



## IV. Access to Healthy, Affordable Food

Healthy options can be hard to find in too many communities. Millions of low-income Americans live in “food deserts,” neighborhoods that lack convenient access to affordable and healthy food. Instead of supermarkets or grocery stores, these communities often have an abundance of fast-food restaurants and convenience stores. In addition, stores in low-income communities may stock fewer and lower quality healthy foods. When available, the cost of fresh foods in low-income areas can be high. Public transportation to supermarkets is often lacking, and long distances separate home and supermarkets in many rural communities and American Indian reservations. It is hard for residents of these areas—even those fully informed and motivated—to follow the necessary and recommended steps to maintain a healthy weight for themselves and their children. Too often, economic incentives strongly favor unhealthy eating, and accessibility, safety concerns, and convenience can also promote unhealthy outcomes.

Limited access to healthy food choices can lead to poor diets and higher levels of obesity and other diet-related diseases. In addition, limited access to affordable food choices can lead to higher levels of food insecurity, increasing the number of low- and moderate-income families without access to enough food to sustain a healthy, active life. There is a growing, though incomplete, body of research that finds an association between food insecurity and obesity, suggesting that hunger and obesity may be two sides of the same coin.

Many communities around the country have already taken steps to make healthy and affordable foods accessible to all residents because of the potential to improve diet quality and reduce obesity, as well as to create jobs, increase local investment and economic activity, and revitalize neighborhoods. This chapter recommends a comprehensive approach that builds on a promising start to mobilize public and private sector resources to make the healthy choice the easy choice for all Americans.

Specifically, this chapter lays out four key elements for ensuring access to healthy, affordable food:

- Convenient physical access to grocery stores and other retailers that sell a variety of healthy foods;
- Prices that make healthy choices affordable and attractive;
- A range of healthy products available in the marketplace; and
- Adequate resources for consumers to make healthful choices, including access to nutrition assistance programs to meet the special needs of low-income Americans.

### A. Physical Access to Healthy Food

Too many Americans live in communities with limited access to supermarkets and grocery stores. Nationwide, USDA estimates that 23.5 million people, including 6.5 million children, live in low-income areas that are more than a mile from a supermarket. Of the 23.5 million, just under half have incomes at or below 200% of the poverty line, and almost 1 million do not have access to a car. USDA estimates

that 2.3 million people live in low-income rural areas that are more than ten miles from a supermarket; and again, just under half have low incomes.<sup>206</sup>

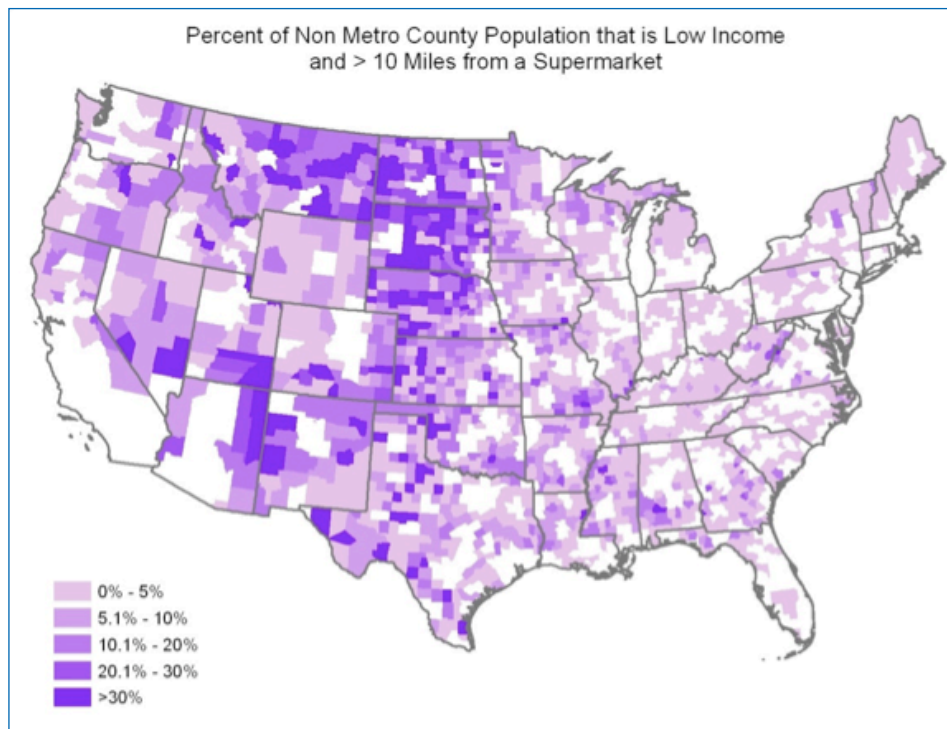
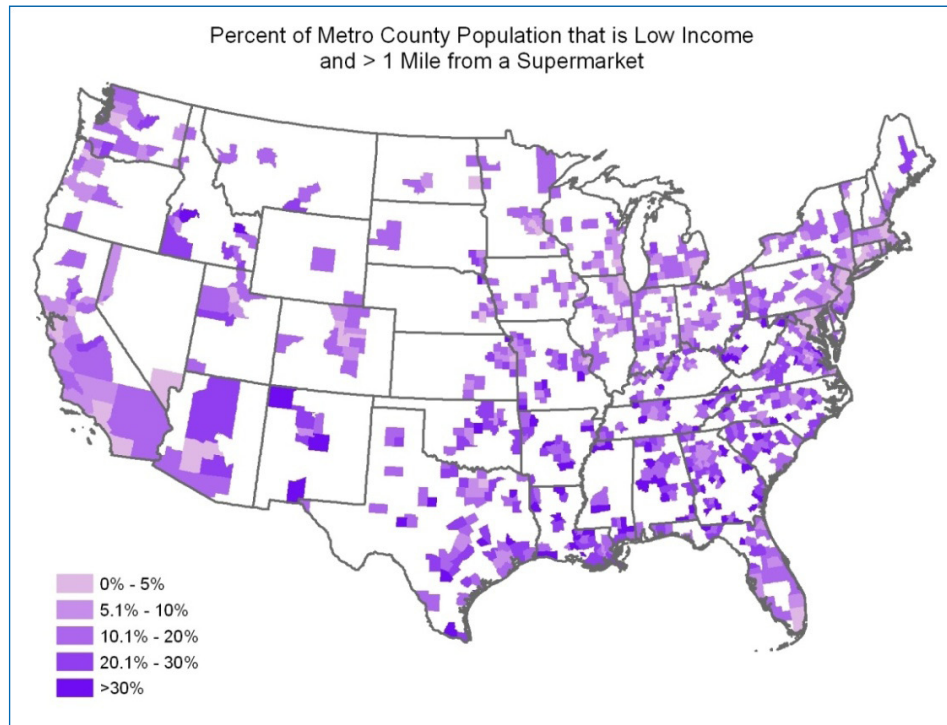
Limited access to healthy foods plays a significant role in poor dietary decisions. A scarcity of healthy foods makes it more difficult for low-income residents to adhere to a nutritious diet than for their counterparts in wealthier, resource-rich neighborhoods.<sup>207</sup> Residents with better access to supermarkets and limited access to convenience stores tend to have healthier diets and lower levels of obesity. Although less consistent, studies do suggest that residents with limited access to fast-food restaurants have healthier diets and lower levels of obesity.<sup>208</sup>

