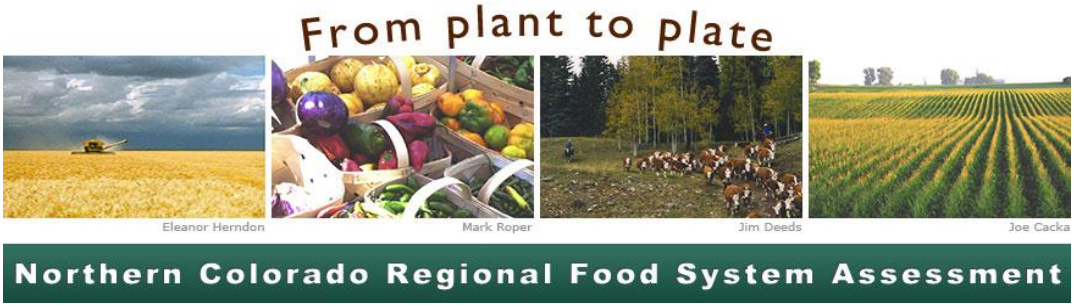


www.larimer.org/foodassessment/

Northern Colorado Regional Food System Assessment

Health Outcomes

Colorado has had the lowest adult obesity rate in the U.S., but is worsening from its status a decade ago. Because of the perceived link between food access, behavior and consumption, exploring connections between the food system and health/nutrition is warranted. The region has shown only slight improvement in two indicators of improved health behaviors— consuming enough fruits and vegetables and adequate physical activity—and all improvements made were in Weld County. Given some limited improvement in health outcomes, and evidence that targeted community programming was effective in Weld county, there may be reason to consider food system issues in future public health discussions.

Linking Behavior to Health Outcomes

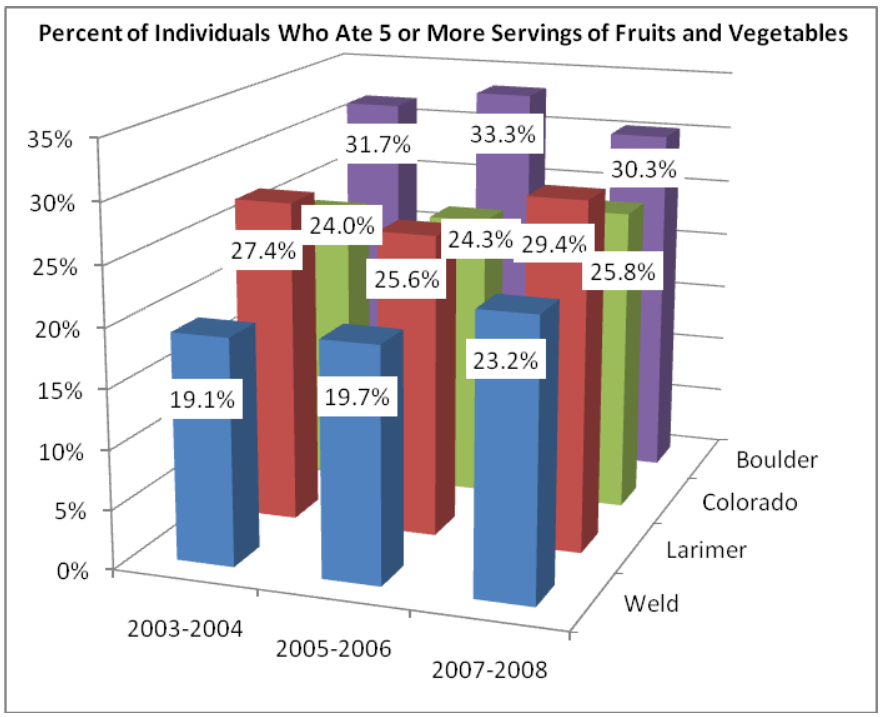
According to the report, "The Weight of the State: 2009 Report on Overweight and Obesity in Colorado", physical activity and overweight/obesity are two of the 10 leading health indicators that represent the most significant preventable threats to health in the U.S. Although there are many causes of overweight conditions and obesity, the bottom line for many people is excess calorie consumption and/or inadequate physical activity. To date, Colorado has had the lowest adult obesity rate in the U.S. (19.1% according to the Trust for America's Health and the Robert Wood Johnson Foundation, 2010); however, this represents a substantial increase from approximately 7% in 1990, and 14.2% in 2000.

