

The CDC Guide to Fruit & Vegetable Strategies to Increase Access, Availability and Consumption



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I. CDC Guide Overview

Using This Guide

This document provides guidance and direction in selecting strategies to increase access and availability of fruits and vegetables. It offers the most relevant information on each type of strategy to help the reader make wise decisions. The following categories of information have been included:

Strategy: An activity intended to prevent disease or promote health in a group of people, also referred to in the literature by the term “approach”. Criteria for inclusion of a strategy in the document are a rationale supporting the strategy and program examples of the strategy being implemented.

Definition: Briefly describes the type of strategy.

Rationale: Explains why a particular type of strategy is important to increasing access or availability of fruits and vegetables.

Evidence of effectiveness: Draws on peer-reviewed literature and current practice to summarize support for the strategy as well as evidence of effectiveness.

Key considerations: Includes items that may be important to keep in mind during the planning, implementation, and/or evaluation phases of an environmental or policy strategy.

Action Steps: Presents a short list of activities that might be undertaken to begin implementing a particular strategy. This list can serve as a springboard for locally tailored approaches and help jump-start local thinking on how to proceed with implementation.

Program Examples: Includes innovative programs that seek to increase access to affordable, higher quality, fruits and vegetables. Examples are provided to show the reader concrete models of various strategies. This list is not exhaustive, and other programs with similar characteristics may exist.

Resources: Guides the reader to further information about programs and other items of interest related to the strategy.

Note: Web site addresses of nonfederal organizations are provided solely as a service to our readers. Provision of an address does not constitute an endorsement of this organization by CDC or the federal government, and none should be inferred. CDC is not responsible for the content of the individual organization Web pages.

References: Provides a sequential list of all information sources cited.

II. Introduction

Consuming a diet high in fruits and vegetables is associated with a decreased risk of many chronic diseases, including heart disease ¹, stroke ², high blood pressure ³, diabetes ⁴, and some cancers⁵. Research has also found that replacing foods of high energy density (high calories per weight of food) with foods of lower energy density, such as fruits and vegetables, can be an important part of a weight management strategy ^{6 7}. Additionally, fruits and vegetables are good sources of many important nutrients including potassium, vitamin C, folate, fiber, and numerous phytochemicals. The importance of fruits and vegetables as part of healthy diets is illustrated by the Dietary Guidelines for Americans 2005 where two of four “Food Groups to Encourage” are fruits and vegetables⁸. Also, the USDA Food Guide, represented by MyPyramid, recommends eating 2 to 6 ½ cups of fruits and vegetables per day depending on age, sex, and activity level.

Awareness of recommendations for fruit and vegetable consumption has increased substantially over the last 20 years. In 1991, about 8% of individuals reported being aware that fruit and vegetable intake should be at least 5 servings a day ⁹. In 2004, that number had increased to 40% ¹⁰. This heightened awareness has not translated into behavior change. Trends in consumption show that intake of fruit has not changed since 1988, and intake of vegetables has decreased slightly during the same period ¹¹.

In a recent analysis of fruit and vegetable intake data using the specific MyPyramid recommended intakes by age, sex, and activity level, fewer than 1 in 10 Americans consume enough fruits and vegetables. Subgroups with higher recommendations for fruit and vegetable consumption based on caloric requirements did not have higher intakes. The primary contributors to total fruit intake among adults was whole fruits but among adolescents it was fruit juices. The largest single contributor to overall fruit intake was orange juice. Potatoes dominated vegetable consumption, particularly among adolescents where fried potatoes increased the median intake from 0.72 cups to 1.21 cups per day. Dark green and orange vegetables and legumes account for a small portion of vegetable intake and few people met specific recommendations for those vegetable subgroups ¹².

Strategies to increase access and availability of fruits and vegetables should focus on promoting fruit and vegetable products that maintain the qualities of these foods that make them healthy. Fruits and vegetables can be fresh, frozen, canned or dried as long as a certain level of healthfulness is maintained, including low sodium, unsweetened, packed in juice, and 100% juice. The seven strategies described in this guide focus on environmental and policy changes to increase access to fruits and vegetables and to improve availability of fruits and vegetables with the expectation that this improved access and availability will lead to increased consumption. The selection of each of these strategies is based on the best available evidence as well as the knowledge and experience of the authors of the guide and partners and experts from outside of CDC.

III. Strategies to Increase Fruit and Vegetable Access and Availability

Strategy 1: Promote Food Policy Councils to Improve the Food Environment at the State and Local Levels

Definition:

Food Policy Councils (FPCs), and related food councils, support and advise residents and governments in developing policies and programs to improve the local food system, with the goal of increasing consumer access to and the availability of affordable, healthy foods such as fruits and vegetables. They include stakeholders from public, private, and non-profit sectors and represent a wide array of interests, including nutrition, health, agriculture, education, policy, community design, and commerce. FPCs may be commissioned by state, tribal, or local governments, developed at the grassroots level, or some combination of the two approaches.

Rationale:

A Food Policy Council (FPC) is established in a community or state to develop policy related to healthy food access, including fruit and vegetable production, availability, and distribution. FPCs develop strategies to provide high quality and affordable healthy food, including fruits and vegetables, to all members of a community¹³. They achieve solutions through environmental and physical changes with policy supports. FPCs have supported policy and program initiatives related to: healthy food retail; community and school gardens; food insecurity; farmers markets and the Farmers Market Nutrition Programs; farm to institution and farm-to-school programs; promotion of locally grown foods such as fruits and vegetables, and nutrition education^{14 15}. These policy and program initiatives have the potential to contribute to changes in individual access to fruits and vegetables, a necessary step in influencing consumption.

Evidence of Effectiveness:

Peer reviewed research on the effects of food policy councils on increasing consumption of fruits and vegetables was not found. However, food policy councils have catalyzed food policy change in many areas, including purchase of local and fresh fruits and vegetables for school lunches ¹⁵, promotion of sustainable agriculture and increasing ease of access to food assistance programs and healthy foods among low-income individuals and seniors ¹⁶. They have also increased opportunities for locally produced farm products and created community and school gardens and farm-to-school program education ^{14, 15}, and created new forms of insurance for small producers and implementation of farm-to-cafeteria and farm-to-school programs (<http://www.statefoodpolicy.org/?pageID=qanda>). A case report from Australia describes how the work of a government and non-government sector steering committee, which included multi-sector stakeholders (similar to a food policy council), led to significant progress in implementing food and nutrition policy and program interventions to improve fruit and vegetable consumption over a one year period ¹⁷.

Key Considerations:

- FPCs operate at state, regional, and local levels. Development of FPCs should take into account the level of action needed to make food system changes. A state-level FPC should be formed to examine the state-wide food system, whereas a city or local community FPC would be a better option to address specific food access issues in a specific city or community.
- The existence of a FPC can be mandated by government or they can be naturally assembled by interested stakeholders and food systems experts. Mandated FPCs often have a steady stream of funding, with paid council members. However, the appointed membership may not fully represent the needs of the local food system. Naturally occurring FPCs often have knowledgeable, invested members, but may not have a sustainable source of funding.
- Once a FPC is formed, a community food assessment may be the first step in understanding needed policies, environmental changes, and fruit and vegetable access issues for disparate populations, such as low-income or minority communities. *What's Cooking in Your Food System?* is a report published by the Community Food Security Coalition that highlights approaches to completing a community food assessment (<http://www.foodsecurity.org/CFAGuide-whatscookin.pdf>)
- FPCs provide a key forum for collaboration between public health, sustainability, and planning advocates. FPCs can broaden the discussion of food and agricultural issues to facilitate a more comprehensive examination of food systems. A FPC can serve as a networking and educational tool for individuals in different parts of the food system. Stakeholders therefore become more informed as to how individual actions impact local and regional food system ¹⁵.

- FPCs help to ensure the sustainability of policy support, development, and programs beyond an intervention. They are also a means of building capacity within the community.

Potential Action Steps:

1. Sponsor a summit and invite key players in your local food system. This summit can provide information and training about the benefits of FPCs.
2. Promote the benefits of FPCs to state legislators, city and local level government officials, or your governor's office, and offer to help establish state and local FPCs in your area.
3. Provide materials related to environmental and policy interventions to increase access to fruits and vegetables to FPCs in your area.
4. Establish links between local or state FPCs and groups promoting fruit and vegetable consumption.

Program Examples:

The Oklahoma Food Policy Council is a statewide collaborative entity of private and public partners, hosted by the Kerr Center for Sustainable Agriculture. Members represent perspectives from farming and ranching, food processing, retail foods, education, and the media, as well as tribal, conservation, religious, and anti-hunger organizations. Established in 2001, a primary initial project of the Council was to promote Oklahoma grown foods through farm to school programs. The Food Policy Council was instrumental in helping to create and pass the "Oklahoma Farm to School Program Act". The act formalized the successful pilot program, which highlighted seedless Oklahoma watermelons, and expanded the model to more than 400 schools. The Oklahoma Department of Agriculture is the primary regulating agency, designating a program administrator to provide leadership and program development, conduct workshops and offer technical assistance to farmers, food service directors, processors and distributors.

<http://www.kerrcenter.com/ofpc/index.htm>

The Knoxville-Knox County Food Policy Council in Knoxville, TN was the first food policy council created in the United States, in 1982. Initiated by graduate students at the University of Tennessee, the council was initially funded through a Federal Community and Nutrition Grant, with a focus upon developing community gardens and food assistance outreach. Expanding to the county level in 2002, partial membership is now appointed by the Mayor of Knoxville and the remaining positions are selected by the Knox County Executive. The many accomplishments of this FPC include the creation of 27 community and school gardens and a consulting partnership with the Regional Transportation Authority to consider food access in determining bus routes.

<http://www.ci.knoxville.tn.us/boards/food.asp>

Hartford Food System (formerly known as The City of Hartford Advisory Commission on Food Policy) evolved into a 15 volunteer member body. Ten members are professionals from anti-hunger organizations and five members are from the general public. This organization is mandated by the City of Hartford. The Commission operates on a \$25,000 budget, partially supported by the City of Hartford and private donations. The majority of this funding is allocated for staff support. A primary accomplishment of the coalition was helping to create the “L-tower” bus route, which more directly connects communities of lower income to food stores, saving participants an average of 45 minutes of commute time.

www.hartfordfood.org

Resources:

Portland Multnomah Food Policy Council is a citizen-based advisory council to the City of Portland and Multnomah County. The website describes several examples of successful policies and programs that were initiated by the FPC. A link offers a video interview of Steve Cohen, of the Portland Multnomah Food Policy Council discussing the role and activities of FPCs.

<http://www.portlandonline.com/osd/index.cfm?c=42290&>

Video: <http://www.blinkx.com/videos/policy+councils>

State & Local Food Policy Councils site, hosted by the Drake University Agricultural Law Center, offers policy publications (e.g. “Selling to Institutions” and “The Law of Food”), several Food Policy Council profiles, and other generally applicable food policy resources.

<http://www.statefoodpolicy.org/>

The North American Food Policy Council site is a component of the Community Food Security Coalition. Their website offers a host of resources, including an updated list of current food policy councils. It separately lists those councils mandated or managed by state or local governments; a sample budget; how-to guides; and suggested policies.

<http://www.foodsecurity.org/FPC/>

The Toronto Food Policy Council has produced a series of relevant discussion papers on a food systems approach to public health policy, such as “Reducing Urban Hunger” and “Changing Agricultural Policy”.

http://www.toronto.ca/health/tfpc_discussion_paper.htm

The National Association of County Governments, Center for Sustainable Communities offers a case study of a successful food policy council at the county level.

http://www.naco.org/Template.cfm?Section=new_technical_assistance&template=/ContentManagement/ContentDisplay.cfm&ContentID=24784

The Washington Environmental Priorities Coalition is an example of a broad-based environmental coalition that has acted as a food policy council to address food

policy priorities. This coalition supported state-wide legislation promoting local food systems in March, 2008, entitled “Local Farms, Healthy Kids”. The legislation provides funding for local food in farm to school and school gardening programs. It eases state and school procurement restrictions, provides funding for EBT (Electronic Benefits Transfer) technology at farmers markets, and promotes local food in emergency food programs. Specific funding amounts for each program are detailed on the website. <http://www.environmentalpriorities.org/local-farms>

***Strategy 2:
Improve Access to Retail Venues that
Sell or Increase Availability of High Quality,
Affordable Fruits and Vegetables
in Underserved Communities***

Definition:

Food can be sold at a variety of retail venues in a community, including supermarkets, grocery stores, convenience stores, corner stores, and specialty food stores (e.g. fruit and vegetable markets). To increase fruit and vegetable consumption of community members, it is important to improve access to these venues, and to increase the availability of high quality, affordable fruits and vegetables sold at these locations. These goals may be achieved in a variety of ways, including: 1) attracting new food stores to underserved areas through financial incentives; 2) improving public transportation to these venues or influencing business owners to provide transportation for customers; 3) upgrading the facilities at existing stores to enable them to carry all forms of fruits and vegetables; and 4) increasing the supply of and shelf space dedicated to high quality, affordable fruits and vegetables at existing stores.

Rationale:

Neighborhood residents with better access to supermarkets and other retail stores that provide healthful foods tend to have healthier diets, including higher intakes of fruits and vegetables¹⁸. The research further suggests that residents of rural, minority, and lower-income neighborhoods are more likely to have poor access to supermarkets¹⁸. While supermarkets generally offer a wider variety of foods at affordable prices, some have limited shelf space devoted to fresh fruits and vegetables, limiting food choices of residents. Moreover, in some neighborhoods, supermarkets and other retail outlets selling fruits and vegetables do not exist¹⁹ and residents may be unable to travel to areas where they are present due to a lack of reliable transportation^{20 21}. In rural, minority, lower-income neighborhoods, convenience stores and other small grocery or “corner” stores may be more prevalent than supermarkets^{22 23}. Because these stores generally stock little or no produce due to limited space or equipment and may charge more for

what is sold ²⁴, residents of these neighborhoods may have limited access to fruits and vegetables.

Improvements in access and availability are necessary steps in creating an environment conducive to adequate fruit and vegetable consumption. Policy and infrastructural supports to make improvements in the foods sold at these stores provide an opportunity to increase access to and availability of fruits and vegetables. Access to fruits and vegetables at food retail stores can be improved by building and attracting new supermarkets or other retail outlets in underserved areas; improving transportation to stores that provide fruits and vegetables; and increasing the availability of affordable fruits and vegetables at existing stores by improving the supply and upgrading facilities to carry an improved supply.

Evidence of Effectiveness:

Policy initiatives aimed at introducing supermarkets to underserved areas have been shown to improve food access and availability in communities. For example, the Pennsylvania Fresh Food Financing Initiative (FFFI), a public-private partnership created in 2004 by the state, helps create new supermarkets and helps existing ones to refurbish and replace old equipment ²⁵. Eligible stores must be located in low- to moderate-income areas that are currently underserved and must provide a full selection of fresh foods. In four years, FFFI has funded over 60 projects across Pennsylvania, including major national chains and smaller independently operated stores. The projects have resulted in the creation or retention of approximately 3,500 jobs and 1.4 million square feet of food retail space. A case study of The Reinvestment Fund, one of the partners in the FFFI, found that adding a supermarket to an underserved area resulted in improved availability of a variety of healthy foods in the community ²⁶.