Access to supermarkets, grocery stores, and specialty markets is important, in part, because they give consumers access to a variety of fruits and vegetables. Diets rich in fruits and vegetables offer a number of health benefits<sup>209</sup> and have been linked to a lower prevalence of obesity or reduced weight gain.<sup>210</sup> Most Americans, especially those with low income, consume far fewer fruits and vegetables than recommended by current dietary guidance,<sup>211</sup> and a lack of easy accessibility may be one reason. A number of studies suggest that better retail access corresponds with healthier eating. Residents with more access to supermarkets or a greater abundance of healthy foods in neighborhood food stores consume more fresh produce and other healthful items. Without nearby access to healthy ingredients, families have a harder time meeting recommended dietary guidelines.<sup>212</sup>

Some research has found significant associations between the availability of food stores and adolescent BMI. The availability of chain supermarkets was associated with lower adolescent BMI and overweight status, while the availability of convenience stores was associated with higher adolescent BMI and overweight status.<sup>213</sup>

Many factors contribute to an individual's overall diet, body weight, and the risk of developing diet-related diseases such as diabetes or cardiovascular disease. Individual factors can explain some but not all of the differences in the rates in which different groups experience these problems. Attention on the relationship between retail food access and obesity has increased as researchers obtain a better understanding of the factors besides individual behaviors that may lead to differences in diet and health outcomes.

## Food Deserts in Urban and Rural America



Creative tools can be used to assess a community's needs. For example, Michigan's Department of Public Health has developed an online Nutrition Environment Assessment Tool (NEAT) to help communities assess the extent to which they promote and support healthy eating.<sup>214</sup> The U.S. Department of Defense adopted this tool for use by commanding officers and other stakeholders to make similar assessments of military communities and facilities.<sup>215</sup> A number of policy interventions can lead to improved access to healthy, affordable food. Communities can bring supermarkets to underserved neighborhoods, help smaller groceries or corner stores expand their stock of healthy and affordable food, and develop other retail outlets such as farmers' markets, public markets, cooperatives, farm stands, community-supported agriculture, and mobile vendors. These efforts also create jobs, bolster local economies, and revitalize neighborhoods, contributing to local economic development. A number of communities have undertaken these kinds of efforts, through projects such as Pennsylvania's Fresh Food Financing Initiative.

### Faith-based Organizations Find Creative Solutions to "Food Deserts"

There is no one-size-fits-all solution to the problem of food deserts in America. In some communities, it may be economically feasible to bring in a supermarket and sustain it over time; in others, the solution may be a mobile grocery store that comes through town once a week but provides access to healthy foods that community residents otherwise would lack.

