limitation of the YRBSS is poor survey response rates. Overall response rates in Colorado were 49 percent in 2001, 32 percent in 2003 and 29 percent in 2007. Only in 2005 did the Colorado YRBSS achieve an overall response rate of 60 percent, which is adequate for generalizing to the entire Colorado adolescent population. Because of inadequate response rates, prevalence estimates for adolescent overweight and obesity that are more recent than 2005 are not available and the trends since 2001 cannot be assessed.

Technical Notes

Race/ethnicity data

Race/ethnicity data are self-reported on population-based surveys. The Health Statistics Section at the Colorado Department of Public Health and Environment uses different race/ethnic categories for different age-specific surveys. Adult race/ethnic categories include non-Hispanic White, non-Hispanic Black, Hispanic, and other. The other category includes Asian, Pacific Islander, Native American, Alaskan Native, and other race/ethnicity populations.

Among surveys of children, such as the Colorado Child Health Survey, race/ethnic categories include

non-Hispanic White, non-Hispanic Black, Hispanic, Asian, and other. It should be noted that in some cases, the other category is omitted from figures. This omission is due to small numbers, which make estimates unreliable. Interpretation of statistics with small numbers is difficult since confidence intervals are large.

Population-based data and application of weights

This report uses data from many population-based surveys. A population-based survey is a survey that is representative of the population being studied; in this case, it is the population of Colorado. Although a survey sample is not strictly proportional to the population of the state, a weight is applied to account for sample and population differences. Using weighting, survey data are adjusted to reflect the population, and this enables public health officials to generalize conclusions to the entire population of Colorado.

Rates

A rate is defined as the frequency with which an event occurs in a defined population over a specified period of time. Rates are important for comparing experiences between populations at different times, different places, and among different types of people.[1] Two types of rates are used in this report:

Age-adjusted rates

All the adjusted rates presented in this report are defined as the number of people with the condition of interest per 100,000 people in the total population of interest (Colorado, United States or a region of Colorado). These age-adjusted rates are adjusted to the 2000 U.S. standard population using the direct method applied to specific age groups. Age adjustment using the direct method involves the application of age-specific rates in a population of interest to a standardized age distribution to eliminate differences in observed rates that result from age differences in population composition. This adjustment usually is done when comparing two or more populations at one point in time or one population at two or more points in time.

[1] *Last, John M. A "Dictionary of Epidemiology." New York, NY. Oxford University Press, 2001.*

Age-specific rates

Age-specific rates also are presented in this report. Age-specific rates are defined as the number of people within an age group who have a condition of interest per 100,000 people in that age group in the total population of interest (Colorado, United States or a region of Colorado). Age-specific rates are not adjusted. Rather, these rates represent rates specific to the age group of interest.

Confidence intervals

Confidence intervals are used to describe the possible margin of error of an estimated prevalence or rate. This report provides 95 percent confidence intervals when they were available. A 95 percent confidence interval indicates that for 95 out of 100 similar samples, the "true" value of a prevalence or rate will be contained between the upper and lower limits of that confidence interval. Confidence intervals are directly affected by sample size. If the sample size is small, the confidence interval will likely be wide. Conversely, if the sample size is large, the confidence interval will likely be narrow.

Confidence intervals can be used as a conservative test of statistical significance. A statistically significant difference is noted when the confidence interval of one estimate is higher or lower than the confidence interval of another estimate. In other words, one estimate is significantly different than another if the two confidence intervals do not overlap.

Health statistics regions

The 21 health statistics regions included in this report are aggregations of counties developed by the Health Statistics Section of the Colorado Department of Public Health and Environment in partnership with state and local public health professionals. The regions were developed using statistical and demographic criteria. More information about these regions is available by e-mailing health.statistics@state.co.us.

Definitions

Adolescent—For the purposes of this report, unless otherwise noted, people in high school (grades 9–12) are considered adolescents.

Adult—For the purposes of this report, unless otherwise noted, people ages 18 years and older are considered adults.

Body mass index (BMI)—BMI estimates used within this report are crude estimates of body fat based on an individual's height and weight. BMI is calculated as weight in kilograms divided by height in meters squared (or as weight in pounds times 703 divided by height in inches squared). BMI categories differ for adults (20 years of age and older) and children (ages 2 to 20 years of age). The four BMI categories for adults are underweight (less than 18.5), healthy weight (18.5–24.9), overweight (25.0–29.9) and obese (30.0 or greater). Among children, BMI is based on sex-specific growth charts, and the four categories of BMI are underweight (less than fifth percentile), healthy weight (5th–84th percentile), overweight (85th–94th percentile) and obese (95th percentile or greater).

Child—For the purposes of this report, unless otherwise noted, people ages 2–14 years are considered children.

Demographic—A characteristic describing social or vital statistics about a human population, such as size, growth, density and distribution

Epidemic—The occurrence of cases of an illness, health condition, health-related behavior or health-related event in excess of what is normally expected within a population for a given time

Epidemiology—The study of the distribution of a disease or physiological condition in human populations and of the factors that influence this distribution

Moderate or vigorous physical activity—This report defined moderate or vigorous physical activity as 30 minutes or more per day of moderate activity for five or more days per week or 20 minutes or more per day of vigorous activity for three or more days per week.

Physical inactivity or physically inactive—This report defined a physically inactive person as one who reported having had no leisure-time physical activity in the past 30 days at the time of survey.

Prevalence—Prevalence is defined as the proportion of individuals in a population who have a disease, condition, or attribute of interest at a specified time. For example, the prevalence of obesity among adults in Colorado in 2008 was 19.1 percent. This value was calculated by taking the number of adults with a body mass index greater than or equal to 30 and dividing by the total number of adults in the population. Prevalence can also be defined as the number of events in a given population in a specified period.

Quintile—A quintile divides the total frequency of a sample or population into five equal proportions such that 20 percent of the total frequency is contained in each quintile.

APPENDIX B

State-level Policies in Colorado, 2004–2008

Collaborative work with many partners has led to several important successes in the promotion and implementation of policy and environmental change strategies to reduce obesity. The state-level policies include the following:

- **Senate Bill 103 (2004)** supported school-based policies to decrease the consumption of low-nutrition, high-sugar containing foods. Senate Bill 103 encouraged each school district board of education to adopt a policy on or before July 1, 2004, that would ensure that, by the 2006-07 school year, at least 50 percent of all items offered in vending machines in the school district be healthful foods or healthful beverages that meet acceptable nutritional standards.
- **Senate Bill 88 (2004)** supports and promotes breast-feeding and supports breast-feeding mothers. This legislation recognizes the benefits of breast-feeding, encourages mothers to breast-feed and allows a mother to breast-feed in any place she has a right to be.
- **Amendment 35 (passed by voters in November 2004)** substantially increased the state's tobacco excise tax and designated revenues for several health initiatives. Since January 2005, the Prevention Services Division at the Colorado Department of Public Health and Environment has used these funds to prevent and reduce tobacco use; prevent, detect and treat cancer, cardiovascular disease and pulmonary disease; expand breast and cervical cancer screening services; and reduce health disparities.
- **Senate Bill 81 (2005)** addresses the combined work of the Early Childhood and School Site Task Forces to support healthful eating and physical activity in schools with the encouragement to adopt coordinated school health policy standards. The bill recognizes overweight among children and youth as a major public health threat and encourages school district boards of education to adopt policies to improve children's nutrition by offering healthful foods at school, providing culturally sensitive nutrition education, establishing local school wellness policies in accordance with the federal Child Nutrition and WIC Reauthorization Act of 2004, ensuring student access to fresh produce (especially Colorado-grown) and ensuring student access to daily physical activity. The bill also encourages the inclusion of goals for nutrition education in local wellness policies.
- **House Bill 309 (2005)** created a Safe Routes to School program in the Department of Transportation to distribute federal funds to local governments to create and promote active communities and lifestyles. This is directly related to the work of the COPAN Active Community Environments Task Force.
- **Senate Bill 127 (2006)** created a program to make free fruits and vegetables available to students in public schools and requires that Colorado-grown produce be used in the program to the maximum extent possible.
- **House Bill 1093 (2007)** is specific to the work of the original 5-A-Day Task Force, in that it encourages the purchase of Colorado-grown produce by government entities.
- **Senate Bill 129 (2008)** requires that all beverages sold to public school students must meet minimum nutritional standards. Beverages sold in elementary and middle schools can be only water, milk or 100 percent juice. Beverages sold in high schools must include the previous standards, but high schools can sell sports drinks. Soft drinks are not allowed for sale in elementary, middle or high schools.
- **House Bill 1276 (2008)** also is known as "Workplace Accommodation for Nursing Mothers." This bill establishes a standard for employers to make a reasonable effort to provide breast-feeding mothers with unpaid break time, paid break time and/or meal time to express breast milk for their nursing children for up to two years after the child's birth; to provide a private location in close proximity to the breast-feeding mother's work area (other than a toilet stall) in which to express milk; and to not discriminate against women for expressing milk in the workplace.