The Leeds retail-intervention in England consisted of provision of a major food supermarket to an area considered a “food desert” because access to healthy affordable food was poor. Evaluation of the Leeds intervention showed no overall impact on fruit and vegetable consumption among community members ²⁷. However, when use of the new food-retail store was considered, survey respondents who reported switching to the new store were found to have increased their consumption of fruits and vegetables, while those who did not switch to the new store showed no change in consumption. No similar published evaluations were found on food retail provision interventions in the United States to assess impact on fruit and vegetable consumption of community members.

Unpublished evaluations of interventions to improve food retail have shown promising results. Evaluation of an intervention to improve fruit and vegetable offerings and promote healthy foods at small ethnic stores (tiendas and bodegas) found that customers shopping at the intervention stores increased their consumption of fruits and vegetables compared to those shopping at the non-intervention stores ²⁸. A New York City initiative to address issues of quantity, quality, display, and distribution at bodegas showed improvements in quality, quantity, and sales of fresh fruits and vegetables ²⁹. Evaluation of the Apache Healthy Stores Program, a multi-component intervention that

included stocking healthier food items, found an increase in the purchase of healthy food, including fruits and vegetables, by households located near the program stores ³⁰.

No research was found evaluating the effect of improvements in transportation to retail food outlets on fruit and vegetable consumption. However studies have shown an association between access and proximity to food outlets and diet. Rose and Richards found that Food Stamp Program participants who lived closer or had better access to supermarkets consumed more fruits ³¹. A separate study found that greater availability of fresh vegetables within 100 meters of residence was associated with higher vegetable intake ³² and a third study found that proximity to food outlets influenced diet quality of pregnant women ³³.

Key Considerations:

- The food environment can be assessed using community food assessment instruments to determine adequacy of healthy food accessibility, availability, and affordability. Such instruments include: USDA's Community Food Assessment Toolkit (<http://www.ers.usda.gov/publications/efan02013/>); the Michigan Department of Community Health's Nutrition Environment Assessment Tool (<http://mihealthtools.org/neat/>); and Emory University's Nutrition Environment Measures Survey (<http://www.sph.emory.edu/NEMS/>). If assessment shows that food stores lack fruits and vegetables, consider policies, programs, and initiatives that encourage and work with retailers and local farmers to provide affordable produce can be used to make improvements. If assessment reveals a lack of food stores, consider community efforts to encourage investment in food stores that provide affordable healthy foods (see Potential Action Steps below).
- In addition to permanent food retail stores, venues such as produce vans, mobile carts, and farmers markets should also be considered for low resource neighborhoods.
- Communities may also work to recruit more retail food stores to locations that are centrally located or easily accessible by public transportation ²⁷. Additional options include working with transportation officials to plan public transit routes to food retail stores and working with developers to include healthy food retail stores in community plans.
- Successful efforts to bring supermarkets to underserved areas have had significant community and business involvement as well as support from political leaders. Thus, it is important to convene and obtain support from multiple stakeholders in the process. Such stakeholders could include: local and state departments of health; local and state governments; advocacy groups; trade associations; community based businesses, organizations and associations; grocery retailers; and local universities.
- Possible sources for funding the establishment or renovation of food stores include local Community Development Financial Institutions (information available at

<http://www.cdfi.org/> and <http://www.cdfifund.gov/>), state or local grants, and private investments.

- Zoning codes may present a barrier to bringing new food stores to a neighborhood. Understanding what barriers exist and working with partners to overcome these barriers will help in the process of moving forward to improve the food retail situation.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive experiences, builds brand equity. Many state health departments are licensed to use the Fruits & Veggies — More Matters® brand and can create their own items. Additionally, those who are licensed, as well as those who are not, can use relevant pre-created materials found at www.fruitsandveggiesmatter.gov or www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include posters, recipe cards, static clings for freezer doors, reusable grocery bags, or shopping list note pads.

Potential Action Steps:

1. Provide training to small store owners in your area on how to select, store, and maintain fruits and vegetables. This training could also include information about equipment needs for stores to stock these perishable items.
2. Sponsor a summit with urban and transportation planners and local officials to discuss and plan for transportation routes that offer better access to healthier food.
3. Assist small store owners to equip their locations to accept Supplemental Nutrition Assistance Program (SNAP) and Special Supplemental Nutrition Program for Women, Infants and Children (WIC) coupons.
4. Work with a local or regional Food Policy Council on a Fresh Food Financing Initiative for your area. These initiatives can provide grants, low-interest loans, and training and technical assistance to improve or establish stores in underserved areas. See The Food Trust's *Fresh Food Financing Initiative* website for more information: <http://www.thefoodtrust.org/php/programs/ffi.php>
5. Support and promote legislation and state policies that offer retailers incentives like a streamlined development process, tax exemptions and credits, and assistance in land acquisition. Include incentives to locate in underserved areas. These incentives can be balanced by requirements to devote a certain amount of shelf space to healthy foods.
6. Assist currently operating retail stores in providing transportation options for their customers.

7. Consider healthy food retail when making general community plans and land use decisions.

Program Examples:

The Pennsylvania Fresh Food Financing Initiative (FFFI) is an innovative state program that aims to increase the number of supermarkets or retailers that sell healthy foods in underserved communities across Pennsylvania by supporting infrastructure costs and credit needs that are not supported by traditional financial institution. FFFI is managed by The Food Trust, in partnership with The Reinvestment Fund and the Greater Philadelphia Urban Affairs.

To create the program, Pennsylvania provided \$30 million in seed money over three years, and The Reinvestment Fund leveraged this investment to create a \$120 million fund. Since the program began, FFFI has committed \$63.3 million in funding for 68 supermarket projects in underserved rural and urban areas, which has resulted in the creation or retention of 3,700 jobs in those communities.

The Food Trust website provides a detailed explanation of the program, as well as information about similar work they are doing across the country, including New York, Louisiana, and Illinois. The site also provides a comprehensive list of reports and resources, including “Stimulating Supermarket Development: A New Day for Philadelphia,” which gives recommendations for how cities can encourage supermarket development in neighborhoods in order to ensure access to affordable nutritious food. FFFI description: <http://www.thefoodtrust.org/php/programs/ffi.php>
Specific report: http://www.thefoodtrust.org/pdf/SupermktReport_F.pdf
Resources page: <http://www.thefoodtrust.org/catalog/resource.list.php>

The Healthy Corner Store Initiative, a project of the Food Trust of Philadelphia, aims to improve the food environment in low-income Philadelphia communities through an integrated approach of assistance to corner store owners, social marketing, nutrition education, and research. During a pilot program in the Fall of 2008, The Food Trust assisted 11 corner store owners with storing, displaying, and marketing fruit, with the intent of making fruit more financially viable. This effort has been replicated in 40 stores throughout North Philadelphia. Snackin’ Fresh is a youth-led advocacy and social marketing campaign to increase availability of and demand for healthy foods in corner stores. Youth participating in the campaign have been involved in creating a film that documents their perspectives about food choices in corner stores, advocating for healthy foods in corner stores and planning a city-wide Snackin’ Fresh Summit. To reinforce the other components of the initiative, The Food Trust works in local schools to educate students, teachers, staff, and parents about the importance of youth having healthy food options in their schools’ neighborhoods. They promote The Snackin’ Fresh campaign through school-wide taste tests and events.
<http://www.thefoodtrust.org/php/programs/corner.store.campaign.php>

The Good Neighbor program of Literacy for Environmental Justice, in San Francisco, CA, provides local merchants with concrete economic incentives to engage in health promoting practices. As a Good Neighbor participant, corner store owners agree to increase their stock of fresh fruits and vegetables and diminish advertising for alcohol and tobacco. Good Neighbor incentives for store owners include free advertising, business training, in-store healthy cooking demonstrations, and Good Neighbor branding. The campaign is substantially youth-led, and was adopted in 2007 as a state-wide model program in California, as a component of the Healthy Food Purchase Program. The youth provide community education on the Good Neighbor program and the importance of healthy eating. Through the website, the “Good Neighbor Best Practices Guide” can be ordered to assist in replicating the Good Neighbor program in other communities.

<http://www.lejyouth.org/programs/food.html>

Resources:

The Environmental Nutrition and Activity Community Tool (ENACT), developed by the Strategic Alliance for Healthy Food and Activity Environments, cites improving transportation options to food retailers (“Transportation” page) and creating walkable communities around high quality mass transit systems (“Transit Oriented Development” page) as key strategies for improving the nutrition and activity environment. Each strategy provides comprehensive information, including model programs and policies, hands-on tools, organizations and coalitions active in the field, and the evidence base for the strategy. Some highlights from the Transportation page include: “Homeward Bound: Food-Related Transportation Strategies in Low-Income and Transit Dependent Communities”; “Transportation and Food: the Importance of Access”; and “Supermarket Shuttle Program: A Feasibility Study for Supermarkets Located in Low-Income, Transit-Dependent, Urban Neighborhoods in California.”

Transportation:

<http://www.preventioninstitute.org/sa/enact/neighborhood/transportation.php>

Transit Oriented Development:

http://www.preventioninstitute.org/sa/enact/neighborhood/car_dependence.php

ENACT also cites the following strategies and important ways of improving the nutrition environment: attracting grocery stores to underserved communities (“Attract Grocery Stores” page); providing training and incentives to help storeowners stock healthier food items (“Incentives for Store Owners” page); encouraging stores to policies that promote healthy products and restrict unhealthy marketing (“Store Displays” page). Each strategy provides comprehensive information, including model programs and policies, hands-on tools, organizations and coalitions active in the field, and the evidence base for the strategy.

Attract Grocery Stores:

http://www.preventioninstitute.org/sa/enact/neighborhood/supermarkets_underserved.php

Incentives for Store Owners:

<http://www.preventioninstitute.org/sa/enact/neighborhood/shopkeepers.php>

Store Displays:

http://www.preventioninstitute.org/sa/enact/neighborhood/store_displays.php

Healthy Food Retailing is a tool developed by Policy Link for improving access to healthy food in underserved communities through three strategies: developing new grocery stores, improving the selection and quality of food in existing smaller stores, and starting and sustaining farmers' markets.

http://www.policylink.org/site/c.lkIXLbMNJrE/b.5137405/k.6042/Healthy_Food_Retailing.htm

Community Design for Healthy Eating: How Land Use and Transportation Solutions Can Help is a report by the Robert Wood Johnson Foundation that discusses the affect of the built environment on food access. The report makes recommendations about how public health interests can engage and collaborate with city planners to address the issues of land use, transportation, and regional forces to improve healthy food access.

<http://www.rwjf.org/files/publications/other/communitydesignhealthyeating.pdf>

Community Food Assessment Toolkit was published by the USDA and provides a series of standardized measurement tools for assessing food security within a community.

<http://www.ers.usda.gov/publications/efan02013/>

Strategy 3:
***Include or Expand Farm-to-Where-You-Are
Programs in All Possible Venues***

Farm-to-where-you-are programs promote the delivery of regionally grown farm produce to community institutions, farmers markets, and individuals. Institutions, such as schools, hospitals, worksites, and other community organizations, sell and distribute the fresh produce at cafeterias and other onsite dining and meeting facilities. Farm produce is also sold to the public at community farmers markets and packaged for direct delivery to individuals and households through Community Supported Agriculture (CSA) programs.

a. Farm-to-Institution

Definition:

Farm-to-institution programs and policies allow regional farms to sell fruits and vegetables directly to community institutions such as schools, including universities; hospitals; faith-based communities; and government and non-government worksites to facilitate convenient and regular access to fresh produce. Program structure primarily consists of institutional purchasing of locally and regionally grown fruits and vegetables

for use in cafeterias, restaurants, meetings and conferences, catering services, and special events. Programs and policies may incorporate education about fruits and vegetables, food preparation, or agriculture. Farm-to-school programs also may include activities that provide students with hands-on learning opportunities, such as food preparation and cooking classes, school gardening and composting, and farm visits (see strategy 6 on school curricula).

Rationale:

Farm-to-institution programs allow for people studying, recovering, visiting, or working in public and private institutions to have regular and convenient access to affordable, high quality, and regionally grown fruits and vegetables. By increasing the demand for fresh produce at institutions, these programs may encourage local and regional farmers to produce a variety of fruits and vegetables. In farm-to-school programs, farmers may visit the school, or field trips can be arranged to the farm. Participants in other farm-to-institution program share similar experiences. This direct, stimulating connection with the food and grower enhances the perception of the food and the willingness of the participant to eat the local and regional fruits and vegetables³⁴. Farm-to-institution programs are often only able to supply a portion of the produce needs of a given institution. Therefore, they are considered to be a complement to existing food service programs.

Evidence of Effectiveness:

Although farm-to-institution programs increase access to fruits and vegetables, there is limited evaluation research documenting the direct relationship of these strategies to fruit and vegetable consumption of customers. However, a review of mainly non-peer reviewed farm-to-school program evaluations that assessed student dietary behavior found that nearly all programs (10 of 11) reported increased purchase or intake of fruits and vegetables by students following the incorporation of farm produce into school salad bars, meal selections, or class-based education, which was often implemented in combination with nutrition education curricula^{35 34}. In addition, of the five programs that also examined student dietary behavior outside of school, four found increases in the selection or intake of fruits and vegetables by the children³⁵.

Farm-to-Institution Key Considerations:

- Locally purchased products can be incorporated into many different venues at different institutions including cafeterias, salad bars, onsite restaurants, stores or markets, catering services, conferences, and at special events.
- Program success is aided by policy commitments, including contracts with language that support local and organic purchasing, identification of personnel to coordinate the farm-to-institution project, and federal and state policies that provide incentives to institutions to purchase locally grown agricultural products.

- Collaboration with farmer cooperatives may reduce program cost because the cooperatives may have simplified delivery systems, increased product volume, unified insurance ³⁶, and may have reduced other barriers on the farm side of the equation. Centralized locations for food storage and preparation can reduce barriers on the institutions' end ³⁷.
- Food service operations are often pressured to produce standardized meals at low cost which can be difficult for local farmers to achieve since they have to deal with seasonality, crop yields, and taste differences. Farm-to-institution programs should involve interested stakeholders such as wellness coordinators, school boards, food service directors and chefs, farmers' cooperatives and food distributors and processors.
- Small businesses that do not provide any food service to employees will require a different level of program, but should not be ignored as potential sites for farm-to programs. For example, a farm-to-institution program can be set up for multiple small businesses in a shared office complex where food service is provided by a separate entity.
- In certain settings, such as schools, food service staff may require training on how to prepare and cook fresh whole foods, menus may need to be adjusted, and vendors may need to form new partners and sourcing practices. Farmers that supply produce can be asked to deliver food in a usable form, e.g., washed and cut-up, and ready to serve.