Some of the most creative strategies have come from faith-based organizations, many of which have a long tradition of helping to meet the food needs in their communities, through food pantries and other anti-hunger efforts. Here are just a few examples:

- The Central Detroit Christian Community Development Corporation operates the "**Peaches & Greens**" **Produce Truck**, which travels through the streets of central Detroit like an ice cream truck, stopping to sell fruits and vegetables to area residents. The organization has also arranged for a number of corner stores to sell "Peaches & Greens" produce.
- In South Los Angeles, the First African Methodist Episcopal Church has arranged for the **open-air So Fresh Market** to operate in its parking lot. The market welcomes families to participate in free activities and live entertainment, while fresh and natural foods are sold to promote a healthy lifestyle and patrons are invited to watch as cooks present quick and easy meal demonstrations. Partnering with the market is part of a broader effort by the church to promote healthier eating among African Americans in the community.

Direct-to-consumer marketing outlets provide another path to increase healthy food access in underserved areas and stimulate economic development in rural communities across America. These opportunities, including farmers' markets, farm stands, and community supported agriculture enterprises, are currently promoted by the USDA through its Know Your Farmer, Know Your Food Initiative.

There are also many publicly and privately managed facilities that are frequented by children and their families, including at meal times, such as national, state, and local parks, as well as privately-run amusement parks, sports venues, and other recreational facilities for children. These places can be considered small scale "food deserts" because meals or snacks are available for purchase but few, if any, healthy options are available.

### Recommendations

**Recommendation 4.1: Launch a multi-year, multi-agency Healthy Food Financing Initiative to leverage private funds to increase the availability of affordable, healthy foods in underserved urban and rural communities across the country.** As proposed in the President's FY11 Budget, through this initiative, USDA, HHS, and the Treasury Department will partner to make over \$400 million available to community development financial institutions, nonprofits, public agencies and businesses to promote interventions that expand access to nutritious foods. Such interventions include helping grocery stores, small businesses, and other retailers provide healthy food options in lower-income communities. Interventions may also include helping improve supply chains to bring fruits, vegetables, and other healthy foods from rural agricultural areas to urban stores and markets. Private sector investments are a critical part of this initiative's success, since they provide up-front capital and sustain the investments until these stores have a chance to establish themselves in the community and build a strong customer base.

In addition to these new resources, communities can access existing Federal grant and loan programs, as well as state, local, and private funds to create market opportunities for producers and to support regional planning systems that ensure greater access to healthy food in underserved areas. Resources include USDA's Farmers' Market Promotion Program, Specialty Crop Block Grants, Community Food Projects, Community Facilities Program, Business and Industry Guaranteed Loan Program, Healthy Urban Food Enterprise Development Center, and Sustainable Communities Regional Planning grants; HHS' Community Economic Development Program; and the U.S. Department of Housing and Urban Development's Community Development Block Grant and Choice Neighborhood initiative.

#### Land Use and Food System Planning

Many communities have had an opportunity to promote access to fresh foods and urban agriculture as a component of their land-use and food system planning processes. Across the country, projects are helping to create, enable, and fund community garden and urban agriculture programs, and developing zoning and permitting processes friendly to urban agriculture and healthy food access. Community gardens can provide culturally significant foods not available in local grocery stores. For example:

- The city of Fresno changed its zoning ordinance to allow farmers markets in all non-residential and certain single-family residential zones. Now, Fresno planners want to plan for urban agriculture in newly developing areas.
- Vendors in Kansas City who sell healthy foods pay a reduced permit fee. City planners also list recommended and excluded products for public vending in the city's parks and recreational areas.
- New York City uses a combination of incentives and restrictions to get green produce carts in areas of the city with the least access to fresh fruits and vegetables.
- Detroit and Cleveland have reclaimed acres of vacant land and lots for community gardens.

**Recommendation 4.2: Local governments should be encouraged to create incentives to attract supermarkets and grocery stores to underserved neighborhoods and improve transportation routes to healthy food retailers.** Incentives could include tax credits, grant and loan programs, and small business or economic development programs. Communities could also develop zoning requirements that create safe, non-motorized routes such as sidewalks, pedestrian malls, and bicycle paths between all neighborhoods and supermarkets, grocery stores, or other retailers who sell healthy food.<sup>216</sup> Local communities can also commit job training resources to ensure that a well-trained workforce is available for healthy food retailers who are considering locating in their area.

**Recommendation 4.3: Food distributors should be encouraged to explore ways to use their existing distribution chains and systems to bring fresh and healthy foods into underserved communities.** The private supply chains that have been developed to bring healthy foods to restaurants and less healthy items to corner stores and grocery stores should be deployed to bring healthy foods to communities that lack these retail options. USDA, as part of its Know Your Farmer, Know Your Food initiative, can also play a role in developing food hub distribution centers to increase opportunities for regional distribution.

**Recommendation 4.4: Encourage communities to promote efforts to provide fruits and vegetables in a variety of settings and encourage the establishment and use of direct-to-consumer marketing outlets such as farmers' markets and community supported agriculture subscriptions.** Options that communities could consider include the following:

- Promote the use of WIC cash value vouchers, WIC and Seniors Farmers' Market coupons, and SNAP benefits in farmers markets and other settings where fruits and vegetables are sold;
- Fund outreach, education, and transportation to encourage residents of lower-income neighborhoods and nutrition assistance program participants to use farmers' markets and farm stands;
- Use land use policies 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 that link procurement of affordable, healthy food with improving skills in purchasing and preparing food;
- Provide incentives to purchase and sell local native-grown produce to Indian schools and communities; and
- Consider the adoption of ordinances or by-laws that promote healthy food vendors and mobile fruit and vegetable vendors in low-income and geographically isolated neighborhoods.