APPENDIX C

Colorado Regional Health Profiles

Purpose

The Weight of the State: 2009 Report on Overweight and Obesity in Colorado provides a comprehensive characterization of the burden of overweight and obesity and an analysis of modifiable risk factors, such as nutrition, physical activity and breast-feeding, that could help reduce overweight and obesity. The purpose of Appendix C is to present region-specific data for the 21 Colorado Health Statistics Regions alongside statewide data, so each region can identify risk factors and outcomes associated with being overweight and obese and target interventions for prevention and treatment.

Method

The Health Statistics Section at the Colorado Department of Public Health and Environment, in partnership with state and local public health professionals, developed the 21 Health Statistic Regions of Colorado. The 21 regions are aggregations of the 64 counties in Colorado. For this report, overweight and obesity-related data were pulled from a comprehensive profile available at the Colorado Department of Public Health and Environment Web site: http://www.cdphe.state.co.us/hs/regionaldata/regionaldata.html

Data for each regional profile were collected from a number of sources, including the United States Census Bureau, the Colorado State Demography Office, the Behavioral Risk Factor Surveillance System, the Pregnancy Risk Assessment Monitoring System, the Colorado Child Health Survey and Colorado Vital Statistics. The Youth Behavioral Risk Factor Surveillance System identifies trends among adolescents; however, region-specific data are unavailable. A review of data sets is available in Appendix A.

Every 10 years, the United States government sets priorities to challenge individuals, communities and professionals to take specific steps to ensure good health. The current set of priorities, *Healthy People 2010*, has 107 key objectives and associated targets to assess health outcomes and behaviors and identify opportunities for improvement of health status.

Presentation

Each Regional Health Profile contains region-specific population characteristics, adult general heath status and modifiable risk factors, child and adolescent general health status and modifiable risk factors, chronic disease outcomes, and mortality. When available, each demographic/indicator has a respective definition, regional prevalence estimate, Colorado prevalence estimate and *Healthy People 2010* target for that health objective.

2009 REGIONAL HEALTH PROFILE
Region 1: Logan, Morgan, Phillips, Sedgwick, Washington, and Yuma Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	72,376	4,909,524	N/A
Age < 1 year	1.3%	1.4%	N/A
Age 1 to 14 years	20.4%	19.3%	N/A
Age 15 to 19 years	6.7%	7.3%	N/A
Age 20 to 44 years	30.2%	36.2%	N/A
Age 45 to 64 years	26.5%	25.9%	N/A
Age ≥65 years	14.9%	9.8%	N/A
White, non-Hispanic	75.0%	72.2%	N/A
White, Hispanic	22.2%	18.7%	N/A
Black	1.5%	4.7%	N/A
Asian American/Pacific Islander	0.5%	3.1%	N/A
American Indian/Native Alaskan	0.9%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	22.4%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	19.0%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	44.1%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	23.5%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	27.3%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	17.9%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	16.6%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	70.9%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	83.1%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	64.2%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	13.7%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	26.5%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	87.5%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	74.7%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	27.2%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	7.5%	5.1%	N/A
Asthma *(percent of adults with asthma)*	5.9%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	35.7%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	24.6%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	187 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	48 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	22 per 100,000	18.0 per 100,000	45.0 per 100,000

[a] Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 2: Larimer County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	283,977	4,909,524	N/A
Age < 1 year	1.2%	1.4%	N/A
Age 1 to 14 years	16.9%	19.3%	N/A
Age 15 to 19 years	8.1%	7.3%	N/A
Age 20 to 44 years	37.5%	36.2%	N/A
Age 45 to 64 years	25.8%	25.9%	N/A
Age ≥65 years	10.4%	9.8%	N/A
White, non-Hispanic	86.4%	72.2%	N/A
White, Hispanic	9.3%	18.7%	N/A
Black	1.4%	4.7%	N/A
Asian American/Pacific Islander	2.2%	3.1%	N/A
American Indian/Native Alaskan	0.9%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	46.7%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	10.9%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	37.8%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	15.8%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	14.4%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	17.0%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	27.4%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	92.7%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	93.6%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	68.1%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	12.3%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	9.8%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	67.7%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	88.5%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	32.4%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	4.2%	5.1%	N/A
Asthma *(percent of adults with asthma)*	7.8%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	35.8%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	17.9%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	142.6 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	46 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	19 per 100,000	18.0 per 100,000	45.0 per 100,000

[a] Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 3: Douglas County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	276,620	4,909,524	N/A
Age < 1 year	1.5%	1.4%	N/A
Age 1 to 14 years	23.6%	19.3%	N/A
Age 15 to 19 years	7.5%	7.3%	N/A
Age 20 to 44 years	38.3%	36.2%	N/A
Age 45 to 64 years	24.2%	25.9%	N/A
Age ≥65 years	4.8%	9.8%	N/A
White, non-Hispanic	86.7%	72.2%	N/A
White, Hispanic	6.7%	18.7%	N/A
Black	2.1%	4.7%	N/A
Asian American/Pacific Islander	4.0%	3.1%	N/A
American Indian/Native Alaskan	0.6%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	59.3%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	6.6%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	36.1%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	15.4%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	10.5%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	8.0%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	23.3%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	94.7%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	94.4%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	62.0%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	11.0%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	10.4%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	75.3%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	87.3%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	28.4%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	2.8%	5.1%	N/A
Asthma *(percent of adults with asthma)*	8.8%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	31.3%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	16.3%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	142.6 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	40.7 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	8.6 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 4: El Paso County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	584,923	4,909,524	N/A
Age < 1 year	1.5%	1.4%	N/A
Age 1 to 14 years	19.9%	19.3%	N/A
Age 15 to 19 years	7.7%	7.3%	N/A
Age 20 to 44 years	37.2%	36.2%	N/A
Age 45 to 64 years	24.6%	25.9%	N/A
Age ≥65 years	9.1%	9.8%	N/A
White, non-Hispanic	75.3%	72.2%	N/A
White, Hispanic	11.5%	18.7%	N/A
Black	8.1%	4.7%	N/A
Asian American/Pacific Islander	3.9%	3.1%	N/A
American Indian/Native Alaskan	1.3%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	41.2%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	10.7%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	36.1%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	19.1%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	16.7%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	20.3%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	26.0%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	81.4%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	92.5%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	62.0%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	13.7%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	10.1%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	73.4%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	84.8%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	32.3%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	4.8%	5.1%	N/A
Asthma *(percent of adults with asthma)*	7.8%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	32.4%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	18.4%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	161.8 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	54.9 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	15.4 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 5: Cheyenne, Elbert, Kit Carson, and Lincoln Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	38,589	4,909,524	N/A
Age < 1 year	1.0%	1.4%	N/A
Age 1 to 14 years	17.0%	19.3%	N/A
Age 15 to 19 years	7.7%	7.3%	N/A
Age 20 to 44 years	31.9%	36.2%	N/A
Age 45 to 64 years	31.1%	25.9%	N/A
Age ≥65 years	11.3%	9.8%	N/A
White, non-Hispanic	87.0%	72.2%	N/A
White, Hispanic	9.0%	18.7%	N/A
Black	2.5%	4.7%	N/A
Asian American/Pacific Islander	0.7%	3.1%	N/A
American Indian/Native Alaskan	0.8%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	28.3%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	10.1%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	39.9%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	18.3%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	19.2%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	21.1%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	29.4%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	84.8%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	*	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	*	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	*	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	*	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	*	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	*	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	*	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	2.9%	5.1%	N/A
Asthma *(percent of adults with asthma)*	9.4%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	35.9%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	16.7%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	163.3 per 100,00	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	32 per 100,00	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	14.4 per 100,00	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE

Region 6: Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero, and Prowers Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	75,833	4,909,524	N/A
Age < 1 year	1.1%	1.4%	N/A
Age 1 to 14 years	18.1%	19.3%	N/A
Age 15 to 19 years	6.4%	7.3%	N/A
Age 20 to 44 years	30.4%	36.2%	N/A
Age 45 to 64 years	28.0%	25.9%	N/A
Age ≥65 years	16.0%	9.8%	N/A
White, non-Hispanic	61.4%	72.2%	N/A
White, Hispanic	32.3%	18.7%	N/A
Black	2.7%	4.7%	N/A
Asian American/Pacific Islander	0.9%	3.1%	N/A
American Indian/Native Alaskan	2.8%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	22.2%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	21.7%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	34.8%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	28.6%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	28.4%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	24.7%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	22.6%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	77.8%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	*	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	*	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	*	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	*	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	*	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	*	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	*	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	10.2%	5.1%	N/A
Asthma *(percent of adults with asthma)*	8.5%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	37.7%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	29.9%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	188.7 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	40.6 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	24.4 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 7: Pueblo County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	155,724	4,909,524	N/A
Age < 1 year	1.3%	1.4%	N/A
Age 1 to 14 years	18.7%	19.3%	N/A
Age 15 to 19 years	7.6%	7.3%	N/A
Age 20 to 44 years	33.5%	36.2%	N/A
Age 45 to 64 years	24.4%	25.9%	N/A
Age ≥65 years	14.6%	9.8%	N/A
White, non-Hispanic	57.4%	72.2%	N/A
White, Hispanic	36.7%	18.7%	N/A
Black	2.7%	4.7%	N/A
Asian American/Pacific Islander	1.1%	3.1%	N/A
American Indian/Native Alaskan	2.1%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	26.2%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	16.2%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	37.4%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	26.7%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	21.3%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	23.7%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	17.8%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	79.3%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	89.0%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	65.9%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	12.5%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	17.8%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	69.1%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	76.6%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	33.1%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	8.7%	5.1%	N/A
Asthma *(percent of adults with asthma)*	10.1%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	38.4%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	29.1%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	164.3 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	53 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	34.1 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE

Region 8: Alamosa, Conejos, Costilla, Mineral, Rio Grande and Saguache Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	47,894	4,909,524	N/A
Age < 1 year	1.3%	1.4%	N/A
Age 1 to 14 years	19.7%	19.3%	N/A
Age 15 to 19 years	8.4%	7.3%	N/A
Age 20 to 44 years	30.2%	36.2%	N/A
Age 45 to 64 years	26.6%	25.9%	N/A
Age ≥65 years	13.8%	9.8%	N/A
White, non-Hispanic	52.2%	72.2%	N/A
White, Hispanic	42.9%	18.7%	N/A
Black	1.1%	4.7%	N/A
Asian American/Pacific Islander	0.9%	3.1%	N/A
American Indian/Native Alaskan	3.0%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	25.1%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	15.8%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	42.0%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	18.8%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	20.1%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	19.9%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	17.3%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	85.2%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	*	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	*	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	*	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	*	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	*	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	*	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	*	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	6.4%	5.1%	N/A
Asthma *(percent of adults with asthma)*	7.9%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	31.2%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	22.6%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	179.7 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	41.3 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	33.6 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 9: Archuleta, Dolores, La Plata, Montezuma and San Juan Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	90,437	4,909,524	N/A
Age < 1 year	1.1%	1.4%	N/A
Age 1 to 14 years	16.7%	19.3%	N/A
Age 15 to 19 years	7.9%	7.3%	N/A
Age 20 to 44 years	32.5%	36.2%	N/A
Age 45 to 64 years	29.6%	25.9%	N/A
Age ≥65 years	12.2%	9.8%	N/A
White, non-Hispanic	80.9%	72.2%	N/A
White, Hispanic	9.8%	18.7%	N/A
Black	0.8%	4.7%	N/A
Asian American/Pacific Islander	0.7%	3.1%	N/A
American Indian/Native Alaskan	7.9%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	36.0%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	11.3%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	38.1%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	15.6%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	13.0%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	22.5%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	24.6%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	87.9%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	79.9%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	62.9%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	18.2%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	13.0%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	71.6%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	92.8%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	24.3%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	3.7%	5.1%	N/A
Asthma *(percent of adults with asthma)*	4.9%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	31.5%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	19.3%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	174.7 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	38.1 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	22.4 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 10: Delta, Gunnison, Hinsdale, Montrose, Ouray and San Miguel Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	99,081	4,909,524	N/A
Age < 1 year	1.2%	1.4%	N/A
Age 1 to 14 years	17.4%	19.3%	N/A
Age 15 to 19 years	7.4%	7.3%	N/A
Age 20 to 44 years	32.0%	36.2%	N/A
Age 45 to 64 years	27.5%	25.9%	N/A
Age ≥65 years	14.5%	9.8%	N/A
White, non-Hispanic	85.1%	72.2%	N/A
White, Hispanic	12.2%	18.7%	N/A
Black	0.8%	4.7%	N/A
Asian American/Pacific Islander	0.7%	3.1%	N/A
American Indian/Native Alaskan	1.3%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	30.2%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	12.8%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	31.9%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	17.8%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	18.9%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	20.4%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	25.7%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	89.2%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	84.2%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	66.3%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	9.4%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	6.7%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	72.4%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	79.7%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	38.5%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	4.4%	5.1%	N/A
Asthma *(percent of adults with asthma)*	6.7%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	34.5%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	23.8%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	160.6 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	35 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	11.5 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 11: Jackson, Moffat, Rio Blanco and Routt Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	44,894	4,909,524	N/A
Age < 1 year	1.3%	1.4%	N/A
Age 1 to 14 years	17.2%	19.3%	N/A
Age 15 to 19 years	7.5%	7.3%	N/A
Age 20 to 44 years	34.7%	36.2%	N/A
Age 45 to 64 years	31.2%	25.9%	N/A
Age ≥65 years	8.1%	9.8%	N/A
White, non-Hispanic	90.5%	72.2%	N/A
White, Hispanic	7.4%	18.7%	N/A
Black	0.6%	4.7%	N/A
Asian American/Pacific Islander	0.7%	3.1%	N/A
American Indian/Native Alaskan	0.8%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	36.1%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	10.6%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	45.3%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	12.8%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	14.2%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	16.9%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	27.8%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	91.3%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	*	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	*	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	*	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	*	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	*	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	*	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	*	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	5.0%	5.1%	N/A
Asthma *(percent of adults with asthma)*	7.5%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	34.3%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	19.8%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	176.8 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	49.4 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	17.1 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 12: Eagle, Garfield, Grand, Pitkin and Summit Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	167,210	4,909,524	N/A
Age < 1 year	1.4%	1.4%	N/A
Age 1 to 14 years	18.9%	19.3%	N/A
Age 15 to 19 years	6.1%	7.3%	N/A
Age 20 to 44 years	39.6%	36.2%	N/A
Age 45 to 64 years	27.4%	25.9%	N/A
Age ≥65 years	6.6%	9.8%	N/A
White, non-Hispanic	77.2%	72.2%	N/A
White, Hispanic	20.2%	18.7%	N/A
Black	0.9%	4.7%	N/A
Asian American/Pacific Islander	1.0%	3.1%	N/A
American Indian/Native Alaskan	0.7%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	45.7%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	11.5%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	36.2%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	11.9%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	17.9%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	15.4%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	30.9%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	94.8%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	78.1%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	50.5%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	15.1%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	16.1%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	72.4%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	81.5%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	28.5%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	1.7%	5.1%	N/A
Asthma *(percent of adults with asthma)*	5.9%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	33.2%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	16.5%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	126.5 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	36.3 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	12 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 13: Chaffee, Custer, Fremont and Lake Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	77,238	4,909,524	N/A
Age < 1 year	0.9%	1.4%	N/A
Age 1 to 14 years	14.6%	19.3%	N/A
Age 15 to 19 years	6.3%	7.3%	N/A
Age 20 to 44 years	34.0%	36.2%	N/A
Age 45 to 64 years	28.8%	25.9%	N/A
Age ≥65 years	15.4%	9.8%	N/A
White, non-Hispanic	80.8%	72.2%	N/A
White, Hispanic	12.8%	18.7%	N/A
Black	4.0%	4.7%	N/A
Asian American/Pacific Islander	0.7%	3.1%	N/A
American Indian/Native Alaskan	1.8%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	23.1%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	14.4%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	40.8%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	17.1%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	20.0%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	20.7%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	23.5%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	86.2%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	83.7%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	81.2%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	15.8%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	12.7%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	69.7%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	78.6%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	37.4%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	5.2%	5.1%	N/A
Asthma *(percent of adults with asthma)*	9.3%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	38.5%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	26.1%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	177.3 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	45.7 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	16.9 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 14: Adams County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	425,379	4,909,524	N/A
Age < 1 year	1.7%	1.4%	N/A
Age 1 to 14 years	22.8%	19.3%	N/A
Age 15 to 19 years	7.3%	7.3%	N/A
Age 20 to 44 years	38.5%	36.2%	N/A
Age 45 to 64 years	22.6%	25.9%	N/A
Age ≥65 years	7.1%	9.8%	N/A
White, non-Hispanic	57.3%	72.2%	N/A
White, Hispanic	33.6%	18.7%	N/A
Black	3.9%	4.7%	N/A
Asian American/Pacific Islander	3.7%	3.1%	N/A
American Indian/Native Alaskan	1.5%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	24.4%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	16.5%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	39.4%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	26.4%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	22.0%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	23.3%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	22.5%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	78.7%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	84.9%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	60.9%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	14.3%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	18.6%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	74.0%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	75.4%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	26.9%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	7.5%	5.1%	N/A
Asthma *(percent of adults with asthma)*	9.2%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	31.7%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	20.1%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	194.6 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	39.8 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	27.3 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 15: Arapahoe County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	552,592	4,909,524	N/A
Age < 1 year	1.5%	1.4%	N/A
Age 1 to 14 years	19.4%	19.3%	N/A
Age 15 to 19 years	7.2%	7.3%	N/A
Age 20 to 44 years	35.4%	36.2%	N/A
Age 45 to 64 years	27.3%	25.9%	N/A
Age ≥65 years	9.2%	9.8%	N/A
White, non-Hispanic	67.5%	72.2%	N/A
White, Hispanic	15.9%	18.7%	N/A
Black	10.6%	4.7%	N/A
Asian American/Pacific Islander	5.2%	3.1%	N/A
American Indian/Native Alaskan	0.9%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	44.5%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	11.8%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	37.2%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	19.2%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	17.4%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	18.8%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	25.6%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	82.0%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	90.9%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	60.6%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	11.8%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	11.7%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	69.4%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	81.0%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	28.0%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	5.1%	5.1%	N/A
Asthma *(percent of adults with asthma)*	8.8%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	33.0%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	22.1%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	153.8 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	38.5 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	15.7 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 16: Boulder and Broomfield Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	346,495	4,909,524	N/A
Age < 1 year	1.3%	1.4%	N/A
Age 1 to 14 years	17.6%	19.3%	N/A
Age 15 to 19 years	8.1%	7.3%	N/A
Age 20 to 44 years	38.2%	36.2%	N/A
Age 45 to 64 years	27.0%	25.9%	N/A
Age ≥65 years	7.9%	9.8%	N/A
White, non-Hispanic	81.1%	72.2%	N/A
White, Hispanic	12.3%	18.7%	N/A
Black	1.4%	4.7%	N/A
Asian American/Pacific Islander	4.4%	3.1%	N/A
American Indian/Native Alaskan	0.8%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	*	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	9.0%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	33.7%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	13.5%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	10.4%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	13.4%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	32.0%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	88.5%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	92.2%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	60.3%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	10.8%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	8.6%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	73.9%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	88.4%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	29.6%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	3.7%	5.1%	N/A
Asthma *(percent of adults with asthma)*	7.7%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	32.4%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	17.0%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	149.9 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	42 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	16 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 17: Clear Creek, Gilpin, Park and Teller Counties