An overall plan for a farm-to-school program should address the practical changes required to reduce reliance on commercially processed and prepared foods and equip schools with the necessary resources to prepare meals from scratch using fresh whole foods.

- Food preparation facilities may need investments in proper equipment or renovations in order to have capacity for preparing or storing fresh foods.
- Farm-to-worksite programs should consider linking their activities to other worksite wellness activities such as health or weight control classes, health marketing activities, conferences, parties, and other events where food is served.
- Farm-to-school programs should consider linking their activities to other school nutrition activities such as school gardens, cooking demonstrations, and nutrition education in the classroom.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive experiences, builds brand equity. Many state health departments are licensed to use the Fruits & Veggies — More Matters[®] brand and can create their own items. Additionally, those who are licensed, as well as those who are not, can use relevant pre-created materials found at www.fruitsandveggiesmatter.gov or

www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include posters, recipes using items obtained from the farm, aprons or tee-shirts for food service staff, or nutrition education materials to have available in the cafeteria.

Farm-to-Institution Potential Action Steps:

1. Start a farm-to-institution program at your own location. This process will give you insight into the many issues that may arise in the process and prepare you to address those issues when promoting farm-to-worksites programs elsewhere.
2. Establish links between farmers and community institutions, vendors, and distributors. Farmers may need to know that there will be a market for the variety of fruits and vegetables that they will grow before they switch from growing commodity crops. Institutions need to know what produce will be available over the year in order to plan menu items. Also, many food service businesses have only worked with major multinational food suppliers or distributors and may not know how to source food through different mechanisms.
3. Collaborate with organizations such as Future Farmers of America to support the growth of fruit and vegetable farming as a profession.
4. Promote policies that support farm-to-institution programs. For example, support state and local policies that provide incentives for the purchase of locally grown agricultural products or the creation of institutional food sourcing guidelines. Share those guidelines with institutions.
5. Sponsor an informational networking summit for community institutions interested in a farm-to program. This summit could address general issues as well as more specific issues relevant to institutions such as schools, hospitals, government facilities.
6. To promote farm-to-school activities in your state: 1) create an interagency working group with other state agencies including the Departments of Education and Agriculture. These agencies can bring additional resources and expertise to that of the Department of Health; 2) develop and disseminate training on starting a farm-to-school program that includes information on food safety, availability of farm products during different seasons, menu ideas, staffing, storage and preparation needs; and 3) promote purchase from local farmers as part of the “Free Fruit and Vegetable Snack Program.”

Farm-to-Institution Program Examples:

Yale Sustainable Food Project and the Yale University Dining Services have collaborated to change the culture of food at Yale. Local produce is purchased among other foods from regional farmers and growers. Also, one of the colleges at Yale has its own garden. One dinner per week is produced entirely from sustainably-grown, local

foods, and sustainable entrée and side dish are offered as options at every lunch and dinner. The Yale Sustainable Food Project has developed purchasing guidelines, seasonal menus, courses, and other resources which are available at this site. An educational component has been added to the undergraduate curriculum.
<http://www.yale.edu/sustainablefood/food.html>

Farm-to School Program Examples:

The Oklahoma Farm to School Program was created by 2006 state legislation titled the “Oklahoma Farm to School Program Act”. The legislation was supported by the efforts of a state-level Food Policy Council, which was initiated by the Kerr Center for Sustainable Agriculture. The legislation funds a full time farm-to-school program coordinator in the OK Department of Agriculture who creates, fosters, and manages farm and school connections throughout the state. Some farm to school activities implemented at schools throughout the state include: serving locally grown produce in school cafeterias; school gardens; farm and farmers market visits; nutritional & educational curriculum; cooking & tasting demonstrations; and workshops for growers, food service personnel and teachers.

The website provides a list of schools that are participating in the OK Farm to School program.

<http://www.okfarmtoschool.com/index.htm>

The Kindergarten Initiative in Pennsylvania works with kindergarten students in the classroom, integrating nutrition concepts into the regular school curriculum as well as providing healthy fruit and vegetable snacks grown by local farmers. **The Kindergarten Initiative toolkit** outlines the story of how The Food Trust created a program that promotes healthy eating through education, snacks from local farms, parent involvement, and community support. It also demonstrates options for implementing a similar program by tailoring the Kindergarten Initiative to suit particular needs.

<http://www.thefoodtrust.org/php/programs/kindergarten.initiative.php>

Farm-to-Institution Resources:

Healthy and Sustainable Food Policy for Food Served at SFDPH Events, Programs, and Institution is an example of a healthy, local food policy developed by the San Francisco, CA Department of Public Health.

<http://www.noharm.org/details.cfm?ID=1609&type=document>

Healthy Food, Healthy Hospitals, Healthy Communities: Stories of Health Care Leaders Bringing Fresher, Healthier Food to their Patients, Staff, and Communities is a compilation of eight case studies by the Institute for Agriculture and Trade Policy's Food and Health Program. It documents stories of health care leaders bringing fresher, healthier food choices to their patients, staff, and communities. The case studies highlight approaches to improving food purchasing guidelines and vending machine regulations and implementing farmers markets and farm stands.

<http://www.healthobservatory.org/library.cfm?refid=72927>

Farm to College is a service provided by the Community Food Security Coalition, offering a variety of resources on farm to college programs, funding, and a comprehensive resource list.

<http://www.farmtocollege.org/>

Farm-to-Cafeteria Connections: Marketing Opportunities for Small Farms in Washington State is a guide for farmers, foodservice, and organizations to develop farm-to-school and farm-to-institution programs.

<http://agr.wa.gov/Marketing/SmallFarm/docs/102-FarmToCafeteriaConnections-Web.pdf>

Bringing Local Food to Local Institutions is a resource guide for farm-to-school and farm-to-institution programs produced by the National Sustainable Agriculture Information Service. It provides detailed information about how to initiate and manage these programs. The guide also provides program descriptions, contact information, and sources of funding and technical assistance.

<http://attra.ncat.org/attra-pub/PDF/farmtoschool.pdf>

Bring Fresh Produce to Your Setting is a guide produced by “Eat Smart, Move More – North Carolina” providing practical information on developing a partnership with a local farmer/produce vendor to bring and sell fresh fruits and vegetables in a variety of settings.

<http://www.eatsmartmovemorenc.com/FreshProduce/FreshProduce.html>

A Guide to Serving Local Food on your Menu was produced by the Glynwood Center and provides a how-to approach for institutions and retail establishments, such as restaurants, on how to integrate fresh, local food into the food service setting. The guide would be a useful resource for foodservice managers and directors, caterers, chefs, restaurateurs and others.

<http://glynwood.org/assets/PDF's/ReportsandGuides/GuideLocalMenu.pdf>

Farm-to-Worksite Resources:

Network for a Healthy California – Ordering Farm Fresh Produce for Worksites is a guide which encourages employers and offers step-by-step instructions on how worksites can order boxes of fresh fruits and vegetables from local farmers to provide as healthy snacks for their employees.

http://www.takeactionca.com/docs/fit-business-kit-tools/BRO-173_FEB_2008FINAL.pdf

Growers' Collaborative is a program organized by Community Alliance with Family Farmers (CAFF). The collaborative organizes small, family farms into a single marketing unit. This lightens the marketing and distribution burden from farmers and provides a more unified delivery option for purchasers, such as public and private grade schools, colleges, hospitals, and corporate cafeterias.

<http://www.caff.org/programs/growerscollaborative.shtml>

Farm-to-School Resources:

Farm to School: Case Studies and Resources for Success from the National Farm to School Program provides 14 case studies of successful Farm to School programs, including New Jersey Farm to School Project, Central Iowa Farm to School Success Stories, and the Yolo County Farm to School Project Evaluation.

<http://www.foodroutes.org/doclib/243/FarmtoSchoolSuccess.pdf>

National Farm to School is an organization which provides how-to guides, information about funding opportunities, policies and legislation, and collaborating organizations. Case studies with feasibility analyses from programs across the country are offered. Statistics on farm-to-school programs, profiles of these programs, and contact information are regularly updated.

<http://www.farmtoschool.org/>

The Environmental Nutrition and Activity Community Tool (ENACT), developed by the Strategic Alliance for Healthy Food and Activity Environments, cites farm-to-school programs that incorporate fresh, local produce into school meals and education students about local agriculture (“Farm to School” page) as a key strategy for improving the nutrition and activity environment at schools. The website provides comprehensive information, including model programs and policies, hands-on tools, organizations and coalitions active in the field, and the evidence base for the strategy. Some highlights include: the “Berkeley Unified School District Food Policy” that requires food served by the district to be nutritious, locally grown, and when possible, organic; and the “Farm to School Procurement Information Package” developed by the Community Food Security Coalition.

http://www.preventioninstitute.org/sa/enact/school/farm_to_school_6b.php

The Community Food Security Coalition provides tips, tools, technical assistance, funding opportunities, publications, and farm-to-school program examples.

http://www.foodsecurity.org/farm_to_school.html

The Checklist for Purchasing Local Produce from Iowa State University Extension discusses local food purchasing from a food safety perspective.

<http://www.extension.iastate.edu/NR/rdonlyres/BOD64A49-9FA9-410E-849A-31865EFECE91/65301/AChecklistforPurchasingLocalProduce.pdf>

USDA’s Farm to School and School Gardens Resource Library provides a clearinghouse of tools, program examples, and resources for implementing farm-to-school programs. Also referenced on this site is “*Eat Smart—Farm Fresh! A Guide to Buying and Serving Locally-Grown Produce in School Meals*” and “*Small Farms/School Meal Initiative*.”

http://healthymeals.nal.usda.gov/nal_display/index.php?info_center=14&tax_level=2&tax_subject=526&level3_id=0&level4_id=0&level5_id=0&topic_id=2314&&placement_default=0#Farm%20to%20School

Farm-to-Healthcare Resources:

The Center for Food Justice, of Occidental College offers an array of resources to be used in promoting farm to healthcare program. The resources include power point presentations and reports on farm to healthcare programs.

<http://departments.oxy.edu/uepi/cfj/f2h.htm>

Menu of Change: Healthy Food in Healthcare is a report and guide produced by Healthcare Without Harm. The report resulted from a 2008 survey of healthy food in Health Care Pledge Hospitals. The document is a framework that outlines steps to be taken by the health care industry to improve the health of patients, communities and the environment, by providing fresh, local, and sustainable food. Examples of farmers markets and Community Supported Agriculture are provided.

<http://www.noharm.org/details.cfm?type=document&ID=1942>

Farmers' Markets and CSAs on Hospital Grounds is a report and guide developed by the organization, Healthcare Without Harm. The report describes the benefits and challenges of hospital farmers markets, and provides tips for getting started, based off of case study examples.

<http://www.noharm.org/details.cfm?ID=1134&type=document>

Buy Fresh, Buy Local is a narrative written by an Iowa dietary manager. This is a compelling, simply told story of her experiences in developing a program to provide more local, fresh fruits and vegetables to her long-term care clients. The article addresses common obstacles, economic, ethical, energy and food safety concerns.

<http://www.noharm.org/details.cfm?ID=1400&type=document>

b. Farmers Markets

Definition:

A farmers market is a recurring gathering of farmers selling their food products, including fruits and vegetables, directly to consumers. Farmers markets can be held on public or private land and in temporary or permanent structures. Farmers markets may be set up in community locations, health clinics, places of worship, schools, and worksites. Farmers markets generally supply produce for purchase by community members, but may also supply produce to local restaurant owners. Food and nutrition assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Farmers Market Nutrition Program (FMNP), and the Senior Farmers Market Nutrition Programs (SFMNP) may also offer nutrition education on storage and use of fruits and vegetables.

Rationale:

Between 1994 and 2008, the number of farmers markets in the United States increased from 1,755 to 4,685³⁸, suggesting increased interest in this method of food marketing. Farmers markets are relatively easy to implement because they are less costly than supermarkets and can be set up in a variety of locations³⁹. Farmers markets provide a direct connection with consumers and the farmer or person that has grown their food. An important benefit of farmers markets is that they support regional fruit and vegetable production while providing consumers with access to fresh produce at an affordable cost. Residents of low-income neighborhoods, where supermarkets are scarce and the small grocery and convenience stores that do exist sell limited fresh produce²², may benefit most from the access to fruits and vegetables provided through farmers markets. Increased access through farmers markets may be associated with increased consumption of fruits and vegetables⁴⁰. Food and nutrition assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Farmers Market Nutrition Program (FMNP), and the Senior Farmers Market Nutrition Programs (SFMNP) have begun to extend benefits to include farmers market purchases for fruits and vegetables through the use of electronic benefit transfers (EBT) or the direct provision of farmers market coupons⁴¹⁻⁴³. The coupons further address the barriers of cost and availability of fresh fruits and vegetables for low income families.

Evidence of Effectiveness:

Although farmers markets are a method to increase access to high quality produce, sparse work has been done to document the direct relationship of farmers markets to increased fruit and vegetable consumption of customers. Kaiser Permanente surveyed patrons at their worksites' farmers markets. Nearly 3 of 4 shoppers reported that they consumed at least a little more fruits and vegetables because of the market, and more than half reported consuming an increased variety of fruits and vegetables⁴⁰. Two studies have evaluated the effects of the WIC FMNP coupon distribution on fruit and vegetable consumption of participants^{44, 45}. In one study, women who received the coupons increased their fruit and vegetable consumption compared to controls⁴⁴. The other study evaluated the distribution of farmers market and supermarket coupons to WIC participants and found that receipt of either coupon increased overall fruit and vegetables intake, and that the increase was sustained 6 months after the end of the intervention⁴⁵. The increase was primarily in vegetable consumption⁴⁵. A mail survey of women participating in WIC found that those who had participated in the FMNP reported a higher daily intake of vegetables, but not fruits, than other WIC participants⁴⁶.

Key Considerations:

- It is important to find a farmers market location that is centrally located, visible to the community, and easily accessible for both farmers and residents.
- There are many issues to address when setting up a farmers market. These may include local policies, zoning and land use regulations, health department regulations, insurance needs and costs, and food safety guidelines.

- A successful market requires a dependable, knowledgeable manager and policies and procedures to help it to run smoothly.
- There are also many consumer needs to consider when setting up a market. Education for the use and storage of fresh produce may be needed for populations that have previously lacked access to these items. It is also important to advertise the existence of the market.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive experiences, builds brand equity. Many state health departments are licensed to use the Fruits & Veggies — More Matters® brand and can create their own items. Additionally, those who are licensed, as well as those who are not, can use relevant pre-created materials found at www.fruitsandveggiesmatter.gov or www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include large weather resistant posters to display at the market, recipes using items available at the market, or aprons, hats, or drinking cups for farmers or others selling produce.