**Recommendation 4.5: Encourage the establishment of regional, city, or county food policy councils to enhance comprehensive food system policy that improve health.** Experience in some communities has shown that food policy councils can bring together citizens and government officials to examine state or local food systems. This unique form of civic engagement assembles diverse food system stakeholders to develop food and agriculture policy recommendations.

**Recommendation 4.6: Encourage publicly and privately-managed facilities that serve children, such as hospitals, afterschool programs, recreation centers, and parks (including national parks) to implement policies and practices, consistent with the Dietary Guidelines, to promote healthy foods and beverages and reduce or eliminate the availability of calorie-dense, nutrient-poor foods.**

### Healthy Foods in Our Parks

Healthy food is often hard to come by on America's public lands. Traditionally, concessioners have provided visitors with a limited number of options, many of which are calorie-laden and highly processed. In cafeterias and snack stands across the National Park System, concessioners are beginning to provide a broader range of healthy, organic, and local foods. The Park Service administers approximately 600 concessions contracts across its 392 units, grossing about \$1 billion annually. Recently, individual parks have taken the lead in working with their concessioners to revamp and revitalize traditionally limited, menus.

At **Golden Gate National Parks' Muir Woods Trading Post**, Ortega Family Enterprises provides a range of low-sugar, reduced-calorie, and organic food, much of which is locally sourced. All of these items are affordably priced and have raised profits for the park and the concessioner alike. Similarly healthy offerings can be found at the company's other National Park outposts in New Mexico. Healthful concessions are also found in **Yellowstone and Grand Teton National Parks**, which offer a range of all-natural and vegetarian options. Far away from the big western parks, the **Statue of Liberty** boasts a range of healthy options in a densely populated urban area. **Baltimore's Fort McHenry** is preparing to open a new cafeteria based on a model school lunch program. And on the **National Mall**, concessioners are now serving low-fat snacks like fruit and yogurt and lunches like vegetable hummus wraps.

### *Benchmarks of Success*

**Eliminate food deserts in America in seven years.** To monitor progress towards this goal, USDA will estimate the number of people in low income areas more than a mile from a supermarket or large grocery store (10 miles in rural areas) every three years beginning in 2012, using demographic data from the American Community Survey and store location information from commercial sources and USDA's directory of stores authorized to accept SNAP benefits.

### **B. Food Pricing**

Prices have a large effect on consumer choices. Consumer behavior has shifted as food prices have declined and low cost, energy-dense foods have become more convenient. Technological advances have made food cheaper. One study found that food prices dropped in comparison to all other goods, over a 50 year period.<sup>217</sup> But these price advantages do not extend to all types of food. Over the last 30 years, prices for fruits and vegetables increased nearly twice as fast as the price of carbonated drinks.<sup>218</sup>

An increase in the price of fruits and vegetables relative to less healthy foods can reduce consumers' incentives to purchase fruits and vegetables, resulting in less healthy diets. Some analyses suggest that energy-dense foods composed of refined grains, added sugars, or fats remain the lowest-cost option to the consumer.<sup>219</sup> It is widely believed that American consumers have seen a significant increase in prices of fruits and vegetables alongside a decrease in the prices of foods that contribute to obesity. Because of quality improvements in fresh fruits and vegetables, however, it is difficult to draw conclusions about the trends in prices and incentives. One recent analysis found that prices declined for commonly consumed fresh fruits and vegetables for which quality has remained fairly constant, as well as for snack foods. This evidence suggests that the price of a healthy diet has not changed relative to an unhealthy one.<sup>220</sup>

Nonetheless, it is not disputed that the prices of some unhealthy foods have fallen, and that prices play a significant role in consumer choices.

Prices change over time for a variety of reasons. Better production and distribution technologies generate more and better goods, driving down prices. Foods that once were available only seasonally are now available year-round. Advances in food processing and packaging have introduced a multitude of ready-to-eat foods, available virtually anywhere and anytime. Farm programs have been designed to stabilize crop prices for farmers and may affect production decisions, commodity prices, and ultimately the prices consumers pay. State and local sales taxes imposed on soft drinks, candy, and snacks raise their cost relative to other food purchases. Nutrition assistance programs subsidize meals for millions of low-income Americans, reducing the relative price of food compared to other consumer needs. As a result, there are many opportunities to affect the cost of healthy food.

Studies suggest that if the price of a particular food increases or decreases, consumption will decrease or increase. Research has found increases in purchases of healthier foods when prices are reduced, and decreases in purchases of less healthy foods as prices increase.<sup>221</sup> The potential influence of food prices on consumption necessitates consideration of the extent to which changes in farm, tax, and subsidy policies might affect consumption patterns.