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	54,435	4,909,524	N/A
Age < 1 year	1.0%	1.4%	N/A
Age 1 to 14 years	16.1%	19.3%	N/A
Age 15 to 19 years	7.0%	7.3%	N/A
Age 20 to 44 years	29.1%	36.2%	N/A
Age 45 to 64 years	36.9%	25.9%	N/A
Age ≥65 years	9.9%	9.8%	N/A
White, non-Hispanic	91.8%	72.2%	N/A
White, Hispanic	4.9%	18.7%	N/A
Black	1.3%	4.7%	N/A
Asian American/Pacific Islander	0.9%	3.1%	N/A
American Indian/Native Alaskan	1.1%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	41.3%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	6.9%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	41.8%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	14.8%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	16.1%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	20.7%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	24.4%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	94.9%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	*	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	*	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	*	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	*	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	*	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	*	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	*	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	4.5%	5.1%	N/A
Asthma *(percent of adults with asthma)*	6.6%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	33.7%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	21.5%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	119.7 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	58.8 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	12.6 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 18: Weld County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	244,513	4,909,524	N/A
Age < 1 year	1.6%	1.4%	N/A
Age 1 to 14 years	21.5%	19.3%	N/A
Age 15 to 19 years	7.9%	7.3%	N/A
Age 20 to 44 years	39.0%	36.2%	N/A
Age 45 to 64 years	21.5%	25.9%	N/A
Age ≥65 years	8.4%	9.8%	N/A
White, non-Hispanic	69.8%	72.2%	N/A
White, Hispanic	26.4%	18.7%	N/A
Black	1.2%	4.7%	N/A
Asian American/Pacific Islander	1.6%	3.1%	N/A
American Indian/Native Alaskan	1.1%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	29.0%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	15.1%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	41.6%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	25.1%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	22.3%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	17.7%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	21.9%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	87.9%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	86.1%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	61.7%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	13.8%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	14.5%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	77.7%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	81.3%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	35.1%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	5.0%	5.1%	N/A
Asthma *(percent of adults with asthma)*	8.5%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	31.3%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	21.3%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	175.3 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	34.4 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	23.2 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 19: Mesa County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	140,414	4,909,524	N/A
Age < 1 year	1.3%	1.4%	N/A
Age 1 to 14 years	18.1%	19.3%	N/A
Age 15 to 19 years	7.6%	7.3%	N/A
Age 20 to 44 years	33.1%	36.2%	N/A
Age 45 to 64 years	25.4%	25.9%	N/A
Age ≥65 years	14.4%	9.8%	N/A
White, non-Hispanic	85.7%	72.2%	N/A
White, Hispanic	11.0%	18.7%	N/A
Black	1.1%	4.7%	N/A
Asian American/Pacific Islander	0.9%	3.1%	N/A
American Indian/Native Alaskan	1.3%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	29.0%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	14.0%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	37.3%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	20.5%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	19.9%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	19.5%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	25.0%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	89.4%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	84.7%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	54.0%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	11.7%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	10.5%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	73.9%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	74.5%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	35.7%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	6.2%	5.1%	N/A
Asthma *(percent of adults with asthma)*	7.2%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	33.9%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	25.0%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	185.8 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	49.8 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	14.5 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 20: Denver County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	592,577	4,909,524	N/A
Age < 1 year	1.8%	1.4%	N/A
Age 1 to 14 years	20.5%	19.3%	N/A
Age 15 to 19 years	6.0%	7.3%	N/A
Age 20 to 44 years	38.8%	36.2%	N/A
Age 45 to 64 years	22.9%	25.9%	N/A
Age ≥65 years	10.0%	9.8%	N/A
White, non-Hispanic	51.4%	72.2%	N/A
White, Hispanic	32.5%	18.7%	N/A
Black	10.8%	4.7%	N/A
Asian American/Pacific Islander	3.8%	3.1%	N/A
American Indian/Native Alaskan	1.5%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	39.4%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	17.5%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	35.7%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	19.6%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	20.8%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	20.5%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	24.7%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	88.1%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	80.9%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	59.4%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	13.9%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	19.6%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	70.5%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	75.3%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	32.7%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	5.4%	5.1%	N/A
Asthma *(percent of adults with asthma)*	6.4%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	32.8%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	21.6%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	159.6 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	39 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	16.6 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