Potential Action Steps:

1. Collaborate with the Department of Transportation, urban planners, and the Department of Agriculture to promote legislation and policies in your state that support farmers markets. Legislation or policies may address zoning, insurance, food safety and other issues to support the ability of small farmers to produce food for farmers markets.
2. Assist existing or newly formed farmers markets, especially those serving low-income populations, in efforts to accept WIC and SNAP benefits. This includes creating a system to accept EBT at these locations.
3. Establish a local Food Policy Council to begin to plan farmers markets for your area, or partner with other groups interested in implementing farmers markets. Work with various stakeholders, including business, local government, institutions, and community members, to ensure support for and success of the market.
4. Incorporate Fruits & Veggies-More Matters promotional and educational materials into new and existing farmers markets in your area. Use the brand to advertise markets in your local area.
5. Highlighting a farmers market at a healthcare facility can be a great opportunity for patients to practice what they have just learned in individual or group counseling in the healthcare facility. Patients are being told to consume more fruits and vegetables and then walk into a parking lot where fruits and vegetables are being sold.

Program Examples:

The Food Trust is a non-profit organization, located in Philadelphia, PA. Developing farmers markets within the Philadelphia area is one of their primary initiatives. By their last report, they had established 30 farmers markets in the area, all sourcing produce from local farmers and growers. The farmers markets offer nutrition education and US Department of Agriculture (USDA) Farmers Market Nutrition Program (FMNP) fruit and vegetable vouchers. Families of low income may exchange SNAP (Supplemental Nutrition Assistance Program) benefits in the form of EBT (Electronic Benefit Transfer) or USDA vouchers for fresh produce at the market. **The Farmers' Market Alliance** in Pennsylvania is hosted by The Food Trust and Greensgrow to provide political and economic support for the growth of farmers markets throughout the state. The Alliance successfully advocated for the "Farmers Market Development Act", which provides grants to develop or expand Pennsylvania farmers markets. The Alliance is a growing coalition of Pennsylvania organizations across the food and farm system, including farmers marketing advocates, city and state officials, rural and urban farmers, school nutrition program specialists, smart growth advocates, food industry representatives and more.

<http://www.thefoodtrust.org/php/programs/farmers.market.alliance.php>

Health Bucks is a program developed by the New York City Department of Public Health as an incentive for populations of low income to buy more fresh fruits and vegetables at local farmers markets. Each Health Buck is a coupon valued at \$2.00, which can be exchanged for fruits and vegetables at participating markets. One health buck is given to each customer for every \$5.00 in food stamps spent at the Farmers Market. Over 40% of the 9,000 coupons initially distributed in 1996 were redeemed for fruits and vegetables. The Health Bucks initiative has been expanded in subsequent years, including distribution sites at local schools.

http://www.nyc.gov/html/doh/html/cdp/cdp_pan_health_bucks.shtml

Kaiser Permanente Farmers Markets Kaiser Permanente has set up on site farmers markets at their regional hospitals and community health centers across five states. This program was designed to increase patient and community members' access to fruits and vegetables. Surveys of patrons at their farmers markets have shown that the majority of customers have increased their fruit and vegetable intake and variety as a result of the farmers market. The website offers a free "Farmers Market Resource Guide" which discusses ways in which a farmers market can be established in healthcare settings, including permit and liability concerns. The website also features a video, "Fresh Farm Food" that describes their weekly farmers market in Los Angeles' Watts neighborhood. "The Healthy Case Study" is a case study about a program delivering locally grown, organic fruits and vegetables to administrative offices in downtown Oakland. The study provides a brief implementation guide and sample promotional and evaluation materials.

http://info.kp.org/communitybenefit/html/our_work/global/our_work_3_d.html

Resources:

Model General Plan Language to Protect and Expand Farmers Markets

(2009) is a guide, with model language, for creating legislation designed to preserve land designated for use by farmers' markets. The guide was developed by Planning for Healthy Places, a project of Public Health Law & Policy, intended for use in California. However, the language used is easily transferable to a variety of different communities and settings. Suggested policies and actions are also provided.

<http://www.healthyplanning.org/modelpolicies.html>

ATTRA Marketing and Business Guide for Farmers Markets is produced by the National Sustainable Agriculture Information Service and serves as a resource for those who want to start a farmers market or sell at one.

<http://attra.ncat.org/attra-pub/PDF/farmmarket.pdf>

Farmers Markets' Rules Regulations and Opportunities is a publication of the National AgLaw Center of the University of Arkansas School of Law. This publication discusses rules, regulations, and opportunities for farmers markets.

<http://www.law.drake.edu/centers/docs/farmersMarkets.pdf>

The Environmental Nutrition and Activity Community Tool (ENACT),

developed by the Strategic Alliance for Healthy Food and Activity Environments, cites establishing accessible Farmers' Markets or farm stand ("Farmers' Markets" page) as a key strategy for improving the nutrition and activity environment. The site provides comprehensive information, including model programs, hands-on tools, and organizations and coalitions active in the field.

<http://www.preventioninstitute.org/sa/enact/healthcare/farmersmarkets.php>

Establishing Land Use Protections for Farmers Markets (2009) is a guide, with model language, for creating legislation designed to preserve land designate for use by farmers markets. The guide was developed by Planning for Healthy Places, a project of Public Health Law & Policy. The language used is easily transferable to a variety of different communities and settings. Legislation and program examples are also provided.

<http://www.healthyplanning.org/modelpolicies.html>

Hot Peppers & Parking Lot Peaches: Evaluating Farmers' Markets In Low Income Communities is a case study report and guide produced by the Community Food Security Coalition (1999). The report addresses WIC farmers market nutrition programs, case studies, Electronic Benefit Transfer, farmstands, policy issues, guidelines for successful markets and policy recommendations.

<http://www.foodsecurity.org/HotPeppersPeaches.pdf>

Homegrown: South Carolina's Guide to Starting or Enhancing Your Community's Farmers Market

was created by Eat Smart Move More South Carolina. It is a step by step guide to creating, managing, and funding a local farmers market. It provides sample legal and promotional materials.

<http://eatsmartmovemore.org/pdfs/farmers-market.pdf>

Starting and Sustaining Farmers Markets is a guide produced by Policy Link, which highlights innovative policies and policy opportunities, addressing entrepreneurial, educational, and organizational aspects of farmers markets.
<http://www.policylink.org/site/c.lkIXLbMNJrE/b.5137443/apps/s/content.asp?ct=6966231>

USDA Wholesale and Farmers Markets is a guide produced by the Agricultural Marketing Service which includes promotion program information on private sector and federal farmers market programs/projects, funding sources, coalitions, statistics, and publications.
<http://www.ams.usda.gov/farmersmarkets/>

USDA WIC Farmers Market Nutrition Program is a thorough source of information on the WIC program, relative to farmers markets.
<http://www.fns.usda.gov/wic/fmnp/FMNPfaqs.htm>

Farmers Market Locator developed by Local Harvest, is a guide to finding a farmers market in your area.
<http://www.localharvest.org/>

c. Community Supported Agriculture (CSA)

Definition:

Community-supported agriculture (CSA) is a partnership between a farm and individuals in the community in which the individuals pay a membership fee to a farm in return for a share of the harvest, which usually includes weekly deliveries of high-quality seasonal fruits and vegetables. CSAs vary in the number of farms involved, membership fee structure and schedule, food delivery methods, and level of participation of members in the operation of the farm. Some CSAs are organized by worksites as wellness programs for their employees and others offer food preparation classes to members.

Rationale:

Between 1993 and 2007, the number of CSA programs in the United States increased from about 400 to over 12,500⁴⁷. While still a small number considering the size of the US population, this growth demonstrates increased interest in this method of fruit and vegetable distribution. CSAs support regional fruit and vegetable production and distribution to provide consumers with high quality fresh produce at an affordable cost, therefore encouraging farmers to produce these foods. Members of a CSA obtain access to fresh produce, which in some communities may be the only access individuals have within a reasonable distance. Increased access to fruits and vegetables may lead to increased consumption of fruits and vegetables.

Evidence of Effectiveness:

Currently there is limited evidence that participation in CSAs increases consumption of fruits and vegetables. Although there were not any published evaluations of CSA in the peer reviewed literature, a study presented by Cohen and colleagues ⁴⁸ revealed a higher consumption of dark green and yellow fruits and vegetables, fiber, and vitamin A among CSA members compared to non-members. Furthermore, while not a traditional CSA, the Seattle Senior Farmers Market Nutrition Program (SFMNP) delivers baskets of fresh local produce to homebound seniors. The seniors who received the fresh produce deliveries reported a greater increase in fruit and vegetable consumption than seniors not participating in the SFMNP ⁴⁹. In interviews, some of these participants reported that they would not have had access to fresh fruits and vegetables without the SFMNP, and that delivery of the produce baskets stimulated their interest in healthful eating and improved their quality of life ⁵⁰.

Key Considerations:

- Distribution of the produce from CSAs may occur at a variety of locations, including a central community or neighborhood site, worksites, schools, hospitals, or other institutions. Members may also pick up their produce share directly at the farm.
- Existing zoning regulations may pose barriers to the implementation of CSAs. Understanding the regulations that allow or disallow this activity and working to change them as needed is important.
- The economic situation of the population where a CSA program is being implemented is important to keep in mind. Although the traditional CSA model requires full payment for the season in advance, new models have been developed. These include payment plans; work shares, where an individual works on the farm in exchange for the CSA basket; and other assistance methods for low income persons ⁵¹.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive experiences, builds brand equity. Many state health departments are licensed to use the Fruits & Veggies — More Matters® brand and can create their own items. Additionally, those who are licensed, as well as those who are not, can use relevant pre-created materials found at www.fruitsandveggiesmatter.gov or www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include posters to display at the pick up site, recipes using items in the CSA box, or aprons, hats, or drinking cups for the staff distributing the boxes.

Potential Action Steps:

1. Establish links between existing CSA programs within your state and those regions of existing need and interest in purchasing from a CSA.

2. Examine existing zoning regulations relevant to CSA implementation and work with relevant groups to develop or modify as necessary.
3. Invite local CSA operators and farmers looking for distribution outlets to participate in state and local level food policy councils. By participating in regional food planning activities, these operators can become aware of community needs and opportunities to expand into areas currently lacking access to fresh fruits and vegetables. Connect producers to groups that desire a CSA program.
4. Make your worksite a pickup location for an existing CSA or work with a local farmer to create a new CSA at your worksite.

Program Examples:

City Fresh is a CSA model focused upon providing fresh fruits and vegetables to urban areas of lower income populations in Cleveland, Ohio. The program is a collaborative initiative between the Ohio State University Cooperative Extension and a not-for-profit organization, the New Agrarian Center. Pre-ordered bags of produce (shares) are paid for in more affordable weekly installments. Produce shares are offered at a substantially discounted price to consumers meeting WIC (Women, Infants, and Children) family income standards. Consumers may also pay for produce in the form of SNAP benefits (Supplemental Nutrition Assistance Program, formerly referred to as Food Stamps). In less than five years, City Fresh has expanded their reach from four community distribution sites to over twelve locations. A food distribution model visually explains the movement of fresh local produce from the farmers to urban centers, restaurants, and universities.

<http://www.cityfresh.org/>

Texas! Bringing Healthy Back is a Texas Department of State Health Services employee wellness program offering a CSA program for employees. Through the program, employees have the option of ordering a fresh basket of local produce, which can be delivered weekly to their worksite. Other worksites interested in learning more about Farm to Work can download the Farm to Work Toolkit (and also the Farm to Work Toolkit Supplement), which compiles all the tools, sample documents, and other resources that were developed to successfully implement Farm to Work at the Texas Department of State Health Services.

<http://www.dshs.state.tx.us/obesity/nutritionfarmtowork.shtm>

The Food Bank Farm of Western Massachusetts is supported by 800 CSA shareholders with 500 shares. It is historically significant as the first CSA in the country with the primary mission of helping to feed those in need. The Food Bank Farm is one of the largest CSA working models in the country and innovative in its approach to incorporating the model into emergency food systems.

<http://www.foodbankwma.org/farm/>

Eat Healthy Rebate Program was developed by the Physician's Plus Insurance Company of Madison, Wisconsin. The insurance company has partnered with Madison Area Community Supported Agriculture Coalition (MASAC) to subsidize the cost of purchasing local vegetables. The rebate offers up to \$100/individual per year or \$200/family per year for insurance members. The offer can only be used to purchase an order of vegetables from MASAC. It can not be used to purchase other locally available products, such as meat, dairy, and eggs.
<http://www.macsac.org/rebates.html>

Resources:

Eat Smart, Move More – North Carolina is a multi-component program with public health strategies intended to improve the nutrition and physical activity of North Carolina Residents. The website offers a CSA resource, *Bring Fresh Produce to Your Setting*. Several successful programs are highlighted in the guide, such as the CSA at the Research Triangle Institute.

<http://www.eatsmartmovemorenc.com/FreshProduce/FreshProduce.html>

The Soil Association provides tool kits on beginning a CSA and case examples.
<http://www.soilassociation.org/Whatwedo/Communitysupportedagriculture/tabid/266/Default.aspx>

USDA - Community Supported Agriculture has a website which contains a thorough listing of CSA-related resources.

<http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>

CSA Farms Training Manual is a thorough how-to resource guide on developing a CSA, produced by the Michigan-based CSA Farms.

<http://www.csafarms.org/csafarms0656231.asp>

CSA Locator, developed by Local Harvest, is a guide to finding a CSA in your area.

<http://www.localharvest.org/csa/>

***Strategy 4:
Ensure Ready Access to Fruits and Vegetables
in Worksite Foodservice and in Food Offered
at Meetings and Events***

a. Healthy Cafeterias

Definition:

Worksites, including medical centers, universities, and other community and business establishments may implement policies to promote fruits and vegetables at cafeterias

and other onsite dining facilities. Policies may include: requiring availability of a variety of appealing, high-quality and affordable fruits and vegetables; preferential pricing for fruits and vegetables; provision of coupons, discounts, and subsidies for fruits and vegetables; use of point-of-sale icons (including nutrition labels) to highlight healthy fruit and vegetable options; and establishing a policy that a certain proportion of the items offered be fruits and vegetables. Policies that encourage the incorporation of locally grown fruits and vegetables in cafeteria and dining facility menus may also be included (see strategy 3 on Farm-To-Where-You-Are).

Rationale:

The social and physical environment of the worksite can influence health behaviors of individuals⁵². Many people spend the majority of their time at a worksite, consuming at least one meal as well as several snacks while there. Approximately half of workers responding to a national survey in 2003 indicated that they purchased their lunch at work at least twice per week. Among workers who purchased a lunch, 43% typically purchased it at a fast food restaurant and 25% at an onsite cafeteria or sandwich shop⁵³. The food available at onsite dining facilities influences what these employees purchase to eat at work. However, the foods available may be high in added sugars, fats, and calories and low in nutrients, leading to unhealthy food intake. At some worksites (e.g. medical centers, universities, and museums), the dining facilities are also utilized by the general public, thus influencing their food consumption as well. According to an unpublished 2001 California survey cited by Backman et al⁵⁴, one of the most common reasons residents gave for not eating fruits and vegetables was they “were hard to find at work”. Focus groups with low and middle income female workers in California revealed that the most frequently cited barrier to healthy eating at work was a lack of access to healthy foods, such as fruits and vegetables⁵⁴. These employees felt that “the best ways to encourage proper nutrition and physical activity are to surround employees with healthy choices and provide them with opportunities to engage in the behaviors”⁵⁴.