### *Agriculture Policy*

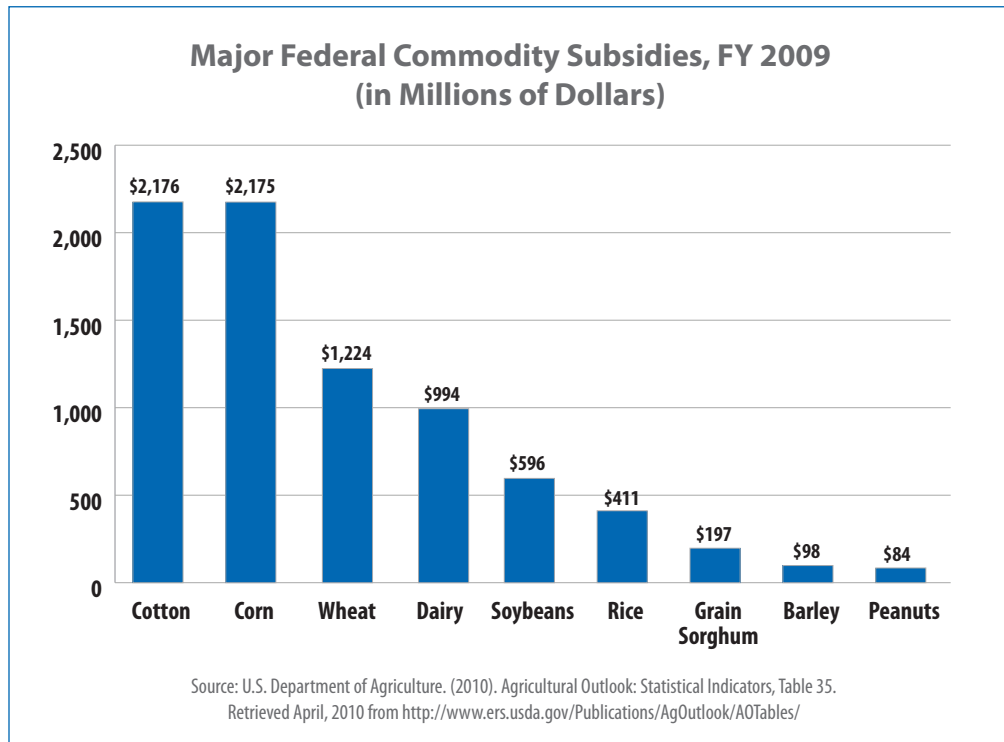
Since the Great Depression, American farm policy has been designed to stabilize crop prices, keep farmers producing food and fiber, and provide American families with an abundant, affordable, and reliable food supply. Eligible farmers receive support through a variety of Federal programs. Nearly all the subsidies go to growers of five commodities: soybeans, corn, rice, wheat, and cotton. In comparison, relatively few subsidies support fruit and vegetable farmers, although the Food, Conservation, and Energy Act of 2008 included, for the first time, \$1.3 billion in new funding over 10 years for specialty crops—fruits, vegetables, and nuts—and increased programs that support local agriculture and healthy foods. It also included a pilot project to allow planting of fruits and vegetables on base acres for USDA's farm commodity price and income support programs in a limited number of states.

Additional studies should be conducted to determine whether current agricultural policy has an impact on the availability and pricing of different types of food and American diets. For example, the orientation of farm program payments toward a group of commodities may have an impact on the composition of the food supply and the relative availability of certain commodities. USDA's Economic Research Service has estimated that to establish a sufficient supply of fruits and vegetables for all Americans to meet the *Dietary Guidelines*, U.S. producers would have to more than double their fruit acreage (from 3.5 million acres today, to 7.6 million) and increase vegetable acreage by nearly one and a half times (from 6.5 million acres today, to 15.3 million).<sup>222</sup>

In addition, some research on the link between obesity and farm programs finds that our farm programs have had small and mixed effects on farm commodity prices, resulting in smaller effects on relative retail prices. Over the past 15 years, most farm subsidies have been in the form of direct income support that is not connected to actual production. One analysis found that direct income support did not significantly affect the affordability of food, either on the whole or within food groups.<sup>223</sup>



#### IV. ACCESS TO HEALTHY, AFFORDABLE FOOD



While farm subsidies have lowered some commodities' prices, their effects may be countered by policies that restrict acreage or production, which potentially increase prices. In addition, the cost of farm commodities represent only a small and shrinking share of the cost of retail food products, on average less than 19%, making changes in commodity prices translate to small changes in the prices consumers pay.<sup>224</sup> One study found, for example, that the corn content of high fructose corn syrup represented about 1.6% of the value of soft drink manufacturing costs and sugar just 0.1%. In turn, small changes in prices are likely to induce only small changes in consumption.<sup>225</sup> As noted above, however, further research can help respond to the underlying questions.

#### **Tax Policy**

The Institute of Medicine and others have recommended that governments implement a tax strategy to discourage consumption of foods and beverages that have minimal nutritional value as a step in the fight against childhood obesity. Based on the notion that consumers will respond to the increased food cost by reducing their consumption, a tax could generate considerable revenue to fund obesity-fighting programs.<sup>226</sup> Many states already tax caloric-sweetened food and beverages.