2009 REGIONAL HEALTH PROFILE
Region 21: Jefferson County

Health Indicators & Demographics	Regional Prevalence/Rate	Colorado Prevalence/Rate	HP 2010 Goal
Regional Population Characteristics [a]			
Total 2007 population	538,323	4,909,524	N/A
Age < 1 year	1.1%	1.4%	N/A
Age 1 to 14 years	16.8%	19.3%	N/A
Age 15 to 19 years	7.3%	7.3%	N/A
Age 20 to 44 years	32.6%	36.2%	N/A
Age 45 to 64 years	30.7%	25.9%	N/A
Age ≥65 years	11.4%	9.8%	N/A
White, non-Hispanic	81.2%	72.2%	N/A
White, Hispanic	12.8%	18.7%	N/A
Black	1.8%	4.7%	N/A
Asian American/Pacific Islander	3.1%	3.1%	N/A
American Indian/Native Alaskan	1.1%	1.3%	N/A
College education *(percent of adults age 25 and older with an associate degree or higher)*	43.7%	39.7%	N/A
Adult Overall Health [b]			
Fair or Poor General Health *(percent of adults reporting fair or poor general health)*	9.6%	12.5%	N/A
Overweight *(percent of adults (≥20) who were overweight (BMI 25.0 - 29.9))*	36.4%	37.3%	N/A
Obesity *(percent of adults (≥20) who were obese (BMI ≥ 30.0))*	17.8%	19.0%	15.0%
Adult Modifiable Risk Factors [c]			
Physical Inactivity *(percent of adults (≥18) who reported no physical activity in past 30 days)*	13.0%	17.3%	20.0%
Smoking *(percent of adults (≥18) who were current smokers)*	19.0%	18.8%	12.0%
Nutrition *(percent of adults (≥18) who ate 5+ servings of fruits and vegetables per day)*	25.1%	25.1%	N/A
Breastfeeding *(percent of mothers who initiated breastfeeding)*	97.8%	87.1%	75.0%
Child Overall Health [d]			
Health Insurance *(percent of children (1 - 14 years of age) with health insurance coverage)*	94.9%	89.0%	N/A
Regular Health Care Provider *(percent of children (1 - 14) with a regular health care provider)*	62.6%	61.8%	N/A
Overweight *(percent of children (2 - 14) who were overweight (85th - 94th percentile))*	16.4%	13.2%	N/A
Obesity *(percent of children (2 - 14) who were obese (95th percentile))*	15.0%	13.3%	15.0%
Child Modifiable Risk Factors [d]			
Physical Activity *(percent of children (5 - 14) engaged in physical activity≥5 hours per week)*	74.1%	72.7%	N/A
Television Watching *(percent of children (5 - 14) viewing television/videos <2 hours per day)*	84.0%	82.2%	N/A
Nutrition *(percent of children (1 - 14) who ate 5+ servings of fruits & vegetables per day)*	25.7%	30.6%	N/A
Chronic Disease [b]			
Diabetes *(percent of adults with diabetes)*	5.2%	5.1%	N/A
Asthma *(percent of adults with asthma)*	8.8%	7.9%	N/A
High Cholesterol *(percent of adults (≥20) with high cholesterol)*	33.4%	33.3%	17.0%
High Blood Pressure *(percent of adults (≥20) with high blood pressure)*	21.0%	20.7%	16.0%
Mortality [e]			
Death due to Heart Disease *(age-adjusted mortality rate due to heart disease)*	152.3 per 100,000	160.6 per 100,000	166.0 per 100,000
Death due to Stroke *(age-adjusted mortality rate due to stroke)*	36.2 per 100,000	42.1 per 100,000	48.0 per 100,000
Death due to Diabetes *(age-adjusted mortality rate due to diabetes)*	15.3 per 100,000	18.0 per 100,000	45.0 per 100,000

a Data from Colorado State Demography Office, 2007-based population estimates, 2007; CDC/NCHS 2007-based, bridged-race population estimates, 2007; and, US Census Bureau, Summary File 3 sample data, 2000.

[b] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007.

[c] Data from Behavioral Risk Factor Surveillance System, CDPHE, 2005 - 2007; and, Pregnancy Risk Assessment Monitoring System, CDPHE, 2004 - 2006.

[d] Data from the Child Health Survey, Health Statistics Section, CDPHE, 2005-2007.

[e] Data from the Vital Statistics Unit, Health Statistics Section, CDPHE, 2005 - 2007.

APPENDIX D

Summary of recommended community strategies and measurements to prevent obesity in the United States

From: *Centers for Disease Control and Prevention. Recommended Community Strategies and Measurements to Prevent Obesity in the United States. Recommendations and Reports, July 24, 2009. MMWR 2009;58(RR07);1-26.*

Strategies to Promote the Availability of Affordable Healthy Food and Beverages	
Strategy 1 Suggested Measurement	**Communities should increase availability of healthier food and beverage choices in public service venues.** A policy exists to apply nutrition standards that are consistent with the dietary guidelines for Americans (U.S. Department of Health and Human Services, US Department of Agriculture. Dietary guidelines for Americans. 6th ed. Washington, DC: U.S. Government Printing Office; 2005.) to all food sold (e.g., meal menus and vending machines) within local government facilities in a local jurisdiction or on public school campuses during the school day within the largest school district in a local jurisdiction.
Strategy 2 Suggested Measurement	**Communities should improve availability of affordable healthier food and beverage choices in public service venues.** A policy exists to affect the cost of healthier foods and beverages (as defined by the Institute of Medicine [IOM] [Institute of Medicine. Preventing childhood obesity: health in the balance. Washington, DC: The National Academies Press; 2005]) relative to the cost of less healthy foods and beverages sold within local government facilities in a local jurisdiction or on public school campuses during the school day within the largest school district in a local jurisdiction.
Strategy 3 Suggested Measurement	**Communities should improve geographic availability of supermarkets in underserved areas.** The number of full-service grocery stores and supermarkets per 10,000 residents located within the three largest underserved census tracts within a local jurisdiction.
Strategy 4 Suggested Measurement	**Communities should provide incentives to food retailers to locate in and/or offer healthier food and beverage choices in underserved areas.** Local government offers at least one incentive to new and/or existing food retailers to offer healthier food and beverage choices in underserved areas.
Strategy 5 Suggested Measurement	**Communities should improve availability of mechanisms for purchasing foods from farms.** The total annual number of farmer-days at farmers' markets per 10,000 residents within a local jurisdiction.
Strategy 6 Suggested Measurement	**Communities should provide incentives for the production, distribution, and procurement of foods from local farms.** Local government has a policy that encourages the production, distribution, or procurement of food from local farms in the local jurisdiction

Strategies to Support Healthy Food and Beverage Choices	
Strategy 7 Suggested Measurement	**Communities should restrict availability of less healthy foods and beverages in public service venues.** A policy exists that prohibits the sale of less healthy foods and beverages (as defined by IOM [Institute of Medicine. Preventing childhood obesity: health in the balance. Washington, DC: The National Academies Press; 2005]) within local government facilities in a local jurisdiction or on public school campuses during the school day within the largest school district in a local jurisdiction.
Strategy 8 Suggested Measurement	**Communities should institute smaller portion size options in public service venues.** Local government has a policy to limit the portion size of any entree (including sandwiches and entrée salads) by either reducing the standard portion size of entrees or offering smaller portion sizes in addition to standard portion sizes within local government facilities within a local jurisdiction.
Strategy 9 Suggested Measurement	**Communities should limit advertisements of less healthy foods and beverages.** A policy exists that limits advertising and promotion of less healthy foods and beverages within local government facilities in a local jurisdiction or on public school campuses during the school day within the largest school district in a local jurisdiction.
Strategy 10 Suggested Measurement	**Communities should provide incentives to food retailers to locate in and/or offer healthier food and beverage choices in underserved areas.** Licensed child care facilities within the local jurisdiction are required to ban sugar-sweetened beverages, including flavored/sweetened milk and limit the portion size of 100% juice.

Strategy to Encourage Breastfeeding	
Strategy 11 Suggested Measurement	**Communities should increase support for breastfeeding.** Local government has a policy requiring local government facilities to provide breastfeeding accommodations for employees that include both time and private space for breastfeeding during working hours.