Employers can make it easier for workers and visitors to make healthy food choices by creating policies to ensure that fruits and vegetables are available in onsite cafeterias and restaurants. In addition, price incentives and point of purchase nutrition information may enhance these policies and further increase consumption of fruits and vegetables. Furthermore, policies addressing foods available at worksites can create social norms that support healthy eating⁵⁵, a factor that influences fruit and vegetable intake⁵⁶.

Research suggests employees are supportive of changes to the worksite food environment, including offering healthier options (e.g., fruits and vegetables) at worksite cafeterias; preferential pricing of healthy options, and point-of-sales icons and nutrition labels^{57 54}. Research also shows that business leaders support changes to the worksite food environment^{54, 58}.

Evidence of Effectiveness:

A systematic review of clinical trials that tested the effectiveness of worksite health promotion programs that included environmental modifications⁵⁹ identified four

multicomponent interventions with cafeteria modifications that increased fruit and vegetable intake^{60 61 62 63}. These studies suggest that fruit and vegetable consumption can be positively influenced by work site health-promotion programs that include healthful modifications to the cafeteria. Two additional studies have measured fruit and vegetable sales at worksite cafeterias before and after an intervention^{64 65}. Jeffery and colleagues found that increasing the number and variety of fruits and vegetables offered and reducing prices resulted in increased sales of fruit and salads, especially among women and those trying to manage their weight⁶⁴. A study of five worksite canteens in Denmark demonstrated that training canteen managers and staff to make fruits and vegetables more accessible and appealing at lunch meals resulted in a significant increase in the quantity of fruits and vegetables served to customers⁶⁵. Furthermore, a systematic review of the literature of policy and environmental interventions for cardiovascular health concluded that targeting the availability of nutritious foods and point-of-purchase strategies are among the strategies with the strongest evidence for promoting good nutritional behaviors⁶⁶. The studies reviewed included evidence from worksite, school, and community settings and provide evidence that modifying the food environment can have positive effects on dietary behavior.

Key Considerations

- Creating and implementing policies to improve menu options can take a significant amount of effort and will require the involvement of many stakeholders. Buy-in and input from key stakeholders, including worksite facility management, food service management, and employees should be considered at each step in the formulation and implementation of policies. In healthcare worksites, it may be helpful to communicate to stakeholders the importance of the healthcare facility being a role model for healthy eating for its employees and persons visiting the facility for services.
- Worksites may have contracts with large chain restaurants to provide food in their facilities for a specified service period. Providing guidance to worksites to plan for eventual changes to their foodservice will help them prepare for new contract negotiations before the current contract period ends.
- Creative and new menu items may be added to increase consumption of fruits and vegetables. These may include adding more fruits and vegetables in soups and stews, adding fruits and vegetables to sauces and garnishes of pasta and meat dishes, and mixing vegetables with rice. Inspiration can be found in traditional dishes from multiple ethnic cuisines as well as seasonal dishes high in fruits and vegetables.
- Potential additional components to this strategy include subsidizing healthy menu items to make them more affordable and to encourage their purchase, and labeling menu items with point-of-choice signage⁶⁷. Because management resources are needed for these steps, gaining management buy-in is important.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive

experiences, builds brand equity. Many state health departments are licensed to use the Fruits & Veggies — More Matters® brand and can create their own items. Additionally, those who are licensed, as well as those who are not, can use relevant pre-created materials found at www.fruitsandveggiesmatter.gov or www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include posters, aprons and hats for the cafeteria staff to wear, branded reusable cups to be used by staff, or nutrition education materials to have available on the tables or near service lines.

Potential Action Steps:

1. Create or expand a healthy cafeteria policy or program in your own worksite. This process will give you insight into the many issues that will arise in the process and prepare you to address those issues when promoting healthy cafeteria policies and programs elsewhere.
2. Assist local worksites to establish healthy food environment policies.
3. Provide resources and training for food service vendors and staff on nutrition guidelines and sources for procuring food that fits within these guidelines.

Program Examples:

Healthy Picks is one of the many programs that are a manifestation of the Kaiser Permanente Comprehensive Food Policy. The vision of the Healthy Picks program, located in Santa Rosa, Ca is “To offer foods that support good health and contribute to the sustainability of our environment.” This article describes the process of modifying the cafeteria menu at Kaiser Permanente-Santa Rosa. Pricing decisions are discussed and sample menus are provided. The program was implemented by a team of nutrition and dining service professionals within Kaiser Permanente. The new program followed a new standard of detailed nutritional standards, creating a much healthier product line for cafeteria consumers.

<http://www.kaisersantarosa.org/cafeteria>

Resources:

The California Fit Business Kit, from the California Department of Health, is a collection of tools and resources to help employers create a worksite culture and environment that supports healthy eating and physical activity among employees. The components of the kit have been evaluated by a diverse group of worksites across the state, and they can be used individually or as part of a comprehensive program. The “Healthy Dining Menu Guidelines” tools offers healthy dining menu standards for onsite cafeterias or dining facilities.

<http://ww2.cdph.ca.gov/programs/cpns/Pages/WorksiteFitBusinessKit.aspx>

The Environmental Nutrition and Activity Community Tool (ENACT), developed by the Strategic Alliance for Healthy Food and Activity Environments, cites

establishing worksite purchasing policies and nutrition standards for cafeterias and vending at worksites (“Food Policy” page), incorporating fresh local produce into cafeteria meals (“Farm to Institution” page), and making healthy foods available to staff and patients at healthcare settings (“Healthy Food” page) as key strategies for improving the nutrition and activity environment. Comprehensive information, including model programs and policies, hands-on tools, organizations and coalitions active in the field, and the evidence base for the strategies are provided. Highlights from the “Farm to Institution” page include “Farm to Cafeteria” from World Hunger Year and San Francisco Department of Health’s “Healthy and Sustainable Food Policy.” Highlights from the “Healthy Food” page include the “Healthy Food in Health Care Pledge” and a resolution by the American Medical Association to support local sustainable food systems.

Food Policy page:

http://www.preventioninstitute.org/sa/enact/workplace/nutrition_4a.php

Farm to Institution page:

<http://www.preventioninstitute.org/sa/enact/workplace/farmtoworkplace.php>

Healthy Food page:

http://www.preventioninstitute.org/sa/enact/healthcare/healthy_food.php

The Sonoma County Employer’s Coalition on Health offers a clearly outlined collection of policies and programs that support their goal of increasing healthy food options for employees. The programs and policies are discussed in the context of a variety of work environments, such as cafeterias, vending machines, food at meetings and functions. They particularly recommend including employees in the development stages of making changes to provide healthier food options, to gather excitement and support. Their Healthy Menu guidelines outline offers specific suggestions for choosing healthier foods.

http://www.sonoma-county.org/scech/wellness/healthy_food.htm

Menu of Change: Healthy Food in Healthcare, by Healthcare Without Harm, outlines steps that can be taken by the health care industry to provide fresh, local, and sustainable food to staff, patients, and visitors. The report is based on information collected from a 2008 survey of hospitals that had signed the “Healthy Food in Health Care Pledge.” Examples of menu changes, hospital and kitchen gardens, healthy vending, farmers markets, and Community Supported Agriculture are provided.

<http://www.noharm.org/details.cfm?type=document&ID=1942>

Healthy Food, Healthy Hospitals, Healthy Communities, from the Institute for Agriculture and Trade Policy, presents eight case studies of hospitals that have successfully launched farm to hospital initiatives. The case studies describe examples of food service changes, local and organic purchasing, healthy vending, farmers markets and farm stands.

<http://www.environmentalobservatory.org/library.cfm?refid=72927>

b. Healthy Foods at Meetings and Events

Definition:

Worksites may implement policies to promote fruits and vegetables at meetings, conferences, or other worksite events and gatherings. Policies may also be implemented to encourage worksites to incorporate locally grown fruits and vegetables in worksite gathering menus.

Rationale:

The social and physical environment of the worksite can influence health behaviors of individuals⁶⁸. Many people consume at least one meal as well as several snacks while at work. One obstacle to maintaining a healthy food intake at work is attending meetings and events where foods high in added sugars, fats, and calories and low in nutrients are served. As discussed in the Healthy Cafeterias section, employees recognize the lack healthy foods, such as fruits and vegetables, and the abundance of unhealthy foods available at the worksite as barriers to healthy eating. Therefore, employees are supportive of increasing healthy food options available.

Worksites can make it easier for people to make healthy food choices by creating policies to ensure that healthy food options, such as fruits and vegetables, are provided at worksite gatherings such as meetings, conferences, or other worksite events. Implementing such policies at the worksite can create social norms that support healthy eating⁵⁵, a factor that influences fruit and vegetable intake⁵⁶.

Research suggests employees and business leaders are supportive of changes to the worksite food environment,^{54, 57 54, 58}.

Evidence:

Published evidence on the impact of implementing healthy food policies for worksite meetings and events on fruit and vegetable consumption is mainly limited to the evaluation of interventions that included this type of policy as part of a comprehensive worksite intervention or program. Clinical trial evaluations of two large, multicenter worksite interventions that included changes to the food catering policies found significant increases in fruit and vegetable intake of employees^{60, 61}. These findings suggest that dietary behaviors can be positively influenced by work site health-promotion programs that include changes to food catering policies. Furthermore, a systematic review of the literature of policy and environmental interventions for cardiovascular health concluded that targeting the availability of nutritious foods is among the strategies with the strongest evidence for promoting good nutritional behaviors⁶⁶. The studies reviewed included evidence from worksite, school, and community settings and provide evidence that modifying the food environment can have positive effects on dietary behavior.

Key Considerations:

- Buy-in and input from key stakeholders, including worksite management, food service management, and employees should be considered at each step in the formulation and implementation of the policy.
- The worksite may need to seek out new food service and caterers who can meet their healthy food policies. Many worksites have implemented healthy food environment policies and may be good resources for finding food service or catering companies that are willing and able to provide food that satisfies these policies.
- A healthy food policy for worksite meetings or events can become part of a larger effort by the worksite to increase the availability of fruits and vegetables. Similar guidelines can be applied to the food offered in cafeterias and vending machines. Employers can work with local growers or produce distributors to have fruits and vegetables available at snack stations or in the break room. Employees can be encouraged to organize healthy food potlucks and to serve healthy foods at birthdays and other celebrations.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive experiences, builds brand equity. Many state health departments are licensed to use the Fruits & Veggies — More Matters® brand and can create their own items. Additionally, those who are licensed, as well as those who are not, can use relevant pre-created materials found at www.fruitsandveggiesmatter.gov or www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include branded tote bags for meeting materials, reusable cups for employees to use at the event and for name tags, or items to give away during the meeting including office supplies.



after, lanyards as prizes cookbooks or

Potential Action Steps:

1. Create or expand a healthy food at events policy at your own worksite. you will learn many important lessons that will assist you as you roll out the idea with local businesses.
2. Assist local worksites in establishing healthy food environment policies. By establishing a policy, a worksite clarifies to food providers, meeting planners, and all staff exactly what issues matter to them.
3. Provide resources and training on how to select healthy options for worksite meetings and events to food service personnel and those who order catering for meetings and events.

meetings and By doing so,

Program Examples

The Healthier Worksite Initiative at CDC was a program designed to make the healthy choice the easy choice when in CDC buildings. “*Choosing Foods and Beverages for Healthy Meetings, Conferences and Events*” is a CDC policy that provides guidance for making available healthful food choices at CDC sponsored or co-sponsored meetings, conferences, and other work related events where light food and beverage will be served. CDC employees who are planning meetings and events are encouraged to use the standards for any food available during the event.

http://www.cdc.gov/nccdphp/dnpa/hwi/policies/Healthy_Worksite_Food.pdf

Resources:

Guidelines for Offering Healthy Foods at Meetings, Seminars and Catered Events is a publication of the University of Minnesota, School of Public Health which provides a rationale for healthful foods at meetings and specific guidelines for what types of foods to serve at various meals and snacks.

http://www.ahc.umn.edu/ahc_content/colleges/sph/sph_news/Nutrition.pdf

Meeting Well: A Tool for Planning Healthy Meetings and Events, from the American Cancer Society, provides tips for meals and snacks, suggestions for stocking a healthy vending machine, and ideas on how to incorporate physical activity into meetings.

<http://www.acsworkplacesolutions.com/documents/F251300Meeting%20Well%20Guide-u.pdf>

The California Fit Business Kit, from the California Department of Health, is a collection of provides tools and resources to help employers create a worksite culture and environment that supports and healthy eating and physical activity among employees. The components of the kit have been evaluated by a diverse group of worksites across the state, and they can be used individually or as part of a comprehensive program. The “Healthy Meeting Policy” tool provides tips for providing healthy foods and physical activity breaks at workplace meetings, gatherings, and events.

<http://ww2.cdph.ca.gov/programs/cpns/Pages/WorksiteFitBusinessKit.aspx>

The Environmental Nutrition and Activity Community Tool (ENACT), developed by the Strategic Alliance for Healthy Food and Activity Environments, cites providing healthy food options at worksites as (“Healthy Options” page) as a key strategy for improving the nutrition and activity environment. Comprehensive information, including model programs and policies, hands-on tools, and organizations and coalitions active in the field are provided. Some highlights include: “Building a Successful Local Food Model – Tips for Institutional Buyers”; “Sustainable Food Guide”; and “Worksite Wellness Program For Tompkins County, NY.” The latter resource provides sample policy statements to encourage healthy eating at the worksite.

http://www.preventioninstitute.org/sa/enact/workplace/foodchoice_3a.php

Healthy Food Choices for Meetings, developed by Seattle and King County Public Health Services in Washington, provides model policies to encourage nutrition and physical activity at worksites.

<http://www.kingcounty.gov/healthservices/health/nutrition/meetings.aspx>

UC Berkeley Guide to Healthy Meetings and Events: a Tool for Campus Event Planners, from the University of California at Berkeley, provides recommendations and resources on how to make meetings more healthful for faculty, staff, and students. Recommendations about food safety, healthy menu and snack choices, and ways of incorporating physical activity into meetings are provided.

<http://www.uhs.berkeley.edu/facstaff/pdf/healthmatters/healthymeetings.pdf>

***Strategy 5:
Support and Promote Community
and Home Gardens***

Definition:

Community gardens are collaborative projects created by members of a community in which participants share both the maintenance and products of the garden, including fruits and vegetables. The gardens may be located in a park or a community lot and the land may be divided into individual plots, shared among all members, or some combination of these approaches. Community gardens may be managed by neighborhood residents, community based organizations, government agencies, or coalitions. Some gardening programs also teach participants how to store and prepare food from the garden. Community gardens can also be comprised of a series of plots dedicated to "urban agriculture" where produce may be distributed or sold to individuals, retailers, and restaurants in the community. A home garden is located at the individual's place of residence and may also include fruits and vegetables to be eaten by individuals, their families, neighbors, and friends. Home production and storage of fruits and vegetables can be important during periods of limited access to these foods.

