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# Fruit and Vegetables Missing from the Menu in Colorado

Evidence-Based Strategies to Address the Problem

DECEMBER 2014

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# Fruit and Vegetables: Missing from the Menu in Colorado

Evidence-Based Strategies  
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## Introduction



Photo by Michael Rieger/CHI

***New grocery stores in transit hubs, gardens at elementary schools, apples and bananas in corner stores that once stocked mostly soda and chips: These trends illustrate just a few of the promising policies that are being tested across the nation to help people make healthier choices by eating more fruit and vegetables.***

This report is part of a collaboration between the Colorado Health Institute (CHI) and the Colorado Department of Public Health and Environment (CDPHE) to support and encourage data-driven and evidence-based discussions about ways to promote Healthy Eating, Active Living (HEAL) in Colorado.

HEAL covers the gamut of policies and activities designed to make the healthier choice the easier choice — including better access to healthy food, more parks and green spaces, increased

miles of biking and walking paths, safer neighborhoods, and stepped-up school-based health programs.

A new fact sheet by CDPHE — [Fruit and Vegetable Consumption in Colorado](#) — gathers and analyzes data on eating habits, nutrition-related risk factors, and health outcomes. This accompanying policy brief by CHI outlines evidence-based strategies and some promising practices for schools and communities.



## The Problem

Healthy food is not on the menu for many Coloradans.

More than four of five Coloradans (86 percent) don't meet the daily recommendations for fruit and vegetables. Men should eat two cups of fruit and three cups of vegetables per day, while women should eat two cups of fruit and 2.5 cups of vegetables, with some variation among age groups, according to federal nutrition guidelines.<sup>1</sup>

The data show that Colorado's high school students eat the fewest fruit and veggies (See Table 1). More than half of high school students eat less than one serving of fruit and one serving of vegetables daily. While adults report eating more vegetables and kids consume more fruit, there's room for improvement across the spectrum.

Race, ethnicity and income matter when it comes to healthy eating, according to the data. White Coloradans are more likely than blacks or Hispanics to eat the recommended levels. And members of households with annual incomes above \$50,000 are significantly more likely to eat more fruit and vegetables than those with lower annual incomes.

Poor eating habits can have a significant impact

**Table 1: Percentage of Coloradans Who Eat Less Than One Serving of Fruit Or Vegetables A Day**

	Vegetables	Fruit
Children	29%	16%
High School Students	55%	55%
Adults	19%	36%

Sources: 2013 Colorado Child Health Survey, 2013 Healthy Kids Colorado Survey, 2013 Behavioral Risk Factor Surveillance System

on health. More than 90 percent of Coloradans with a chronic disease do not eat enough fruit and vegetables.

Adults of healthy weights are significantly more likely to meet the fruit and vegetable recommendations than those who are overweight or obese.



## Recipes for Success

The public and private sectors can develop and promote initiatives that explain the benefits of healthy eating and that make healthy eating easier for more people. These efforts have the potential to lower health care costs, improve quality of life, and move Colorado closer to its

goal of becoming the healthiest state.

Research has identified several proven or promising strategies.<sup>2</sup> These approaches — some of which are underway or being considered in Colorado — fall into two main

categories: improving the quality of school meals and snacks and making fruit and vegetables widely available in communities.

- **Proven strategies** are those that rigorous studies have shown to produce consistently positive results. Such strategies are likely to

make a difference and boost fruit and vegetable consumption rates.

- **Promising strategies** are those that have emerged from more than one study, though further research is needed.

## School-Based Strategies

School-based strategies can narrow the gap between children and adults when it comes to healthy eating. Many students eat one and often two of their three daily meals at school, providing ample opportunity to build healthy eating habits at an early age.

Nutrition guidelines for school meals, as well as for other foods and beverages sold in schools, are set by the federal National School Lunch Program and the School Breakfast Program. States, however, can go beyond these guidelines.