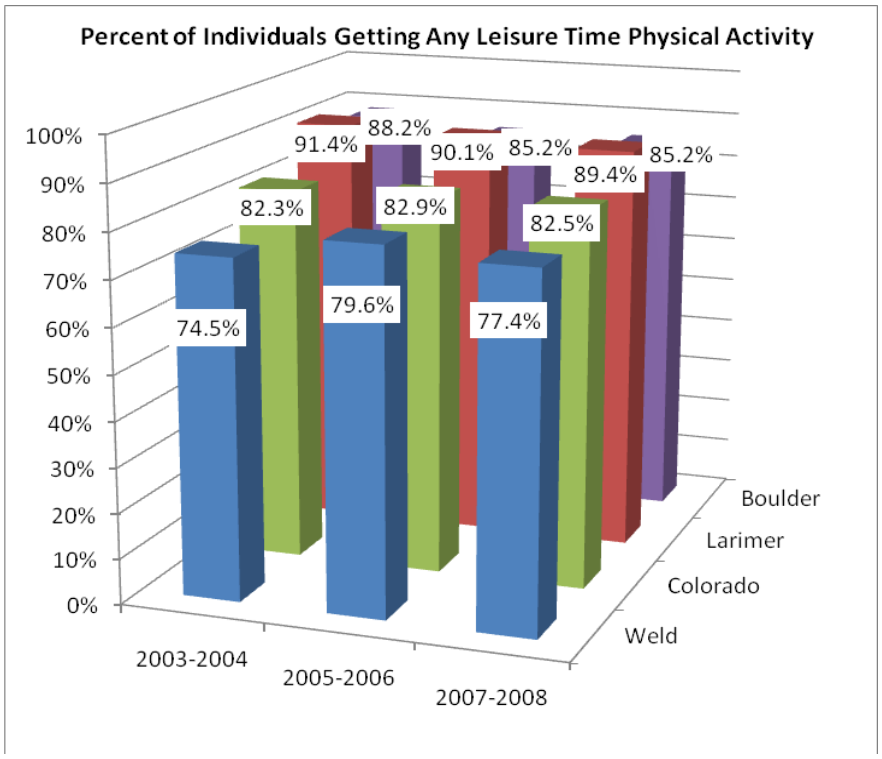
There are general behavioral trends in the U.S. that impact rates of overweight status and obesity in the U.S. and in Colorado. These include individuals' shift in diet toward energy-dense foods high in fat and sugars but low in vitamins and micronutrients (junk, snack and fast food), and a trend toward lower levels of physical activity due, in part, to changes in workplace behaviors and types of transportation used (Colorado Department of Public Health and Environment, 2010). The link to the food system and diet is clear, but some would argue that physical activity and transportation systems are related to food access as well (something explored more in the Food Security and Access handout).

Reported Behavior Changes in Northern Colorado

The following two charts show trends in individuals' reported eating and exercise behavior in Boulder, Larimer and Weld counties, and for the state of Colorado as a whole. In terms of improvements in reported behavior, Weld county shows a sustained increase in those who have improved their healthy eating habits, with a 4.1% increase from the period 2003/2004 to 2007/2008, and a 2.9% increase for those getting any leisure time physical activity. Although these levels are below the state average, they represent notable improvement s for Weld county residents.

In terms of the overall share of individuals with positive health-related behaviors, Boulder county ranks above the state level, and above Larimer and Weld. However, over time, Boulder county residents report an overall decrease in healthy eating and in physical activity from the period 2003/2004 to 2007/2008. In Larimer county, residents report an increase in healthy eating and a slight decrease in leisure time physical activity.





Source: Colorado Department of Public Health and Environment, Survey Research Unit, which conducts the Colorado Behavioral Risk Factor Surveillance System (BRFSS) survey and selects respondents using a random digit dialing sampling technique.