Strategies to Encourage Physical Activity or Limit Sedentary Activity Among Children and Youth	
Strategy 12 Suggested Measurement	**Communities should require physical education in schools.** The largest school district located within the local jurisdiction has a policy that requires a minimum of 150 minutes per week of PE in public elementary schools and a minimum of 225 minutes per week of PE in public middle schools and high schools throughout the school year (as recommended by the National Association of Sports and Physical Education).
Strategy 13 Suggested Measurement	**Communities should increase the amount of physical activity in PE programs in schools.** The largest school district located within the local jurisdiction has a policy that requires K–12 students to be physically active for at least 50% of time spent in PE classes in public schools.
Strategy 14 Suggested Measurement	**Communities should increase opportunities for extracurricular physical activity.** The percentage of public schools within the largest school district in a local jurisdiction that allow the use of their athletic facilities by the public during non-school hours on a regular basis.
Strategy 15 Suggested Measurement	**Communities should reduce screen time in public service venues.** Licensed child care facilities within the local jurisdiction are required to limit screen viewing time to no more than 2 hours per day for children aged ≥2 years.

Strategies to Create Safe Communities That Support Physical Activity	
Strategy 16 Suggested Measurement	**Communities should improve access to outdoor recreational facilities.** The percentage of residential parcels within a local jurisdiction that are located within a half-mile network distance of at least one outdoor public recreational facility.
Strategy 17 Suggested Measurement	**Communities should enhance infrastructure supporting bicycling.** Total miles of designated shared-use paths and bike lanes relative to the total street miles (excluding limited access highways) that are maintained by a local jurisdiction.
Strategy 18 Suggested Measurement	**Communities should enhance infrastructure supporting walking.** Total miles of paved sidewalks relative to the total street miles (excluding limited access highways) that are maintained by a local jurisdiction.
Strategy 19 Suggested Measurement	**Communities should support locating schools within easy walking distance of residential areas.** The largest school district in the local jurisdiction has a policy that supports locating new schools, and/or repairing or expanding existing schools, within easy walking or biking distance of residential areas.
Strategy 20 Suggested Measurement	**Communities should improve access to public transportation.** The percentage of residential and commercial parcels in a local jurisdiction that are located either within a quarter-mile network distance of at least one bus stop or within a half-mile network distance of at least one train stop (including commuter and passenger trains, light rail, subways, and street cars).
Strategy 21 Suggested Measurement	**Communities should zone for mixed use development.** Percentage of zoned land area (in acres) within a local jurisdiction that is zoned for mixed use that specifically combines residential land use with one or more commercial, institutional, or other public land uses.
Strategy 22 Suggested Measurement	**Communities should enhance personal safety in areas where persons are or could be physically active.** The number of vacant or abandoned buildings (residential and commercial) relative to the total number of buildings located within a local jurisdiction.
Strategy 23 Suggested Measurement	**Communities should enhance traffic safety in areas where persons are or could be physically active.** Local government has a policy for designing and operating streets with safe access for all users which includes at least one element suggested by the national complete streets coalition (http://www.completestreets.org)

Strategy to Encourage Communities to Organize for Change	
Strategy 24 Suggested Measurement	**Communities should participate in community coalitions or partnerships to address obesity.** Local government is an active member of at least one coalition or partnership that aims to promote environmental and policy change to promote active living and/or healthy eating (excluding personal health programs such as health fairs).

APPENDIX E

INSTITUTE OF MEDICINE

REPORT BRIEF • SEPTEMBER 2009

Local Government Actions to Prevent Childhood Obesity

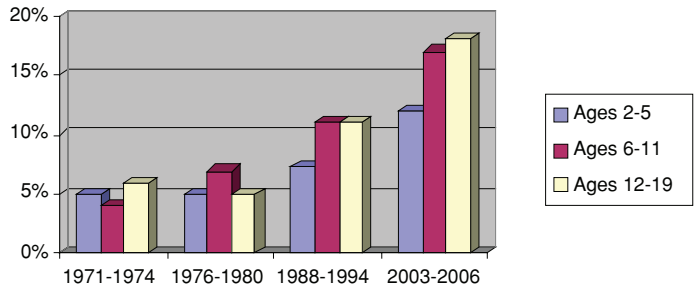
In the United States, 16.3 percent of children and adolescents between the ages of two and 19 are obese. This epidemic has exploded over just three decades. Among children two to five years old, obesity prevalence increased from 5 percent to 12.4 percent; among children six to 11, it increased from 6.5 percent to 17 percent; and among adolescents 12 to 19 years old, it increased from 5 percent to 17.6 percent (see Figure 1).

The prevalence of obesity is so high that it may reduce the life expectancy of today's generation of children and diminish the overall quality of their lives. Obese children and adolescents are more likely than their lower-weight counterparts to develop hypertension, high cholesterol, and type 2 diabetes when they are young, and they are more likely to be obese as adults.

In 2008, the Institute of Medicine (IOM) Committee on Childhood Obesity Prevention Actions for Local Governments was convened to identify promising ways to address this problem on what may well be the epidemic's frontlines. The good news is that there are numerous actions that show potential for use by local governments. Of course, parents and other adult caregivers play a fundamental role in teaching children about healthy behaviors, in modeling those behaviors, and in making decisions for children when needed. But those positive efforts can be undermined by local environments that are poorly suited to supporting healthy behaviors—and may even promote unhealthy behaviors. For example, many communities lack ready sources of healthy food choices, such as supermarkets and grocery stores. Or they may not provide safe places for children to walk or play. In such communities, even the most motivated child or adolescent may find it difficult to act in healthy ways.

. . . local governments are ideally positioned to promote behaviors that will help children and adolescents reach and maintain healthy weights.

FIGURE 1: PREVALENCE OF OBESITY AMONG CHILDREN, 1971-2006



SOURCE: Centers for Disease Control and Prevention, National Health and Nutrition Examination Survey

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For more information visit www.iom.edu/obesitylocalgov.

Advising the Nation. Improving Health.

ACTING LOCALLY

Local governments are experienced in promoting children's health, as they historically have implemented policies intended to ensure, among other things, that children are immunized or they wear helmets when riding a bike. In the same way, local governments—with jurisdiction over many aspects of land use, food marketing, community planning, transportation, health and nutrition programs, and other community issues—are ideally positioned to promote behaviors that will help children and adolescents reach and maintain healthy weights. Promoting children's healthy eating and activity will require the involvement of an array of government officials, including mayors and commissioners or other leaders of counties, cities, or townships. Many departments, including those responsible for public health, public works, transportation, parks and recreation, public safety, planning, economic development, and housing will also need to be involved.

In addition, community involvement and evaluation are vital to childhood obesity prevention efforts. It is critical for local government officials and staff to involve constituents in determining local needs and identifying top priorities. Engaging community members in the process will help identify local assets, focus resources, and improve implementation plans. And, as obesity prevention actions are implemented, they need to be evaluated in order to provide important information on what does and does not work.

CREATING EQUAL OPPORTUNITIES FOR HEALTHY WEIGHT

In adopting policies and practices tailored to raising healthy children, local communities have an added opportunity to achieve health equity—put simply, the fair distribution of health resources among all population groups, regardless of their social standing. Poverty, poor housing, racial segregation, lack of access to quality education, and limited access to health care contribute to the uneven well-being of some groups of people, especially those living in historically disadvantaged communities. If local officials observe, for example, that many children in certain neighborhoods do not engage in sufficient physical activity or consume too few fruits and vegetables, they should examine the equity of access to recreation opportunities and grocery stores in those areas. These officials may then find themselves uniquely positioned to catalyze, support, or lead collaborations in the community and engage diverse constituent groups in efforts to improve the places where children live and play.

RECOMMENDING PROMISING ACTIONS

Evidence on the best childhood obesity prevention practices is still accumulating and is limited in many important topic areas. However, local government officials want to act now on the best available information. The IOM committee reviewed published literature, examined reports from organizations that work with local governments, heard presentations from experts on the role of local government in obesity prevention, and explored a variety of tool kits that have been developed for communities and their leaders.

In arriving at its recommendations, the committee looked for actions that are within the jurisdiction of local governments; likely to directly affect children; based on the experience of local governments or sources that work with local governments; take place outside of the school day; and have the potential to promote healthy eating and adequate physical activity. Healthy eating is characterized as consuming the types and amounts of foods, nutrients, and calories recommended by the Dietary Guidelines for Americans, and adequate physical activity for children constitutes a total of 60 minutes per day.

The committee recommends nine healthy eating strategies and six physical activity strategies for local government officials to consider in planning, implementing, and refining childhood obesity prevention efforts. The committee also recommends a number of specific action steps for each strategy and highlights 12 steps overall judged to have the most promise.