The effectiveness of taxing food purchases primarily depends on the degree to which consumers are aware of and respond to changes in food prices. One review suggests that the percentage change in consumption is generally smaller than the percentage change in price.<sup>227</sup> Consumers may, however, be fairly responsive to a price change in caloric-sweetened sodas, fruit drinks, and sports drinks. The extent of the response would certainly be affected by the size of the change in price. Recent research indicates that current state-level tax rates on soda purchases have had a relatively small impact on adolescent<sup>228</sup> and adult weights.<sup>229</sup> But a higher tax rate would likely have a greater impact on consumption, as evidenced by the effects of the substantial rise in tobacco taxes.<sup>230</sup>

Retail State sales and vending machine “snack tax” rates, 2009								
Product	Sales Tax				Vending Machine Tax			
	Number of States	Average Tax Rate	Min Rate	Max Rate	Number of States	Average Tax Rate	Min Rate	Max Rate
Soda	33	5.2	1.2	7.0	39	5.3	1.2	8.0
Candy	29	4.8	1.0	7.0	37	5.1	1.0	8.0
Gum	28	4.7	1.0	7.0	38	5.0	1.0	8.0
Ice cream	18	4.2	1.0	7.0	35	5.0	1.0	8.0
Popsicles	16	4.0	1.0	7.0	33	5.0	1.0	8.0
Chips/pretzels	14	3.7	1.0	7.0	32	5.0	1.0	8.0
Milkshakes/ Baked goods	14	3.7	1.0	7.0	33	5.0	1.0	8.0

Source: Bridging the Gap: [www.impactteen.org/obesitystatedata.htm](http://www.impactteen.org/obesitystatedata.htm)

### Subsidy Policy

Providing incentives or subsidies to encourage greater consumption of healthier food choices offers an alternative to taxes on foods of limited nutritional value. In experiments, targeted price changes have increased purchases of healthier snacks from vending machines. For example, a 50% price reduction on fresh fruit and baby carrots in two secondary school cafeterias resulted in a four-fold increase in fresh fruit sales and a two-fold increase in baby carrot sales.<sup>231</sup> Another experiment used a simple color-coded label of red (least healthy), yellow, or green (most healthy) based on fat and calorie content and added a five cent “tax” (approximately 8% of the product’s value) on each red item. After one year, this resulted in a 5% decrease in sales of least healthy items, a 16% increase in the sale of most healthy items, and overall sales increased as well.<sup>232</sup>

A recent study on the effect of price subsidies on healthy food consumption among SNAP participants suggests that a 10% subsidy for vegetables and fruits would increase vegetable consumption from 1.26 cups to 1.33 cups per day, and fruit consumption from 0.89 cup to 0.97 cup. These increases in consumption bring individuals closer to the recommended levels, closing the gap by 4.7% for vegetables and 7% for fruits.<sup>233</sup>

Since 2005, a group of farmers markets, foundations, local governments, and nonprofit organizations have collaborated on pilot incentive programs to expand USDA programs to improve the health and nutrition of low income families and their children. Wholesome Wave’s Double Value Coupon Program increases the value of SNAP and other program benefits when used at participating farmers markets, reducing the cost of fruits and vegetables for low-income participants. Initiated in 2008, the program has expanded to more than 60 markets in 12 states and the District of Columbia. Early results from participating farmers markets often indicate a 300% increase in SNAP and WIC use at farmers markets with the introduction of double voucher incentive programs.<sup>234</sup>

### Recommendations

**Recommendation 4.7: Provide economic incentives to increase production of healthy foods such as fruits, vegetables, and whole grains, as well as create greater access to local and healthy food for consumers.** The upcoming reauthorization of programs governed by the Food, Conservation and Energy Act of 2008 provides another opportunity to strengthen Federal farm and food policy to help meet the needs of all Americans.

**Recommendation 4.8: Demonstrate and evaluate the effect of targeted subsidies on purchases of healthy food through nutrition assistance programs.** Through the Healthy Incentives Pilot, the Food, Conservation, and Energy Act of 2008 provided \$20 million to determine if incentives provided to SNAP recipients at the point-of-sale increase the purchase of fruits, vegetables, or other healthful foods. The evaluation of this pilot, still in the early development stages, will offer solid evidence on whether a financial incentive can influence fruit and vegetable purchases and consumption.

**Recommendation 4.9: Analyze the effect of state and local sales taxes on less healthy, energy-dense foods** based on nutrient content or categories with low nutritional value (such as soft drinks, candy, snack foods, and fast foods).

### Benchmarks of Success

**By 2020, increase the availability of fruits and vegetables in the American food supply by 70%, or 450 pounds per person per year.** In 2008, the American food supply included 643.6 pounds of fruit and vegetables per person—about 251 pounds of fruit and 393 pounds of vegetables.<sup>235</sup> A recent USDA analysis suggested that to bring American diets into alignment with recommendations in the 2005 Dietary Guidelines, consumption of fruit would have to increase by 132%, and consumption of vegetables would have to increase by 31%.<sup>236</sup> The increased supply of fruit and vegetables needed to support these consumption changes would total 1,096 pounds per person—an increase of 453 pounds, or over 70%.

USDA prepares these estimates of fruit and vegetables in the food supply on an annual basis, drawing on data from a variety of government and private sources, including farm production and stocks information from the Census of Agriculture, trade information from the U.S. Census Bureau and USDA's Agricultural Marketing Service, and information on processed products from trade association reports. Per capita estimates are calculated using population estimates for that particular year.