Gardens may also be incorporated into school curricula as a means to increase student and staff access to fruits and vegetables and to provide students with opportunities to participate in growing and harvesting a wide variety of these foods. Please see strategy 6 on school curricula for information and resources specific to school gardens.

Rationale:

Individual and community access to fruits and vegetables can be addressed through the creation of community and home gardens. Individuals who participate in community or home gardens are exposed to fresh fruits and vegetables, and therefore may be more likely to consume them ⁶⁹. Community gardens can yield high quality produce at low

cost, benefitting community members from both an economic and a health perspective. Gardeners recognize that participation in a community garden can improve access to fresh fruits and vegetables and their nutrition, and they perceive additional benefits, including increased physical activity, improved mental and social health, the enjoyment of nature, and community cohesion ^{70, 71}.

Evidence of Effectiveness:

An evaluation of a large urban gardening project found that gardeners reported a higher consumption of specific vegetables and a lower consumption of milk, citrus, and sweet foods and drinks than non-gardeners ⁶⁹. Focus groups conducted with inner-city youth revealed that those involved in garden programs reported more willingness to consume healthy food and try unfamiliar food than those not in a program ⁷². Other studies have found an association between gardening and fruit and vegetable consumption, even when the gardening activity occurred in the past ^{73 74}.

Community & Home Garden Key Considerations:

- Local policies and zoning ordinances may pose barriers to community and home gardens. A site that seems suitable for a community garden may be zoned for commercial use only. Neighborhood associations may prohibit front yard home gardens.
- Land availability, water supply, insurance coverage, soil conditions (e.g. lead content), and other potential challenges like vandalism are important to consider before starting a community garden.
- A community may need assistance with start-up costs. Local community or faith-based organizations or businesses may be willing to finance these start-up costs or donate items such as seeds, tools, and building materials.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive experiences, builds brand equity. Many state health departments are licensed to use the Fruits & Veggies — More Matters® brand and can create their own items. Additionally, those who are licensed, as well as those who are not, can use relevant pre-created materials found at www.fruitsandveggiesmatter.gov or www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include hats to protect gardeners from the sun, bags to carry gardening supplies, aprons to use when cooking produce from the garden, or recipes that use the items being grown in the garden.

Community or Home Garden Potential Action Steps:

1. Identify communities that need and are interested in starting a community garden. Establish relationships among these communities and existing community programs or local businesses that can support their efforts through funding or other resources.

2. Examine existing zoning regulations relevant to community and home gardening. Develop new regulations or modify existing ones as necessary.
3. Provide resources and trainings for community and home gardeners or set up a program for state extension agents, Master Gardeners, or other knowledgeable gardeners to train community and home gardeners.
4. Invite local community garden operators to participate in state and local level food policy councils.
5. Start a community garden at the health department to promote and experience firsthand the benefits and challenges encountered in gardening efforts.

Program Examples:

P-Patch Gardening Program was initiated in 1973 by the City of Seattle, Washington's Department of Neighborhoods Program. The gardening program focuses upon populations of low-income and immigrants. Over 6000 urban gardeners currently participate in the program, utilizing 2500 garden plots which cover an urban area totaling 23 acres of land. The site offers many tips and resources for community gardening, market gardening, youth gardening, and community food security.
<http://www.seattle.gov/neighborhoods/ppatch/>

Common Ground Garden Program was initiated in 1978 by The University of California Cooperative Extension in Los Angeles County. Common Ground focuses upon residents of lower income and traditionally underrepresented families. The goals of the program are to increase access to fresh fruits and vegetables, improve nutrition, and offer garden education, among other services. The program offers a "Community Garden Start-Up Guide" that is intended to help neighborhood groups and organizations in starting and sustaining a community garden.

Common Ground Garden Program:

http://celosangeles.ucdavis.edu/Common_Ground_Garden_Program/

Community Garden Start-Up Guide:

http://celosangeles.ucdavis.edu/garden/articles/pdf/startup_guide.pdf

City Slicker Farms increases food self-sufficiency in West Oakland by creating organic, sustainable, high-yield urban farms and back-yard gardens. The organization builds and helps to maintain vegetable gardens in the backyards of residents of lower income, and minority populations, in West Oakland, Ca. Other services and activities include a weekly farm stand, gardening education workshops, and social activities. City Slicker Farms has formed partnerships with several local organizations, such as Alameda County Food Bank and People's Grocery. One of their urban gardens produces 2,000 lbs of vegetables per year on 2,000 square feet of land.

<http://www.cityslickerfarms.org/>

Resources:

Establishing Land Use Protections for Community Gardens (2009) is a guide, with model language, for creating legislation designed to preserve land designate for use by community gardens. The guide was developed by Planning for Healthy Places, a project of Public Health Law & Policy. The language used is easily transferable to a variety of different communities and settings. Legislation and program examples are also provided.

<http://www.healthyplanning.org/modelpolicies.html>

Got Dirt? A Gardening Initiative, from Wisconsin Department of Health and Family Service's Nutrition and Physical Activity program, is a program that assists with the implementation of community, school, and child care gardens. The website provides "The Got Dirt? Garden toolkit", a guide for starting a garden. Tips from garden experts and garden success stories from around Wisconsin are also included.

<http://www.dhfs.state.wi.us/Health/physicalactivity/gotdirt.htm>

The Environmental Nutrition and Activity Community Tool (ENACT), developed by the Strategic Alliance for Healthy Food and Activity Environments, cites promoting and establishing community gardening ("Community Gardens & Urban Agriculture" page) as a key strategy for improving the nutrition and activity environment. The website provides comprehensive information, including model programs and policies, hands-on tools, organizations and coalitions active in the field, and the evidence base for the strategy.

http://www.preventioninstitute.org/sa/enact/neighborhood/community_garden.php

A Guide to Community Food Projects: Community Food Security Coalition⁷⁵ provides examples of successful community garden projects that are funded by the Community Food Projects Program.

http://www.foodsecurity.org/cfsc_case_studies.pdf

The American Community Gardening Association (ACGA) is a bi-national nonprofit membership organization of professionals, volunteers and supporters of community greening in urban and rural communities. The site offers information, tools, links, and resources for starting a community garden and a locator tool for finding your nearest community garden. <http://communitygarden.org/>

The National Gardening Association (NGA) is a nonprofit leader in plant-based education. NGA serves as a bridge to connect people to gardening in five core fields: plant-based education; health and wellness; environmental stewardship; community development; and responsible home gardening. Resources provided include: how-to videos; gardening articles, and a food garden guide.

<http://www.garden.org/home>

Strategy 6: Establish Policies to Incorporate Fruit and Vegetable Activities into Schools

Definition:

To reinforce health messages provided by schools, schools may establish policies to incorporate activities with fruits and vegetables into curricula. Such activities include school gardening, agricultural education (e.g. visits to farms), and fruit and vegetable preparation and tasting demonstrations in the classroom. School policies can also encourage integrated approaches to the activities, where the produce from school gardens is used in the classroom activities as well as in food service, events, and fundraisers at the school. These curriculum-based activities provide students with hands-on experiences with fruits and vegetables and support policy and environmental changes within the school setting. These policy and environmental changes may include: applying for the USDA Free Fruit and Vegetable Snack Program, adding a salad bar to the school cafeteria, or creating standards for competitive food in the school that require fruit and vegetable choices be available. The activities may also be part of a farm-to-school program (see strategy 3: Farm-To-Where-You–Are), or they may encourage the school to adopt such a program.

In school gardening programs, students participate in growing and harvesting a variety of fruits and vegetables. Gardening activities provide hands-on study of nutrition and science concepts as well as ecology, math, history, social science, and the visual arts. Agricultural education provides students the opportunities to learn about fruit and vegetable production at school, in the community, and elsewhere. The classroom activities about fruits and vegetables can teach students how to select and prepare fruits and vegetables and encourage them to taste and handle both familiar and unfamiliar varieties. Food preparation classes can support experiential learning about nutrition, health, science, and ecology.

Rationale:

With most U.S. children attending school daily, schools are in a unique position to influence and promote fruit and vegetable intake among students. The lack of youth meeting fruit and vegetable guidelines ¹² highlights the need for strategies to increase consumption among this group. Policies to require school-based nutrition education are one such strategy that can help students eat more healthfully. Research suggests that

education with elementary-school aged children about diet and nutrition should focus on concrete experiences with food ⁷⁶. School gardens, agricultural education, and fruit and vegetable preparation and tasting activities are concrete, hands-on experiences that can help students develop a personal connection to their food and a lasting relationship to healthy eating. These activities, by providing students access to fruits and vegetables, increase students' exposure to and familiarity with these foods, which influence the development of food preferences ^{77, 78}. Access and preference have been identified as important factors affecting consumption ⁷⁹. Use of the school setting may also be beneficial because peer influence and social support are additional factors related to consumption ^{78, 80}, and teachers can model healthy behaviors to reinforce nutrition and health messages. School-based hands-on experiences with fruits and vegetables may also empower children to prepare these foods at home with their families and influence the quality of the food their families buy and prepare ^{81 82}.

Some teachers perceive school gardens to be effective in enhancing healthful eating habits of students ⁸³ and addressing aspects of healthy eating such as nutrition education, exposure to vegetables, and school support of healthy eating ⁸⁴. Additional benefits associated with the use of school gardens include: improved school attitude; promotion of teamwork; community outreach; opportunities to learn about environmental stewardship, math, and science; and opportunities for physical activity ^{85, 86}.

Evidence of Effectiveness:

Research done on school gardening programs has focused on primary schools and has found that school gardening, especially when used to enhance nutrition education programs, is associated with increased intake of fruit and vegetables among students ^{87, 88}. Participation in school gardening, often combined with education, has also been associated with factors that influence consumption of fruits and vegetables, including: increased ability to identify fruits and vegetables ^{72, 89}; willingness to taste vegetables grown in the garden ⁹⁰; willingness to try vegetables in the school lunch ⁹¹; and increased knowledge of, attitudes towards, and preferences for fruits and vegetables ^{90, 92, 93}.

Food preparation and tasting activities are generally part of multi-component classroom curricula. Consequently there is limited direct evidence of the effectiveness of these specific components. One study of curricula that included cooking with new, plant-based foods, found that the students who participated in the curriculum ate significantly more of these foods when offered them in the lunch program than the students who did not participate ⁸². Furthermore, the parents of the children who received the curriculum reported that their children were “agents of change in their families,” asking them to buy new, healthy foods. Another study found that a food preparation program for elementary students had positive effects on preferences for and knowledge of healthy foods (including vegetables) and intentions to eat the foods, decreased plate waste of healthy foods, and improved self-efficacy towards cooking ⁹⁴.

Key Considerations

- Many schools do not have adequate facilities, equipment, or partnerships for developing experiential lessons on fruit and vegetable production, preparation and storage. A combined effort to create a school food environment that includes a garden and fruit and vegetable preparation and storage materials, as well as partnerships with local farms may be more likely to foster support and momentum for policies that call for the integration of experiential lessons at the school.
- Consider existing school and district policies that may pose barriers. For example, the garden's harvest may be plentiful for school food service to use in cafeteria preparation, but there may be policies that prevent its use. Consultation with the schools district on how to eliminate or reduce these barriers may be necessary.
- School gardens, fruit and vegetable preparation and tasting curricula, and an existing farm-to-school program can be integrated. For example, foods from school gardens or local farms can be used in food preparation and food tasting activities. Farm tours or visits from farmers can reinforce lessons learned from school garden curricula.
- Teachers and other staff may require training in gardening and food preparation skills prior to teaching these lessons to students. Consider partnerships with local farmers and chefs and University Cooperative Extension Service programs to support such trainings.
- For sustainability of a school garden, the school must have broad support from the school community. Help schools obtain buy-in from key stakeholders, including district and school administrators, staff, parents, and students. Engaging and developing partnerships with other schools, community volunteers, civic groups, and local businesses can also increase chances of long term success. Assist in securing support to maintain the school garden during the summer months when school is out of session but the garden still needs care.
- Have a plan to address environmental challenges to school gardens. For example, an urban school with almost no land could create a container garden on their roof or in a classroom with many windows; a school in a northern climate may need to start their garden in a greenhouse.
- Extra produce from a school garden may be sold at markets, fundraisers, school events, or through school food service. Any revenue generated must go back into the nonprofit school foodservice account, which can then be used to sustain the school garden. Extra produce can also be donated to emergency food programs as long as this complies with state and local health and safety regulations.
- Marketing fruits and vegetables through branding can be used in conjunction with this strategy. Exposing people to a brand, especially when it is connected to positive experiences, builds brand equity. Many state health departments are licensed to use

_____ or
www.fruitsandveggiesmorematters.org. Examples of items that could be used with this strategy include recipes that use the foods being grown in the garden, hats to protect students from the sun, tee-shirts, bags to carry gardening supplies, or aprons to use when cooking and tasting items. Furthermore, there are many educational materials promoting fruits and vegetables available for teachers and students that can be used in conjunction with a school garden or with cooking classes and tastings.

Potential Action Steps

1. Plan a meeting with school officials to discuss the integration of experiential curricula on fruits and vegetables into school wellness policies.
2. Identify experts (e.g., school food service staff, chefs, culinary instructors, local farmers, dietitians, Master Gardeners, community garden groups, and University Cooperative Extension Service) who can work with students and/or staff on experiential classes.
3. Identify and form relationships between schools that want to start gardening programs and schools that have existing programs.
4. Encourage links between schools and community garden programs or local business that can support and partner with school gardens programs. Also, establish links between schools and local farms to support agricultural education of students.
5. Identify resources for school gardens. Funding or supplies may come from state grants, nonprofit organization grants, community organizations, local businesses, or local garden retailers.
6. Create training classes for appropriate school staff. Gardening skills to teach include how to start and maintain a garden and how and when to pick fruits and vegetables. Food preparation skills to teach include use of fruits and vegetables in snacks and meals, cooking techniques, as well as lessons in food safety; general kitchen safety related to use of knives, stoves, and other equipment; and information about developing food preferences.
7. Consider using the Institute of Medicine Nutrition Standards for Foods in Schools as a policy lever here: their conclusion is that foods offered outside of school meals should comprise fruits, vegetables, whole grain foods, and low-fat or nonfat milk and milk products ⁹⁵.