2

ACTIONS FOR HEALTHY EATING

GOAL 1: IMPROVE ACCESS TO AND CONSUMPTION OF HEALTHY, SAFE, AND AFFORDABLE FOODS

Strategy 1: Retail Outlets

Increase community access to healthy foods through supermarkets, grocery stores, and convenience/corner stores.

Action Steps

- Create incentive programs to attract supermarkets and grocery stores to underserved neighborhoods (e.g., tax credits, grant and loan programs, small business/economic development programs, and other economic incentives).
- Realign bus routes or provide other transportation, such as mobile community vans or shuttles to ensure that residents can access supermarkets or grocery stores easily and affordably through public transportation.
- Create incentive programs to enable current small food store owners in underserved areas to carry healthier, affordable food items (e.g., grants or loans to purchase refrigeration equipment to store fruits, vegetables, and fat-free/low-fat dairy; free publicity; a city awards program; or linkages to wholesale distributors).
- Use zoning regulations to enable healthy food providers to locate in underserved neighborhoods (e.g., "as of right" and "conditional use permits").
- Enhance accessibility to grocery stores through public safety efforts, such as better outdoor lighting and police patrolling.

Strategy 2: Restaurants

Improve the availability and identification of healthful foods in restaurants.

Action Steps

- Require menu labeling in chain restaurants to provide consumers with calorie information on in-store menus and menu boards.
- Encourage non-chain restaurants to provide consumers with calorie information on in-store menus and menu boards.
- Offer incentives (e.g., recognition or endorsement) for restaurants that promote healthier options (for example, by increasing the offerings of healthier foods, serving age-appropriate portion sizes, or making the default standard options healthy – i.e., apples or carrots instead of French fries, and non-fat milk instead of soda in "kids' meals").

Strategy 3: Community Food Access

Promote efforts to provide fruits and vegetables in a variety of settings, such as farmers' markets, farm stands, mobile markets, community gardens, and youth-focused gardens.

Action Steps

- Encourage farmers markets to accept Special Supplemental Nutrition Program for Women, Infants and Children (WIC) food package vouchers and WIC Farmers Market Nutrition Program coupons; and encourage and make it possible for farmers markets to accept Supplemental Nutrition Assistance Program (or SNAP, formerly the Food Stamp Program) and WIC Program Electronic Benefit Transfer (EBT) cards by allocating funding for equipment that uses electronic methods of payment.
- Improve funding for outreach, education, and transportation to encourage use of farmers markets and farm stands by residents of lower-income neighborhoods, and by WIC and SNAP recipients.

= Most Promising Steps

- Introduce or modify land use policies/zoning regulations to promote, expand, and protect potential sites for community gardens and farmers' markets, such as vacant city-owned land or unused parking lots.
- Develop community-based group activities (e.g., community kitchens) that link procurement of affordable, healthy food with improving skills in purchasing and preparing food.

Strategy 4: Public Programs and Worksites

Ensure that publicly-run entities such as after-school programs, child-care facilities, recreation centers, and local government worksites implement policies and practices to promote healthy foods and beverages and reduce or eliminate the availability of calorie-dense, nutrient-poor foods.

Action Steps

- Mandate and implement strong nutrition standards for foods and beverages available in government-run or regulated after-school programs, recreation centers, parks, and child care facilities (which includes limiting access to calorie-dense, nutrient-poor foods).
- Ensure that local government agencies that operate cafeterias and vending options have strong nutrition standards in place wherever foods and beverages are sold or available.
- Provide incentives or subsidies to government run or regulated programs and localities that provide healthy foods at competitive prices and limit calorie-dense, nutrient poor foods (e.g., after-school programs that provide fruits or vegetables every day, and eliminate calorie-dense, nutrient poor foods in vending machines or as part of the program).

Strategy 5: Government Nutrition Programs

Increase participation in federal, state, and local government nutrition assistance programs (e.g., WIC, school breakfast and lunch, the Child and Adult Care Food Program [CACFP], the Afterschool Snacks Program, the Summer Food Service Program, SNAP).

Action Steps

- Put policies in place that require government-run and -regulated agencies responsible for administering nutrition assistance programs to collaborate across agencies and programs to increase enrollment and participation in these programs (i.e., WIC agencies should ensure that those who are eligible are also participating in SNAP, etc.)
- Ensure that child care and after-school program licensing agencies encourage utilization of the nutrition assistance programs and increase nutrition program enrollment (CACFP, Afterschool Snack Program, and the Summer Food Service Program).

Strategy 6: Breastfeeding

Encourage breastfeeding and promote breastfeeding-friendly communities.

Action Steps

- Adopt practices in city and county hospitals that are consistent with the Baby-Friendly Hospital Initiative USA (United Nations Children's Fund/World Health Organization). This initiative promotes, protects, and supports breastfeeding through ten steps to successful breastfeeding for hospitals.
- Permit breastfeeding in public places and rescind any laws or regulations that discourage or do not allow breastfeeding in public places and encourage the creation of lactation rooms in public places.
- Develop incentive programs to encourage government agencies to ensure breastfeeding-friendly worksites, including providing lactation rooms.
- Allocate funding to WIC clinics to acquire breast pumps to loan to participants.

Strategy 7: Drinking Water Access

Increase access to free, safe drinking water in public places to encourage water consumption instead of sugar-sweetened beverages.

Action Steps

- Require that plain water be available in local government-operated and administered outdoor areas and other public places and facilities.
- Adopt building codes to require access to and maintenance of fresh drinking water fountains (e.g., public restroom codes).

GOAL 2: REDUCE ACCESS TO AND CONSUMPTION OF CALORIE-DENSE, NUTRIENT-POOR FOODS

Strategy 8: Policies and Ordinances

Implement fiscal policies and local ordinances to discourage the consumption of calorie-dense, nutrient-poor foods and beverages (e.g., taxes, incentives, land use and zoning regulations).

Action Steps

- Implement a tax strategy to discourage consumption of foods and beverages that have minimal nutritional value, such as sugar-sweetened beverages.
- Adopt land use and zoning policies that restrict fast food establishments near school grounds and public playgrounds.
- Implement local ordinances to restrict mobile vending of calorie-dense, nutrient-poor foods near schools and public playgrounds.
- Implement zoning designed to limit the density of fast food establishments in residential communities.
- Eliminate advertising and marketing of calorie-dense, nutrient-poor foods and beverages near school grounds and public places frequently visited by youths.
- Create incentive and recognition programs to encourage grocery stores and convenience stores to reduce point-of-sale marketing of calorie-dense, nutrient-poor foods (i.e., promote "candy-free" check out aisles and spaces).

GOAL 3: RAISE AWARENESS ABOUT THE IMPORTANCE OF HEALTHY EATING TO PREVENT CHILDHOOD OBESITY

Strategy 9: Media and Social Marketing

Promote media and social marketing campaigns on healthy eating and childhood obesity prevention.

Action Steps

- Develop media campaigns, utilizing multiple channels (print, radio, internet, television, social networking, and other promotional materials) to promote healthy eating (and active living) using consistent messages.
- Design a media campaign that establishes community access to healthy foods as a health equity issue and reframes obesity as a consequence of environmental inequities and not just the result of poor personal choices.
- Develop counter-advertising media approaches against unhealthy products to reach youth as has been used in the tobacco and alcohol prevention fields.

ACTIONS FOR INCREASING PHYSICAL ACTIVITY

GOAL 1: ENCOURAGE PHYSICAL ACTIVITY

Strategy 1: Built Environment

Encourage walking and bicycling for transportation and recreation through improvements in the built environment.

Action Steps

- Adopt a pedestrian and bicycle master plan to develop a long-term vision for walking and bicycling in the community and guide implementation.
- Plan, build, and maintain a network of sidewalks and street crossings that creates a safe and comfortable walking environment and that connects to schools, parks, and other destinations.
- Plan, build, and retrofit streets so as to reduce vehicle speeds, accommodate bicyclists, and improve the walking environment.
- Plan, build, and maintain a well-connected network of off-street trails and paths for pedestrians and bicyclists.
- Increase destinations within walking and bicycling distance.
- Collaborate with school districts and developers to build new schools in locations central to residential areas and away from heavily trafficked roads.

Strategy 2: Programs for Walking and Biking

Promote programs that support walking and bicycling for transportation and recreation.