## C. Product Formulation

In addition to ensuring access to supermarkets and grocery stores, these stores must also provide healthy options at affordable prices. Consumer demand plays an essential role in the range of foods available, yet decisions that the food and agriculture industries make in responding to these demands determine what is on store shelves. Parts of the food industry are undertaking efforts to reformulate products, and through concerted efforts, the marketplace can move faster and farther. To address the obesity crisis, we must expand and accelerate efforts to reformulate products, particularly those aimed at kids, so they have less fat, salt, and sugar, and more of the nutrients children need.

It is easy for companies to take advantage of the human craving for sugary, fatty, salty foods by creating products that are sweeter, richer, and saltier than ever before. Doing so does not just respond to people's natural inclinations, it also helps shape them. This is particularly dangerous for our Nation's children, as these foods become embedded in their life-long eating habits.

There is another choice. Just as we can shape children's preferences for high-calorie, low-nutrient foods, we can also shape their preference for high-quality, healthier foods. Making this a reality requires a serious industry-wide commitment to provide parents with healthier food options at affordable prices.

The food industry has shown that it can respond to new consumer demands, including demands related to health and nutrition. In 2008, manufacturers introduced about 23,000 new products, with claims such as "natural," "fresh," "organic," "no preservatives," "low or no trans fat," and "high vitamin," used to market about 25% of these new products.<sup>237</sup> In the competition for health-conscious consumers, processed food manufacturers quadrupled the average number of new whole-grain products introduced between 2001 and 2006.<sup>238</sup>

Rather than finding creative ways to market existing products as healthy, we must develop new products proven to be healthy—products that help shape the health habits of an entire generation. Products like baby carrots and apple slices have proven appealing to children, as well as whole grains. Developing and marketing more of these products, as well as reducing sugar in items popular with children like flavored milk or yogurt, help children form healthy habits and ultimately, combat the obesity trend.

### *Recommendations*

***Recommendation 4.10: The food, beverage, and restaurant industries should be encouraged to use their creativity and resources to develop or reformulate more healthful foods for children and young people.***

- Industries should be encouraged to shift product portfolios to promote new and reformulated child-oriented foods and beverages that are substantially lower in total calories, fats, salt, and added sugars, and higher in nutrient content. This should be informed by research about which products are favored by children, and in particular, by children at high risk for obesity.
- Restaurants should be encouraged to expand and actively promote healthier food, beverage, and meal options for children, and be attentive to the effects of plate and portion size, as noted in Chapter II.

### *Benchmarks of Success*

**Increase new product introductions that are consistent with dietary recommendations and substantially lower in total calories, fat, salt, and added sugars.** Proprietary data sources can be used to monitor the number and percent of annual product introductions with healthier formulations, such as low fat, no trans fat, low or no sodium, low or no sugar, added calcium, or reduced calories per serving. Over time, it should be possible to monitor consumer purchases of these new product introductions to determine whether they have become a larger share of purchases and intake, using commercial data.

## D. Hunger and Obesity

In 2008, approximately 49 million people, including 17 million children, live in households struggling to put enough food on the table. In over 500,000 households, children skipped meals or ate less than needed because of lack of resources.<sup>239</sup> Scholars are increasingly discussing the possible correlation between weight status and food insecurity. This association seems paradoxical, since food insecurity results from inadequate resources to purchase enough food and obesity is a consequence of consuming too much. Still, a number of studies have suggested a possible correlation between food insecurity and obesity, especially in women.<sup>240</sup>

This relationship may exist because the low cost of nutrient-poor, energy-dense foods promotes over-consumption of calories, leading to weight gain. To maintain adequate energy intake, people who must limit food costs may select lower-quality diets, consisting of high-energy, inexpensive foods. People eat fewer fruits and vegetables as food insecurity worsens. Food insecurity may also lead to various psychological and behavioral changes, such as a preoccupation with food, stress, depression, and physical limitations in adults—all of which can lead to an increased risk for obesity. In addition, because many food-insecure households receive assistance from one or more Federal nutrition assistance programs, it is important to consider whether these programs contribute to the obesity/food insecurity paradox, or help solve the paradox by providing access to healthier food, incentives for healthier choices, and effective nutrition education.

USDA administers 15 Federal nutrition assistance programs as our Nation's first line of defense against hunger, including those mentioned above—the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps), the National School Lunch Program (NSLP), the School Breakfast Program (SBP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The Federal government will invest more than \$80 billion in the national nutrition safety net in fiscal year 2010, subsidizing meals and food purchases for more than 1 in 4 Americans. One-half of all children will participate in SNAP alone at some point during their childhood, including 90% of African-American children.<sup>241</sup>

Given these programs' extensive reach, it is important that they be part of the solution to childhood obesity. Data from the National Health and Nutrition Examination Survey show that generally there are more similarities than differences in the nutrient intakes, diet quality, and food choices of program participants compared to the rest of the American population.<sup>242</sup> A thorough assessment of the research in this field shows that WIC and school lunch and breakfast programs do not contribute to childhood obesity.