Human Health Costs

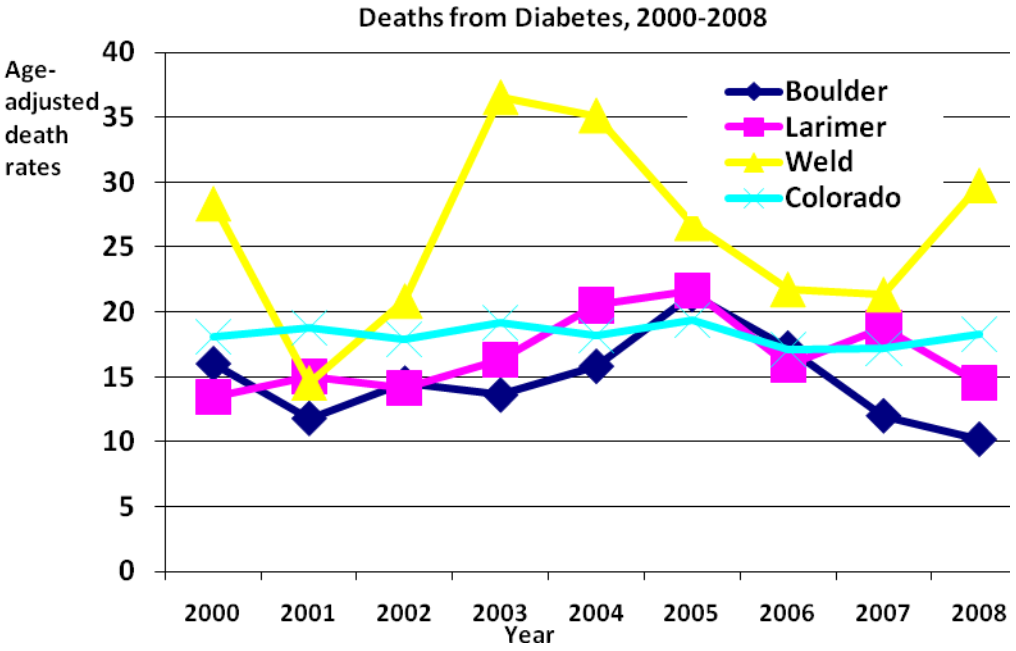
The implications of these trend data are that positive modifications in health-related behaviors are observable in Weld county, but not in Larimer and Boulder counties. The following table examines some health outcomes across the three counties.

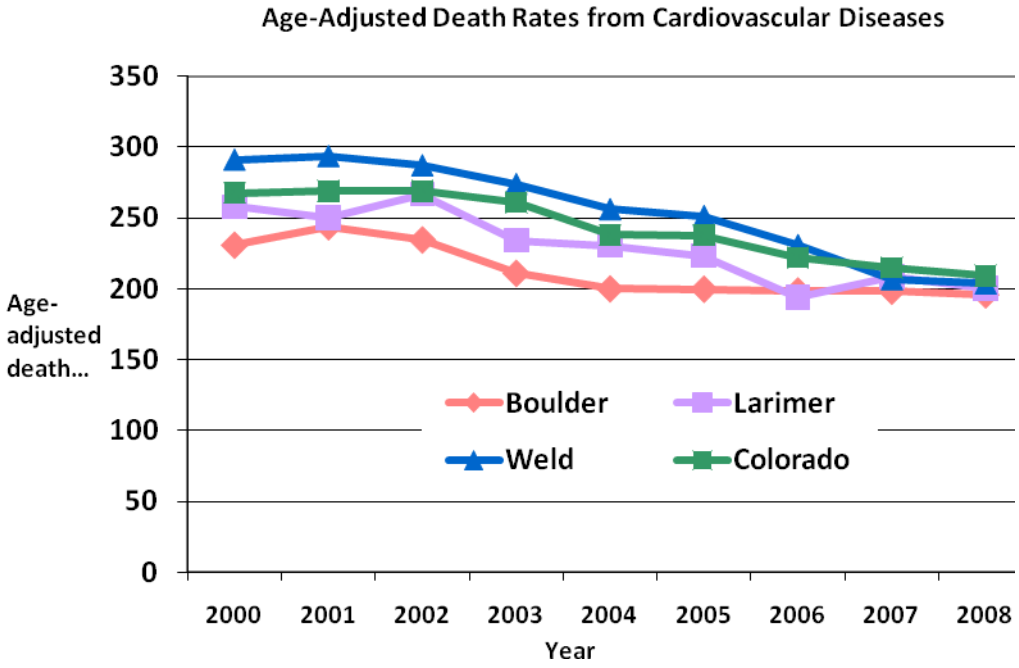
	Diagnosed with Diabetes		**Overweight, BMI* 25.0 to 29.9**		**Obese, BMI* > 30**	
	2007-2008	Change from 2003-2004 to 2007-2008	2007-2008	Change from 2003-2004 to 2007-2008	2007-2008	Change from 2003-2004 to 2007-2008
Boulder	3.0%	-0.7%	35.1%	7.3%	14.4%	3.4%
Colorado	5.3%	0.8%	36.3%	0.2%	19.4%	2.8%
Larimer	4.6%	1.3%	35.2%	-0.5%	17.1%	5.0%
Weld	5.5%	1.3%	36.5%	-5.2%	24.0%	-0.3%

#Note: Body Mass Index (BMI) is defined as weight in kilograms divided by height in meters squared (w/h**2).