Stocking vending machines with affordable fruit and vegetables, putting locally grown produce on lunch menus, and showing students the link between diet and health can contribute to better choices. Further, childhood habits often become adult habits, pointing to the importance of early intervention.

### *Proven School-Based Strategies*

- **School Gardens:** Combining school gardens with garden-based nutrition education boosts health-related knowledge and makes picky eaters more willing to try new foods.<sup>3</sup> Students who participate in school gardens eat more fruit and vegetables than students without this experience.

- **Farm to School Programs:** Farm to School programs include the use of locally grown produce in school meals, nutrition education, farm field trips, student-managed gardens and more.<sup>4</sup> In addition to encouraging healthy eating habits, these programs prompt students



Photo by Michael Rieger/CHI

**Kids in Salida** eats a healthy lunch during the summer school lunch program of salad and watermelon.

to be more adventurous eaters and develop a taste for vegetables and fruit that can last a lifetime.<sup>5</sup> Farm to school programs also can benefit agricultural producers, local economies and the environment.<sup>6</sup>

- **Competitive Pricing in Schools:** This evidence-based strategy of economic incentives — making soup and salad less expensive than burgers and fries — encourages students to select healthy foods. Competitive pricing in schools is a proven strategy for increasing sales of low-fat foods, fruit and vegetables.<sup>7</sup> Importantly, research shows that lowering the price of healthy foods or raising the price of unhealthy options does not decrease overall school food revenues.<sup>8</sup>

## Spotlight: Colorado Schools



Photo by Michael Rieger/CHI

**Michael McGovern**, general manager of Amica's restaurant in Salida, prepares dozens of fresh salads for children in the local summer school lunch program.

Colorado's schools are working toward becoming healthy places where students, parents and teachers learn to appreciate nutrition and build healthy habits.

Approximately 75 of Colorado's 175 public school districts, representing about 562,170 students, are involved in Farm to School programming.<sup>9</sup>

Following mandates in the federal Healthy, Hunger Free Kids Act, Colorado schools are implementing new nutrition standards. These requirements include increasing fruit and vegetables in school meals and limiting sugar-sweetened beverages and the sale of processed snack foods.

## Community-Based Strategies

Fruit and vegetable consumption is lower among people who must travel long distances to a grocery store or who don't have access to transportation. Cost is an important factor as well. People with limited incomes will pass up expensive food. Attracting grocers to high-need neighborhoods has the potential to stimulate the economy, bring revenue into communities, and create jobs for local residents.<sup>10</sup> Economics aside, proximity to a healthy food retailer can result in better dietary choices.<sup>11</sup>



### Promising Community-Based Food Retail Strategies

- **Transportation:** Developing safe, efficient and affordable public transportation between high-need areas and grocers or attracting food retailers to transportation hubs are promising strategies for promoting greater access to supermarkets and food retailers.<sup>12,13</sup>
- **Zoning Laws:** Cutting red tape can encourage the development of grocery stores in high-need communities.<sup>14</sup> Zoning boards can grant variances allowing stores to open on sites that would otherwise prohibit a retail outlet or ease parking requirements to accommodate a grocery store. By lowering such barriers, zoning and city planning policies can expedite food retail expansion and promote access to fruit and vegetables in communities.

Communities short on fruit and vegetables don't have to wait for a grocery groundbreaking. Mobile markets or community gardens can bring healthy food to underserved neighborhoods at much lower start-up costs than building brick-and-mortar grocery stores.