It remains important to ensure that those who are eligible for and in need of assistance have ready access to these programs. While these programs serve millions of low-income Americans, some people who need benefits do not participate; over one-third of individuals eligible for SNAP do not participate,<sup>243</sup> and 40% of those eligible for WIC do not participate<sup>244</sup>. They may not be aware they are eligible, may not realize the size and value of benefits, or may find applying difficult or burdensome. Similarly, although meal programs exist in thousands of schools across the country, not all eligible children participate in the NSLP, and even fewer participate in the SBP. School lunch is served in around 100,000 schools, while the breakfast program is only available in 88,000 schools and almost two-thirds of children who eat a school lunch do not receive a school breakfast. Some bring healthy food from home, but others, especially in high schools, may forego a nutritious lunch or breakfast entirely.

### Is Poor Diet a Low Income Problem?

In general, when one looks at both the food choices and the diet quality of nutrition program participants and other consumers, the similarities are more striking than the differences:

- A recent analysis of nutrition monitoring data (Cole et al., 2008), comparing the diets of participants in SNAP, WIC, and the school meals programs with nonparticipants and higher income consumers show that the diets of all groups fall far short of the *Dietary Guidelines for Americans*. All groups had very low intakes of whole grains, dark green and orange vegetables, and legumes, and high intakes of fat, saturated fat and added sugars.
- With regard to the shopping practices of SNAP participants specifically, consumer expenditure data suggest that they tend to buy the same categories of foods as other consumers. These differences are minor even though families at the high end of the income distribution spend *over twice as much on food at home* as those at the low end.

Nonetheless, some differences do appear to be linked to income:

- In 2003-04, people in low-income families had significantly lower intakes of total vegetables, dark green and orange vegetables and legumes, and whole grains than did higher income families.
- People in low-income families, compared with their counterparts, had lower (i.e. more healthful) intakes of sodium than higher-income families.
- The only significant difference in the quality of *children's* diets by family income, as measured by the Healthy Eating Index, was that low-income children had a higher score for total vegetables. This may reflect low-income children's greater participation in the National School Lunch Program (Guenther et al. 2008).

In general, the critical lesson from this evidence is that while some income-linked factors, such as improved access to healthy options, hold promise to support and influence better diets, almost all Americans, no matter their income need to make significant changes in their eating behaviors to promote good health.

Sources: Cole, N., Fox, M.K. (2008). *Diet Quality of Americans by Food Stamp Participation Status: Data from the National Health and Nutrition Examination Survey*. Washington, DC: Abt Associates, Inc.; Guenther, P.M., Juan, W., Mark, L., Hiza, H.A., Fugwe, T., Lucas, R. (2008). Diet Quality of Low-Income and Higher Income Americans in 2003-04 as Measured by the Healthy Eating Index-2005. *Nutrition Insight*, 42.

## Recommendations

**Recommendation 4.11: Increase participation rates in USDA nutrition assistance programs through creative outreach and improved customer service, state adoption of improved policy options and technology systems, and effective practices to ensure ready access to nutrition assistance program benefits, especially for children.** Improved policies and effective practices include streamlined and more timely application process, greater use of broad-based categorical eligibility and direct certification, and reductions of barriers to participation such as finger imaging. Access to feeding programs for children throughout the year can also be expanded by engaging state, local, Tribal, community leaders, and partnerships with allied organizations, advocacy groups, and communities.

### *Benchmarks of Success*

**Increase participation among people eligible for SNAP benefits to 75% by 2015.** USDA estimates annual participation rates based on the Annual Social and Economic Supplement to the Current Population Survey and administrative data on SNAP participants. The SNAP participation rate was 65.8% in 2007.

**Increase National School Lunch Program participation by 2 million additional children (up to 60% of all students) and School Breakfast Program participation by 3 million additional children (up to 25% of all students) by 2015.** USDA monitors participation in the school meal programs through periodic reporting by State administering agencies; information on school enrollments is available annually from the U.S. Department of Education. In 2009, 56% of enrolled students participated in lunch and 20% participated in breakfast.

### **Key Questions for Future Research**

Making research in this area a priority may help to identify the relationship between access and consumption of healthy foods, as well as the causal links between access and diet related health outcomes. Key issues to address with future research investments include:

- The definition, measurement, and consequences of food deserts on food access, diet, and weight outcomes;
- The impact of improved access on dietary quality and obesity rates;
- How agricultural policy may affect food prices and obesity rates;
- The comparative efficacy of sales taxes and price subsidies on weight outcomes; and
- The effectiveness of price incentives, including supplements that increase the value of farmers' market purchases or incentives to promote the purchase of fruits, vegetables, and other healthful foods, especially for low-income populations;

In addition, there is need for tools proven to help communities assess their progress in helping residents eat healthy foods, increase their knowledge of potential steps to promote healthy eating and good nutrition among community residents, as well as identify and define influential actions. This includes tools that connect to and use existing databases (such those that track which products are being sold at grocery stores, through UPC codes) to help communities, industry, and policymakers assess progress in shifting toward increased consumption of healthy foods.

Finally, focusing investments in food technologies, research, and development may help to identify and produce new and reformulated child-oriented foods and beverages that are substantially lower in total calories, fats, salt, and added sugars.