Program Examples

The Edible School Yard was spearheaded by chef Alice Waters of the restaurant Chez Panisse. It is a nonprofit cooking and gardening program on the campus of Martin

Luther King Junior Middle School in Berkeley, California. The garden was established in 1995 and has gradually become more integrated into the curriculum and activities of the school. Biology and science-based classes are conducted in the garden, and cooking and food appreciation classes are held in the adjacent kitchen. The website provides a detailed explanation of the program as well as downloadable lessons and recipes. The Edible Schoolyard of Berkeley has inspired the development of many other school gardening programs throughout Berkeley Public Schools and has developed an affiliate network of similar Edible Schoolyard programs. Their first affiliate garden was created in New Orleans, LA, at the Samuel J. Green Charter School. One goal of building a network of affiliate Edible Schoolyard Gardens is to monitor best practices through cross-site research and to develop policy recommendations for local, state, and national levels.

The Edible School Yard: <http://www.edibleschoolyard.org/>

Edible Schoolyard New Orleans: <http://www.esynola.org/>

California Head Start Association has joined with the California School Garden Network to launch a statewide garden project, offering Growing with Children Garden Grants. In the 2007-2008 school year, 14 Head Start programs in the state of California were awarded a garden grant, which included basic materials, funds, and a garden start-up guide, *Growing, Eating, Living: A Garden Guide for Head Start*. The goal of the program is to promote the message of nutrition, parent involvement, and active living through Head Start site gardens.

<http://caheadstart.org/GardenProgram.html>

Cooking with Kids engages elementary school children in hands-on learning with fresh, affordable foods from diverse cultures. In 2007, the US Department of Health and Human Services awarded Cooking with Kids the national nonprofit Innovation in Prevention Award. The program was initially developed and implemented in Santa Fe public schools, where more than 70% of the students are Latino and many are from low-income households. Students are encouraged to explore many varieties of foods using all of their senses, to have fun, and to exercise choice. The curriculum is aligned with New Mexico Department of Education Academic Standards in Math, Science, Social Studies, Language Arts, Wellness, as well as National Health Education Standards. A thorough evaluation of the program showed that the majority of children have shown a greater interest in eating healthy foods, including fruits and vegetables, at home. The website contains education materials and curricula, which has now been applied in other schools throughout Mexico, the United States, and Canada.

Program description: <http://cookingwithkids.net/>

Program evaluation:

http://www.actionforhealthykids.org/resources_profile.php?id=370

CHANGE (Cultivating Health And Nutrition through Gardening Education) is a program developed by King County Extension of Washington State, which integrates nutrition education through gardening with reading, writing, math and science studies, for grades K-5. The curriculum offers hands-on learning in cooking and gardening. Curricula can be downloaded for free from the website. The program has been implemented in several schools where 50% of the students are enrolled in a free or

reduced lunch program. Food Sense Educators deliver 10 hours of in-classroom nutrition education and three hours of teacher training as a component of the program. Teachers then agree to devote 19 additional hours of classroom time to nutrition concepts in their daily curriculum. <http://www.king.wsu.edu/nutrition/change.htm>
Curricula available here:
<http://www.king.wsu.edu/nutrition/CHANGEpdfs.htm>

Resources:

The California School Garden Network provides comprehensive information about creating school gardens. Resources provided include: downloadable curricula, a gardening guide, information on securing financial support for a garden, and helpful information about farm to school and agricultural literacy.

<http://www.csgn.org/>

Farm to School and Ag literacy: <http://csgn.org/page.php?id=29>

Farm-to-School and Educational Garden Programs: A Resource Guide for Georgia Educators, Administrators, and Parents was developed by Georgia Organics, an organization based in Atlanta, GA that promotes organic and local food. The guide includes instructions, lesson plans, and recipes.

http://www.georgiaorganics.org/about_us/Georgia%20Organic%20Farm%20to%20School%20Guide.pdf

Kidsgardening.org, created by the National Gardening Association, provides resources to parents and teachers on youth gardening. The resources include: classroom projects; professional development options; funding options, a question and answer section that offers video tips; and a school garden search tool that encourages making connections with other school gardens

<http://www.kidsgardening.com/>

The Environmental Nutrition and Activity Community Tool (ENACT), developed by the Strategic Alliance for Healthy Food and Activity Environments, cites establishing school gardens (“Gardens” page) as a key strategy for improving the nutrition and activity environment at schools. The website provides comprehensive information, including model programs and policies, hands-on tools, organizations and coalitions active in the field, and the evidence base for the strategy.

<http://www.preventioninstitute.org/sa/enact/school/schoolgardens.php>

Farm to School and School Gardens Resource Library was developed by the USDA and provides tools, program examples, and resources for creating school gardens. http://healthymeals.nal.usda.gov/nal_display/index.php?info_center=14&tax_level=2&tax_subject=526&level3_id=0&level4_id=0&level5_id=0&topic_id=2314&placement_default=0#Farm%20to%20School

School Garden Wizard provides step-by-step guidance on how to create and implement a school garden. The website provides resources about how to make the

case to administrators for creating a garden, plan and create the garden, incorporate the garden into lessons.

<http://www.schoolgardenwizard.org/>

The Food Studies Institute gives a brief summary of results obtained from research-based projects that have introduced the Food is Elementary© (FIE) curriculum into schools.

<http://www.foodstudies.org/Results/ResearchSummaries.htm>

Agriculture in the Classroom is a program coordinated by USDA. Its goal is to help students gain a greater awareness of the role of agriculture in the economy and society. The website includes lesson plans related to food, agriculture, and health.

<http://www.agclassroom.org/teacher/index.htm>

**Strategy 7:
Increase Access to Fruits and Vegetables in
Emergency Food Programs**

Definition:

Emergency food programs provide hunger relief to individuals and families, and include: food banks; food rescue programs; emergency food organizations; emergency kitchens; food pantries; and homeless shelters. These programs can improve client access to fruits and vegetables by specifically requesting donations of fresh, frozen, canned, and dried fruits and vegetables; partnering with local grocery retailers, farmers markets, Community Supported Agriculture (CSA) programs, and community, school, and home gardens to supply these foods; and acquiring donations of or purchasing unsold and surplus fruits and vegetables from individual farmers.

Rationale:

In 2007, about 11 percent of US households were food insecure at least sometime during the year ⁹⁶. Many of these families and individuals depend on food assistance. In 2007, for example, nearly 7 million adults and 4 million children obtained food from food pantries ⁹⁷. Unfortunately, emergency food programs can have inadequate supply of fruits and vegetables ^{98, 99}. Programs that offer food assistance can best encourage fruit and vegetable consumption by increasing their stock of these foods and providing them directly to clients.

Evidence of Effectiveness:

No research was found that evaluated the effectiveness of this strategy on increasing consumption of fruits and vegetables.

Key Considerations:

- Emergency food facilities can consider increasing their supply of all forms of fruits and vegetables including: fresh; frozen; canned; and dried; and 100% juice.
- The capacity at facilities for cold storage to safely stock fresh and frozen fruits and vegetables may be a limiting factor to receipt of these forms of produce.
- Efforts to increase the supply and use of fruits and vegetables at emergency food distribution centers should be accompanied by education and training for program staff and clients on proper transport, storage, handling, and preparation of these foods.
- Emergency food programs can also initiate or partner with community gardens, economical sources of fruits and vegetables.

Potential Action Steps:

1. Identify partners who can assess the existing fruit and vegetable supply within emergency food programs and identify potential needs for enhancement.
2. Examine existing policies and regulations relevant to the acquisition of fruits and vegetables by emergency food programs and develop or modify as necessary.
3. Invite emergency food program operators to participate in state and local level food policy councils.
4. Encourage partnerships between emergency food programs and local grocery retailers; farmers markets; Community Supported Agriculture (CSA) programs; community, home, and school gardens; and individual farmers to acquire donations of or purchase unsold and surplus fruits and vegetables.
5. Create trainings for staff on proper transport, storage, handling, and preparation of fruits and vegetables.
6. Incorporate hands-on nutrition education into emergency food programs, so clients become familiar with the benefits of fruits and vegetables and how to safely prepare them.

Program Examples:

The Food Bank of Western Massachusetts has a mission to work with the community to reduce hunger and increase food security. The Food Bank has an affiliate farm, The Food Bank Farm, which donates half of its annual produce to food bank

member agencies and individuals who are food insecure. This food donation amounts to an average of 200,000 pounds of organic produce per year. The farm is supported in part by individuals or families who purchase a share of the produce at the beginning of each season, in a Community Supported Agriculture (CSA) model.

<http://www.foodbankwma.org/farm/>

The Michigan Agricultural Surplus System (MASS) is an innovative partnership between Michigan food banks, the agricultural community and food processors. It is funded by a grant from the Michigan Department of Agriculture since 1990, MASS works to procure unmarketable, yet nutritious, agricultural surplus for Michigan food banks. A recent annual donation estimate amounted to 6 million pounds of fresh produce. MASS also ensures that growers, packers, and processors are reimbursed for the costs incurred during the donation preparation process.

http://www.fbcmich.org/site/PageServer?pagename=programs_foodprograms_mass_index

The Community Food Bank of Arizona's Community Food Security Center has a vision to improve community food security for the people of Pima County by promoting, demonstrating, advocating for, and collaboratively building an equitable and regional food system, which supports food production and strengthens communities. This is achieved in part through community garden and faith-based programs.

<http://communityfoodbank.com/community-food-security-center/>

The Emergency Foodshelf Network has a mission to provide high quality food and essential support services to hunger relief programs in the community. Their *Lost for Harvest* program has been developed to save Mexican grown produce imports for distribution to needy US families.

<http://www.emergencyfoodshelf.org/OurFamilyOfPrograms/LostHarvest/OverviewAndAccomplishments.aspx>

Resources:

Second Harvest Heartland, located in St. Paul, MN, is the Upper Midwest's largest hunger-relief organization with a mission of ending hunger through community partnerships. One particularly successful initiative is their Plant a Row for the Hungry program, encouraging community gardeners to donate extra produce to the Food Bank. The website provides guidance on starting a similar program and a list of potential partners.

http://www.2harvest.org/site/PageServer?pagename=progserv_plant_a_row

<http://www.gardenwriters.org/gwa.php?p=par/index.html>

Building the bridge: Linking Food Banking and Community Food Security is a report produced by the Community Food Security Coalition that offers a series of case studies on creative community food bank programs, such as farm to food bank and garden development.

<http://www.foodsecurity.org/BuildingBridges.pdf>

IV. References

1. Hu FB. Plant-based foods and prevention of cardiovascular disease: an overview. *Am J Clin Nutr.* 2003;78(3 Suppl):544S-551S.
2. He FJ, Nowson CA, MacGregor GA. Fruit and vegetable consumption and stroke: meta-analysis of cohort studies. *The Lancet.* 2006;367(9507):320-326.
3. Fung T, Chiuve S, McCullough M, Rexrode K, Logroscino G, Hu F. Adherence to a DASH-style diet and risk of coronary heart disease and stroke in women. *Arch Intern Med.* 2008;168(7):713-720.
4. Montonen J, Knekt P, Jarvinen R, Reunanen A. Dietary Antioxidant Intake and Risk of Type 2 Diabetes. *Diabetes Care.* 2004;27(2):362-366.
5. World Cancer Research Fund, American Institute for Cancer Research. *Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective.* 2007.
6. Tohill BC, Seymour J, Serdula M, Kettel-Khan L, Rolls BJ. What Epidemiologic Studies Tell Us about the Relationship between Fruit and Vegetable Consumption and Body Weight. *Nutr Rev.* 2004;62:365-374.
7. Rolls BJ, Ello-Martin JA, Tohill BC. What can intervention studies tell us about the relationship between fruit and vegetable consumption and weight management? *Nutr Rev.* Jan 2004;62(1):1-17.
8. U.S. Department of Health and Human Services and U.S. Department of Agriculture. *Dietary Guidelines for Americans, 2005.* 6th edition ed. Washington, D.C.: Government Printing Office; 2005.
9. Stables GJ, Subar AF, Patterson BH, et al. Changes in vegetable and fruit consumption and awareness among US adults: Results of the 1991 and 1997 5 A Day for Better Health Program surveys. *J Am Diet Assoc.* 2002;102(6):809-817.
10. NCI. *5 A Day Attitude and Behavioral Tracking, National Omnibus Survey Results: November 2004.*
11. Casagrande, Stark S, Wang Y, Anderson C, Gary TL. Have Americans Increased Their Fruit and Vegetable Intake?: The Trends Between 1988 and 2002. *Am J Prev Med.* 2007;32(4):257-263.
12. Kimmons J, Gillespie C, Seymour J, Serdula M, Blanck HM. Fruit and vegetable intake among adolescents and adults in the United States: percentage meeting individualized recommendations. *Medscape J Med.* 2009;11(1):26.
13. Biehler D, Fisher A, Siedenburg K, Winne M, Zachary J. Getting Food on the Table: An Action Guide to Local Food Policy. Venice, CA: Community Food Security Coalition & California Sustainable Agriculture Working Group (SAWG); 1999:
<http://www.ssawg.org/cfs-resources.html>.
14. McCullum C, Desjardins E, Kraak VI, Ladipo P, Costello H. Evidence-based strategies to build community food security. *J Am Diet Assoc.* 2005;105(2):278-283.

15. Southern Sustainable Agriculture Working Group. Food Security Begins at Home: Creating Community Food Coalitions in the South: Southern Sustainable Agriculture Working Group; 2005: http://www.ssawg.org/cfs-handbook.html#Food_Security_Begins_at_Home.
16. Dillon C. Counties and Local Food Systems: Ensuring Healthy Foods, Nurturing Healthy Children. National Association of Counties Center for Sustainable Communities. . Available at http://www.farmtoschool.org/files/publications_133.pdf, accessed 3/8/2010. 2007.
17. Pollard CM. Selecting interventions to promote fruit and vegetable consumption: from policy to action, a planning framework case study in Western Australia. *Aust New Zealand Health Policy*. 2008;5(1):27.
18. Larson N, Story M, Nelson M. Neighborhood Environments Disparities in Access to Healthy Foods in the U. S. *Am J Prev Med*. 2009.
19. Morland K, Filomena S. Disparities in the availability of fruits and vegetables between racially segregated urban neighborhoods. *Public Health Nutr*. 2007;10(12):1481-1489.
20. McCann B. *Community Design for Health Eating: How land use and transportation solutions can help*. Princeton: Robert Wood Johnson Foundation;2006.
21. Pierce M, Sheehan N, Ferris A. Nutrition Concerns of Low-Income Elderly Women and Related Social Support. *J Nutr Elder*. 2002;21(3):37-54.
22. Morland K, Wing S, Diez Roux A, Poole C. Neighborhood characteristics associated with the location of food stores and food service places. *Am J Prev Med*. 2002;22(1):23-29.
23. Powell L, Slater S, Mirtcheva D, Bao Y, Chaloupka F. Food store availability and neighborhood characteristics in the United States. *Prev Med*. 2007;44(3):189-195.
24. Kaufman P, MacDonald J, Lutz S, Smallwood D. Do the Poor Pay More for Food? Item Selection and Price Differences Affect Low-Income Household Food Costs Washington DC: United States Department of Agriculture: Economic Research Center; 1997.
25. Lang B, Manon M. Stimulating Supermarket Development: A New Day for New York. 2009. <http://www.thefoodtrust.org/pdf/0509nycommission.pdf>. Accessed August 20, 2009.
26. Goldstein I, Loethen L, Kako E, Califano C. Community Development Financial Institution Financing of Supermarkets in Underserved Communities: A Case Study. 2008. http://www.cdfifund.gov/impact_we_make/research/community-economic-development/reports/Community%20Development%20Financial%20Institution%20Financing%20of%20Supermarkets%20in%20Underserved%20Communities%20-%20A%20Case%20Study.pdf. Accessed August 20, 2009.
27. Wrigley N, Warm D, Margetts B. Deprivation, diet, and food-retail access: findings from the Leeds 'food deserts' study. *Environ Plan A*. 2003;35:151-188.
28. Ayala G, Baquero B, Linnan L, Laraia B, Bloom P. Working with tienda to promote healthy eating. 2009. <http://www.iom.edu/Object.File/Master/62/082/Session%204%20920%20am%20Ayala.pdf>. Accessed August 20, 2009.
29. Nonas C. New York City: Healthy Food Access. 2009. <http://www.iom.edu/Object.File/Master/62/078/Session%205%20100%20pm%20Nonas.pdf>. Accessed August 20, 2009.