Although the table above is not inclusive of all possible health outcomes attributable to reported behaviors, it does provide an indication of health trends in each county. One of the most striking results is that Boulder county fared best with a slight decrease in individuals diagnosed with diabetes. Boulder, however, showed the greatest increase in those considered overweight (with a Body Mass Index between 25.0-29.9)—a 7.3% increase in Boulder versus less than 1% in Colorado, and compared to decreases in the incidence of overweight in Larimer and Weld counties.

Other trend data are shown in the charts below. For example, although diagnoses of diabetes have risen 1.3% in Weld county, from 2003 to 2008 the deaths rate fell by 19%, implying that people with diabetes are living longer (entailing other direct and indirect costs for federal, state and local service agencies). Age-adjusted death rates from cardiovascular diseases have plateaued in all three counties but, interestingly, are lower in each county of the Northern Colorado region than for the state overall. The impacts from increases in overweight and obesity may be lagged, with individuals living longer with chronic health conditions. Therefore, the death rate does not necessarily reflect recent increases in negative health behaviors.


Deaths from Diabetes, 2000-2008
Age-adjusted death rates
40
35
30
25
20
15
10
5
0
Boulder
Larimer
Weld
Colorado
2000
2001
2002
2003
2004
2005
2006
2007
2008
Year


Age-Adjusted Death Rates from Cardiovascular Diseases
Age-adjusted death...
350
300
250
200
150
100
50
0
Boulder
Larimer
Weld
Colorado
2000
2001
2002
2003
2004
2005
2006
2007
2008
Year

Economic Costs

Adverse changes in the health behavior of Americans come at a high cost to everyone. According to a 2010 report released by the CDPHE, the rise in obesity rates in the U.S. has resulted in a 20—30% increase in health care spending since 1979. In fact, the direct and indirect economic costs related to obesity exceed $100 billion annually; a number which has almost certainly increased since that era (given Colorado-only estimates at similar levels below). The report further estimates that, in relative terms, obesity accounts for 6-10% of U.S. health care spending, compared to 2.0-3.5% in other Western countries. They note that the public health care system bears most of these costs. For example, CDPHE (2010) states that in Colorado, "medical spending attributable to obesity was estimated at $874 million dollars in 2003, with $139 million in Medicare costs (15.9% of the total) and $158 million in Medicaid costs (18.1% of the total)."

Prevention and Support for Healthy Living

Fortunately, states and local agencies are taking action to support and educate individuals about their choices for healthy living. TFAH and RWJF (2010) report the following:

- Twenty states and D.C. set nutritional standards for school lunches, breakfasts and snacks that are stricter than current United States Department of Agriculture requirements. In 2005, only four states had legislation requiring stricter standards.
- Twenty-eight states and D.C. have nutritional standards for competitive foods sold in schools on à la carte lines, in vending machines, in school stores, or through school bake sales. In 2005, only six states had nutritional standards for competitive foods.
- Every state has some form of physical education requirement for schools, but these requirements are often limited, not enforced or do not meet adequate standards in the opinion of health science experts.
- Twenty states have passed requirements for body mass index screenings of children and adolescents or have passed legislation requiring other forms of weight and/or fitness related assessments in schools. In 2005, only four states had passed screening requirements.

Furthermore, the Colorado Physical Activity and Nutrition State Plan 2010 lists several programs and strategies for promoting healthy living, including breastfeeding promotion; physical activity and nutrition in early childhood, at school sites, at colleges and at worksites; programs for older adults, and programs to encourage active community environments. The document also provides information on resource kits and other links for Colorado that can guide communities and agencies.

Lastly, the Colorado Department of Public Health and Environment is partnering with LiveWell Colorado, a nonprofit organization committed to reducing obesity in Colorado by promoting healthy eating and active living. In addition to educating and inspiring people to make healthy choices, LiveWell Colorado focuses on policy, environmental and lifestyle changes that remove barriers and increase access to healthy behaviors. Through one of their strategic initiatives, they have targeted Weld County and several regional communities to grow the community and educational programs that target food-related health issues. The targeting of Weld County several years ago may be one reason that the data show improvement (from a relatively low baseline) in that area's health behaviors.

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Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF). 2009. "F as in Fat: How Obesity Threatens America's Future 2009". Online at http://healthyamericans.org/reports/obesity2009/Obesity2009Report.pdf.