### Proven Community-Based Strategies

- **SNAP Incentives for Fresh Foods:** Many low-income adults and families rely on Supplemental Nutrition Assistance Program (SNAP) benefits for food purchases. Attracting retailers who accept SNAP to low-income neighborhoods or neighborhoods with few fresh food options increases access to healthy foods, as does encouraging existing vendors to accept SNAP. Creating financial incentives for SNAP beneficiaries to purchase fresh food is a proven strategy for increasing fruit and vegetable purchases and consumption.<sup>15</sup>
- **Healthy Incentives Pilot:** Participants in the U.S. Department of Agriculture's 2008 Healthy Incentives Pilot (HIP) received a 30-cent refund for each SNAP dollar they spent on fruit and vegetables.<sup>16</sup> Evaluation results suggested that financial incentives encouraged fruit and vegetable consumption. HIP participants ate 26 percent more fruit and vegetables daily and spent more of their SNAP benefits on produce than SNAP participants who did not participate in the pilot.
- **Food Insecurity Nutrition Incentive Program:** The 2014 federal Farm Bill created the Food Insecurity Nutrition Incentive program that provides financial incentives to SNAP beneficiaries to purchase more fruits and vegetables.<sup>17</sup> Support for the program stemmed from reports of demonstrated success in prior initiatives, including the Healthy Incentives Pilot, New York City's Health Bucks program and Michigan's statewide "Double up Food Bucks" initiatives, which similarly reimbursed beneficiaries for purchasing fresh produce.

## Spotlight: Colorado Communities



Photo by Brian Clark/CHI

**The Las Animas Community Garden** was launched in 2007 to provide food and combat obesity. It serves more than 600 people.

Colorado's communities are chipping away at food deserts — defined as geographic areas with inadequate food access.

The Colorado Fresh Food Financing Fund (CO4F) was established in 2013 under the federal Healthy Foods Financing Initiative and is supported through a \$7.1 million initial investment from the Colorado Health Foundation.<sup>20</sup> Financing is available to develop new grocery stores in underserved areas, upgrade equipment or energy efficiency in existing stores, keep existing stores open under new management and support other innovative fresh food business concepts.<sup>21</sup>

The Weld County Public Health Department launched a Healthy Corner Stores Pilot Program. A joint venture with CDPHE, the program works

with store operators and national chains to increase the fresh fruit and vegetable inventory. Strategies include better refrigeration, showcasing healthy foods, and developing relationships with local growers or produce distributors.

Denver's Westwood community is developing its own healthy food system. The Westwood Food Hub will be owned by residents and supplied by local urban farms, gardens and greenhouses.<sup>22</sup>

Community gardens — whether community-based school gardens or urban gardens — are popping up across the state. The nonprofit Denver Urban Gardens has become a national model for urban agriculture and community engagement, helping more than 135 communities across the city establish gardens.<sup>23</sup>



Photo by Brian Clark/CHI

**Grace Gardner** picks tomatoes at the Las Animas Community Garden, which serves an area where nearly a third of all children are obese.

### *Promising Community-Based Strategies*

- **Community Gardens:** Helping residents establish community gardens is a developing strategy to improve access to fresh produce, particularly in neighborhoods without a nearby grocery.<sup>18</sup> Additionally, community gardens demonstrate positive results similar to those produced by school gardens — increasing awareness about healthful eating and fostering interest in trying new foods.

- **Healthy Corner Stores:** Improving the food offerings at corner stores in underserved communities helps to increase fruit and vegetable consumption. There are several ways to encourage these businesses to add more produce to their shelves.<sup>19</sup> Grants or low-interest loans can be used to help store owners to buy equipment to display fruit and vegetables or add refrigeration to preserve fresh foods.

## Conclusion

A range of evidence-based programs and policies — some proven and some still being tested — are available to ensure that Coloradans have more opportunities to eat fruit and vegetables. Healthier eating could make inroads

into the rates of chronic disease and obesity. Implementing proven and promising initiatives could put healthier foods on more plates, shaping healthy habits in Colorado's homes, schools and communities.



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The Colorado Health Institute is a trusted source of independent and objective health information, data and analysis for the state's health care leaders. The Colorado Health Institute is funded by the Caring for Colorado Foundation, Rose Community Foundation, The Colorado Trust and the Colorado Health Foundation.

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