30. Ethelbah B, Gittelsohn J. *Apache Healthy Stores: Results of the Main Trial and Future Directions*: National Research Initiative of the USDA CSREES.
31. Rose D, Richards R. Food store access and household fruit and vegetable use among participants in the US Food Stamp Program. *Public Health Nutr.* 2004;7(08):1081-1088.
32. Bodor JN, Rose D, Farley TA, Swalm C, Scott SK. Neighbourhood fruit and vegetable availability and consumption: the role of small food stores in an urban environment. *Public Health Nutr.* 2008;11(4):413-420.
33. Laraia BA, Siega-Riz AM, Kaufman JS, Jones SJ. Proximity of supermarkets is positively associated with diet quality index for pregnancy. *Prev Med.* 2004;39(5):869-875.
34. Joshi A, Azuma A. Bearing Fruit: Farm-to-School Program Evaluation Resources and Recommendations. 2008.
35. Joshi A, Azuma A, Feenstra G. Do Farm-to-School Programs Make a Difference? Findings and Future Research Needs. *J Hunger Environ Nutr.* 2008;3:229-246.
36. Murray SC. *A survey of farm-to-college programs: history, characteristics and student involvement*: College of Forest Resources, University of Washington; 2005.
37. Markley K. *National Farm to College Research Report*: Community Food Security Coalition; October 2002.
38. United States Department of Agriculture AMS. Farmers Market Growth: 1994-2008. 2008; <http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateS&navID=WholesaleandFarmersMarkets&leftNav=WholesaleandFarmersMarkets&page=WFMFarmersMarketGrowth&description=Farmers%20Market%20Growth&acct=frmrdirmlt>, 2009.
39. Elias J, Austin J. *Supermarkets in Inner Cities*. Boston, MA: Harvard Business School; 1998.
40. Kaiser Permanente's Farmers' Market Patron Survey Summary of Cross-Site Results. 2005. <http://www.permanente.net/homepage/kaiser/pdf/46367.pdf>.
41. United States Department of Agriculture FNS. WIC Farmers' Market Nutrition Program. 2008; <http://www.fns.usda.gov/WIC/FMNP/FMNPfaq.htm>, 2009.
42. United States Department of Agriculture FNS. Senior Farmers' Market Nutrition Program. 2008; <http://www.fns.usda.gov/wic/SeniorFMNP/SFMNPmenu.htm>, 2009.
43. United States Department of Agriculture FNS. Supplemental Nutrition Assistance Program. 2008; <http://www.fns.usda.gov/FSP/ebt/default.htm>, 2009.
44. Anderson JV, Bybee DI, Brown RM, et al. 5 a day fruit and vegetable intervention improves consumption in a low income population. *J Am Diet Assoc.* 2001;101(2):195-202.
45. Herman DR, Harrison GG, Afifi AA, Jenks E. Effect of a targeted subsidy on intake of fruits and vegetables among low-income women in the Special Supplemental Nutrition Program for Women, Infants, and Children. *Am J Public Health.* 2008;98(1):98-105.
46. Kropf ML, Holben DH, Holcomb Jr JP, Anderson H. Food Security Status and Produce Intake and Behaviors of Special Supplemental Nutrition Program for Women, Infants, and Children and Farmers' Market Nutrition Program Participants. *J Am Diet Assoc.* 2007;107(11):1903-1908.
47. United States Department of Agriculture. Community Supported Agriculture. 2008; <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>. Accessed October 27, 2008.

48. Cohen N, Cooley J, Hall R, Stoddard A. Community supported agriculture: A study of members' dietary patterns and food practices 1997.
49. Johnson DB, Beaudoin S, Smith LT, Beresford SA, LoGerfo JP. Increasing fruit and vegetable intake in homebound elders: the Seattle Senior Farmers' Market Nutrition Pilot Program. *Prev Chronic Dis.* 2004;1(1).
50. Smith LT, Johnson DB, Beaudoin S, Monsen ER, LoGerfo JP. Qualitative assessment of participant utilization and satisfaction with the Seattle Senior Farmers' Market Nutrition Pilot Program. *Prev Chronic Dis.* 2004;1(1).
51. Forbes CB, Harmon AH. Buying into Community Supported Agriculture: Strategies for Overcoming Income Barriers. *J Hunger Environ Nutr.* April 2007;2(2):65-79.
52. Stokols D, Pelletier KR, Fielding JE. The ecology of work and health: research and policy directions for the promotion of employee health. *Health Educ Q.* May 1996;23(2):137-158.
53. Blanck HM, Yaroch AL, Atienza AA, Yi SL, Zhang J, Masse LC. Factors influencing lunchtime food choices among working Americans. *Health Educ Behav.* Apr 2009;36(2):289-301.
54. Backman D, Carman J, Aldana S. *Fruits and Vegetables and Physical Activity at the Worksite: Business Leaders and Working Women Speak Out on Access and Environment:* California Department of Health Services;2004.
55. Sorensen G, Linnan L, Hunt MK. Worksite-based research and initiatives to increase fruit and vegetable consumption. *Prev Med.* 2004;39 Suppl 2:S94-100.
56. Emmons KM, Barbeau EM, Gutheil C, Stryker JE, Stoddard AM. Social influences, social context, and health behaviors among working-class, multi-ethnic adults. *Health Educ Behav.* 2007;34(2):315-334.
57. Devine CM, Nelson JA, Chin N, Dozier A, Fernandez ID. "Pizza is cheaper than salad": assessing workers' views for an environmental food intervention. *Obesity.* 2007;15 Suppl 1:57-68S.
58. Wilson MG, Goetzel RZ, Ozminkowski RJ, et al. Using formative research to develop environmental and ecological interventions to address overweight and obesity. *Obesity.* 2007;15 Suppl 1:37-47S.
59. Engbers L, van Poppel M, Chin A Paw M, van Mechelen W. Worksite Health Promotion Programs with Environmental Changes A Systematic Review. *Am J Prev Med.* 2005;29(1):61-70.
60. Sorensen G, Stoddard A, Hunt MK, et al. The effects of a health promotion-health protection intervention on behavior change: the WellWorks Study. *Am J Public Health.* 1998;88(11):1685-1690.
61. Sorensen G, Thompson B, Glanz K, et al. Work site-based cancer prevention: primary results from the Working Well Trial. *Am J Public Health.* 1996;86(7):939-947.
62. Beresford SAA, Thompson B, Feng Z, Christianson A, McLerran D, Patrick DL. Seattle 5 a Day Worksite Program to Increase Fruit and Vegetable Consumption. *Prev Med.* 2001;32(3):230-238.
63. Emmons KM, Macario E, Sorensen G, Kay Hunt M, Rudd RE. Nutrition Education for Cancer Prevention among Low-Income Populations: An Extension of the EFNEP Model. *J Nutr Educ.* 1999;31(1):47-53.
64. Jeffrey R, French S, Raether C, Baxter J. An Environmental Intervention to Increase Fruit and Salad Purchases in a Cafeteria. *Prev Med.* 1994;23:788-788.

65. Lassen A, Thorsen AV, Trolle E, Elsig M, Ovesen L. Successful strategies to increase the consumption of fruits and vegetables: results from the Danish '6 a day' Work-site Canteen Model Study. *Public Health Nutr.* Apr 2004;7(2):263-270.
66. Matson-Koffman DM, Brownstein JN, Neiner JA, Greaney ML. A site-specific literature review of policy and environmental interventions that promote physical activity and nutrition for cardiovascular health: what works? *Am J Health Promot.* 2005;19(3):167-193.
67. Story M, Kaphingst KM, Robinson-O'Brien R, Glanz K. Creating Healthy Food and Eating Environments: Policy and Environmental Approaches. *Annu Rev Public Health.* 2008;29(1):253-272.
68. Stokols D. Translating social ecological theory into guidelines for community health promotion. *Am J Health Promot.* Mar-Apr 1996;10(4):282-298.
69. Blair D, Giesecke CC, Sherman S. A dietary, social and economic evaluation of the Philadelphia urban gardening project. *J Nutr Educ.* 1991;23(4):161-167.
70. Wakefield S, Yuedall F, Taron C, Reynolds J, Skinner A. Growing urban-health: Community gardening in South-East Toronto. *Health Promot Int.* 2007;22(2):92-101.
71. Armstrong D. A survey of community gardens in upstate New York: implications for health promotion and community development. *Health Place.* 2000;6(4):319-327.
72. Lautenschlager L, Smith C. Beliefs, knowledge, and values held by inner-city youth about gardening, nutrition, and cooking. *Agric Human Values.* June 2007;24(2):245-258.
73. Alaimo K, Packnett E, Miles R, Kruger D. Fruit and vegetable intake among urban community gardeners. *J Nutr Educ Behav.* 2008;40(2):94-101.
74. Devine CM, Wolfe WS, Frongillo EA, Jr., Bisogni CA. Life-course events and experiences: association with fruit and vegetable consumption in 3 ethnic groups. *J Am Diet Assoc.* 1999;99(3):309-314.
75. Tauber M, Fisher A. A Guide to Community Food Projects: Community Food Security Coalition. 2002:19. http://www.foodsecurity.org/cfsc_case_studies.pdf.
76. Contento I. Childrens Thinking About Food and Eating - a Piagetian-Based Study. *J Nutr Educ.* 1981;13(1):S86-S90.
77. Burchett H. Increasing fruit and vegetable consumption among British primary schoolchildren: a review. *Health Educ.* 2003;103:99-109.
78. Birch LL. Development of Food Preferences. *Annu Rev Nutr.* 1999;19:41-62.
79. Blanchette L, Brug J. Determinants of fruit and vegetable consumption among 6-12-year-old children and effective interventions to increase consumption. *J Hum Nutr Diet.* 2005;18(6):431-443.
80. Brug J, Tak NI, te Velde SJ, Bere E, de Bourdeaudhuij I. Taste preferences, liking and other factors related to fruit and vegetable intakes among schoolchildren: results from observational studies. *Br J Nutr.* 2008;99 Suppl 1:S7-S14.
81. Heim S, Stang J, Ireland M. A garden pilot project enhances fruit and vegetable consumption among children. *J Am Diet Assoc.* 2009;109(7):1220-1226.
82. Demas A. Low-fat school lunch programs: achieving acceptance. *Am J Cardiol.* Nov 26 1998;82(10B):80T-82T.
83. Graham H, Zidenberg-Cherr S. California teachers perceive school gardens as an effective nutritional tool to promote healthful eating habits. *J Am Diet Assoc.* Nov 2005;105(11):1797-1800.

84. Somerset S, Ball R, Flett M, Geissman R. School-based community gardens: Re-establishing healthy relationships with food. *Journals of the HEIA*. 2005;12(2):9.
85. Blair D. The Child in the Garden: An Evaluative Review of the Benefits of School Gardening. *J Environ Educ*. 2009;40(2):24.
86. Ozer EJ. The Effects of School Gardens on Students and Schools: Conceptualization and Considerations for Maximizing Healthy Development. *Health Educ Behav*. 2007;34(6):846-863.
87. Hermann JR, Parker SP, Brown BJ, Siewe YJ, Denney BA, Walker SJ. After-School Gardening Improves Children's Reported Vegetable Intake and Physical Activity. *J Nutr Educ Behav*. 2006;38:201-202.
88. McAleese JD, Rankin LL. Garden-Based Nutrition Education Affects Fruit and Vegetable Consumption in Sixth-Grade Adolescents. *J Am Diet Assoc*. 2007;107(4):662-665.
89. Somerset S, Markwell K. Impact of a school-based food garden on attitudes and identification skills regarding vegetables and fruit: a 12-month intervention trial. *Public Health Nutr*. 2009;12(2):214-221.
90. Morris J, Neustadter A, Zidenberg-Cherr S. First-grade gardeners more likely to taste vegetables. *California Agriculture*. 2001;55(1):43-46.
91. Parmer S, Salisbury-Glennon J, Shannon D, Struempfer B. School gardens: an experiential learning approach for a nutrition education program to increase fruit and vegetable knowledge, preference, and consumption among second-grade students. *J Nutr Educ Behav*. 2009;41(3):212-217.
92. Morris JL, Zidenberg-Cherr S. Garden-enhanced nutrition curriculum improves fourth-grade school children's knowledge of nutrition and preferences for some vegetables. *J Am Diet Assoc*. 2002;102(1):91-93.
93. Lineberger S, Zajicek J. School Gardens: Can a Hands-on Teaching Tool Affect Students' Attitudes and Behaviors Regarding Fruit and Vegetables? *HortTechnology*. 2000;10(3):593-596.
94. Liquori T, Koch P, Contento I, Castle J. The Cookshop Program: Outcome Evaluation of a Nutrition Education Program Linking Lunchroom Food Experiences with Classroom Cooking Experiences. *J Nutr Educ*. 1998;30(5):302-313.
95. Institute of Medicine. *Nutrition Standards for Schools for Foods in Schools: Leading the Way Toward Healthier Youth*. Washington DC: The National Academies Press; 2007.
96. United States Department of Agriculture ERS. Food Security in the United States. 2008; <http://www.ers.usda.gov/Briefing/FoodSecurity/>, 2009.
97. United States Department of Agriculture ERS. Use of Federal and Community Food and Nutrition Assistance Programs. 2007:10. <http://www.ers.usda.gov/publications/err66/err66d.pdf>.
98. Akobundu UO, Cohen NL, Laus MJ, Schulte MJ, Soussloff MN. Vitamins A and C, calcium, fruit, and dairy products are limited in food pantries. *J Am Diet Assoc*. 2004;104(5):811-813.
99. Dillinger T, Jett S, Macri M, Grivetti L. Feast or Famine? Supplemental food programs and their impacts on two American Indian Communities in California. *Int J Food Sci Nutr*. 1999;50(173-187).