Action Steps

- Adopt community policing strategies that improve safety and security of streets, especially in higher crime neighborhoods. *
- Collaborate with schools to develop and implement a Safe Routes to School program to increase the number of children safely walking and bicycling to schools.
- Improve access to bicycles, helmets, and related equipment for lower-income families, for example, through subsidies or repair programs.
- Promote increased transit use through reduced fares for children, families, and students, and improved service to schools, parks, recreation centers, and other family destinations.
- Implement a traffic enforcement program to improve safety for pedestrians and bicyclists.

Strategy 3: Recreational Physical Activity

Promote other forms of recreational physical activity.

Action Steps

- Build and maintain parks and playgrounds that are safe and attractive for playing and in close proximity to residential areas.
- Adopt community policing strategies that improve safety and security for park use, especially in higher crime neighborhoods.*
- Improve access to public and private recreational facilities in communities with limited recreational options through reduced costs, increased operating hours, and development of culturally appropriate activities.

6

* These two action steps on community policing were combined for the most promising 12 action steps list.

- Create after-school activity programs, e.g., dance classes, city-sponsored sports, supervised play, and other publicly or privately supported active recreation.
- Collaborate with school districts and other organizations to establish joint use of facilities agreements allowing playing fields, playgrounds, and recreation centers to be used by community residents when schools are closed; if necessary, adopt regulatory and legislative policies to address liability issues that might block implementation.
- Create and promote youth athletic leagues and increase access to fields, with special emphasis on income and gender equity.
- Build and provide incentives to build recreation centers in neighborhoods.

Strategy 4: Routine Physical Activity

Promote policies that build physical activity into daily routines.

Action Steps

- Institute regulatory policies mandating minimum play space, physical equipment, and duration of play in preschool, after-school, and child-care programs.
- Develop worksite policies and practices that build physical activity into routines (for example, exercise breaks at a certain time of day and in meetings, or walking meetings). Target worksites with high percentages of youth employees and government-run and -regulated worksites.
- Create incentives for remote parking and drop-off zones and/or disincentives for nearby parking and drop-off zones at schools, public facilities, shopping malls, and other destinations.
- Improve stairway access and appeal, especially in places frequented by children.

GOAL 2: DECREASE SEDENTARY BEHAVIOR

Strategy 5: Screen Time

Promote policies that reduce sedentary screen time.

Action Steps

- Adopt regulatory policies limiting screen time in preschool and after-school programs.

GOAL 3: RAISE AWARENESS OF THE IMPORTANCE OF INCREASING PHYSICAL ACTIVITY

Strategy 6: Media and Social Marketing

Develop a social marketing program that emphasizes the multiple benefits for children and families of sustained physical activity.

Action Steps

- Develop media campaigns, utilizing multiple channels (print, radio, internet, television, other promotional materials) to promote physical activity using consistent messages.
- Design a media campaign that establishes physical activity as a health equity issue and reframes obesity as a consequence of environmental inequities and not just the result of poor personal choices.
- Develop counter-advertising media approaches against sedentary activity to reach youth as has been done in the tobacco and alcohol prevention fields.

FOR MORE INFORMATION . . .

Copies of *Local Government Actions to Prevent Childhood Obesity* are available from the National Academies Press, 500 Fifth Street, N.W., Lockbox 285, Washington, DC 20055; (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area); Internet, www.nap.edu. The full text of this report is available at www.nap.edu.

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APPENDIX F

Healthy People 2010 Physical Activity and Overweight/Obesity Objectives (25 Objectives Total)

Physical activity, 22 objectives

http://www.healthypeople.gov/hpscripts/KeywordResult.asp?n361=361&Submit=Submit

1–3. Increase the proportion of persons appropriately counseled about health behaviors.

Objective: *Increase in counseling on health behaviors among persons at risk with a physician visit in the past year*

1–3a. Physical activity or exercise (adults ages 18 years and older)
Target: Developmental

1–3b. Diet and nutrition (adults ages 18 years and older)
Target: Developmental

3–10. Increase the proportion of physicians and dentists who counsel their at-risk patients about tobacco use cessation, physical activity, and cancer screening.

3–10h. Primary care providers who counsel about physical activity
Target: 85 percent

7–2. Increase the proportion of middle, junior high and senior high schools that provide school health education to prevent health problems in the following areas: unintentional injury; violence; suicide; tobacco use and addiction; alcohol and other drug use; unintended pregnancy, HIV/AIDS, and STD infection; unhealthy dietary patterns; inadequate physical activity; and environmental health.

7–2h. Unhealthy dietary patterns
Target: 95 percent

7–2i. Inadequate physical activity
Target: 90 percent

7–3. Increase the proportion of college and university students who receive information from their institution on each of the six priority health-risk behavior areas: injuries (intentional and unintentional), tobacco use, alcohol and illicit drug use, sexual behaviors that cause unintended pregnancies and sexually transmitted diseases, dietary patterns that cause disease, and inadequate physical activity.

Target: 25 percent

7–11. Increase the proportion of local health departments that have established culturally appropriate and linguistically competent community health promotion and disease prevention programs.

7–11s. Nutrition and overweight
Target: 50 percent

7–11v. Physical activity and fitness
Target: 50 percent

12–11. Increase the proportion of adults with high blood pressure who are taking action (for example, losing weight, increasing physical activity, or reducing sodium intake) to help control their blood pressure.

Target: 95 percent

15–31. (Developmental) Increase the proportion of public and private schools that require use of appropriate head, face, eye and mouth protection for students participating in school-sponsored physical activities.

22–1. Reduce the proportion of adults who engage in no leisure-time physical activity.

Target: 20 percent

22–2. Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Target: 30 percent

22–3. Increase the proportion of adults who engage in vigorous physical activity that promotes the development and maintenance of cardiorespiratory fitness three or more days per week for 20 or more minutes per occasion.

Target: 30 percent

22–4. Increase the proportion of adults who perform physical activities that enhance and maintain muscular strength and endurance.

Target: 30 percent

22–5. Increase the proportion of adults who perform physical activities that enhance and maintain flexibility.

Target: 43 percent

22–6. Increase the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on five or more of the previous seven days.

Target: 35 percent

22–7. Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness three or more days per week for 20 or more minutes per occasion.

Target: 85 percent

22–8. Increase the proportion of the Nation's public and private schools that require daily physical education for all students.

Target (Middle and Junior High Schools): 25 percent

Target (Senior High Schools): 5 percent

22–9. Increase the proportion of adolescents who participate in daily school physical education.

Target: 50 percent

22–10. Increase the proportion of adolescents who spend at least 50 percent of school physical education class time being physically active.

Target: 50 percent

22–11. Increase the proportion of adolescents who view television two or fewer hours on a school day.

Target: 75 percent

22–12. (Developmental) Increase the proportion of the Nation's public and private schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours (that is, before and after the school day, on weekends, and during summer and other vacations).

22–13. Increase the proportion of work sites offering employer-sponsored physical activity and fitness programs.

Target: 75 percent

22–14. Increase the proportion of trips made by walking.

Target (Adults Ages 18 Years and Older): 25 percent of trips of one mile or less

Target (Children and Adolescents Ages 5 to 15 Years): 50 percent of trips to school of one mile or less

22–15. Increase the proportion of trips made by bicycling.

Target (Adults age 18 years and older): 2 percent of trips of five miles or less

Target (Children and adolescents ages 5 to 15 years): 5 percent of trips to school of two miles or less

Overweight and Obesity, 7 Objectives

http://www.healthypeople.gov/hpscripts/KeywordResult.asp?n360=360&Submit=Submit

7–11 Increase the proportion of local health departments that have established culturally appropriate and linguistically competent community health promotion and disease prevention programs.

Target: 50 percent

12–11 Increase the proportion of adults with high blood pressure who are taking action (for example, losing weight, increasing physical activity, and reducing sodium intake) to help control their blood pressure.

Target: 95 percent

19–1 Increase the proportion of adults who are at a healthy weight.

Target: 60 percent

19–2 Reduce the proportion of adults who are obese.

Target: 15 percent

19–3 Reduce the proportion of children and adolescents who are overweight or obese.

Target: 5 percent

22–1 Reduce the proportion of adults who engage in no leisure-time physical activity.

Target: 20 percent

22–2 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Target: 30 percent

Colorado Department
of Public Health
and Environment