



What's Right for Young Children II

Childcare Gardens



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WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

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Learning Together

What's Right for Young Children II

Childcare Gardens

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Foreword

We know that good nutrition helps children grow, develop, and learn from birth onward. With two-thirds of mothers of young and school-aged children in the workforce, good childhood nutrition has become a team effort. Childcare providers, for many children, have become a critical part of the “good nutrition team,” and need to cultivate good nutrition practices that link children and families to healthy behaviors and lifestyles.

Childcare gardening is a great way to encourage physical activity, teach nutrition, sample tasty fruits and vegetables, and have fun. Childcare centers with gardens can teach children hands-on lessons about the benefits of growing and eating fruits and vegetables. Through these gardens families have the opportunity to join with childcare providers in shaping the messages that children receive about life skills and healthy eating habits, and to continue good nutrition at home.

As part of our New Wisconsin Promise, the Department of Public Instruction is working to increase good nutrition and physical activity as a key part of all children’s health and development. Poor nutrition and lack of physical activity not only contribute to overweight children and chronic disease, but also affect behavior, cognitive skills, and the ability to focus. Childcare providers can play an important role in providing a healthy learning environment.

This booklet, funded by a Team Nutrition Grant, explores gardening in the childcare setting. I am pleased to offer this valuable resource to help childcare sites, schools, families, and communities “plant the seeds” for the future growth, learning, and good health of Wisconsin children.

Elizabeth Burmaster
State Superintendent

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All photographs courtesy of the 2004-2005 Team Nutrition Childcare Gardening Project sites.

How to Use “What’s Right for Young Children II”

This packet provides childcare sites with ideas and resources to improve the childcare nutrition environment through fruit and vegetable gardening.

Readers Will Learn about

1. Health trends and the implications for children, evidence linking eating behaviors to health, and the impact of sedentary behaviors on the health of children.
2. The importance of nutrition education and adult role modeling in helping children develop healthy eating and physical activity behaviors.
3. Best practices, experiences, recommendations, and lessons learned from the Team Nutrition Childcare Gardening Project childcare sites.
4. Resources available to support these efforts.

Finding Information by Topic

Below is a listing of articles in this packet divided by topic. Look for articles listed under each topic for information to advance your childcare gardening/nutrition efforts.

Forming a Team

- Delivering Team Nutrition Messages through Fruit and Vegetable Gardening: Challenges — Solutions — Resources
- A Childcare Gardener’s Best Friends: The Experts in the Community!
- Web and Print Resources

Gaining Support

- Improving the Eating Behaviors of Young Children
- Childcare Gardening: A Natural Way to Promote Good Nutrition and Physical Activity
- Improving Family Nutrition through Gardening
- What are the Healthiest Foods to Eat?
- Web and Print Resources

Setting Priorities and Developing an Action Plan

- Self-Assessment Results: Childcare Sites Offer Children More Fruits and Vegetables
- Delivering Team Nutrition Messages through Fruit and Vegetable Gardening: Challenges-Solutions-Resources
- A Review: What More Can We Learn From the Childcare Gardening Sites?
- What’s in a “Role Modeling the ABCs of Good Health” Nutrition Workshop for Childcare Garden Sites?
- Web and Print Resources

Putting Plans into Action

- Wisconsin’s “Got Dirt?” Initiative
- Frequently Asked Questions about Best Plants, Food Safety, and Childcare Meals and Snacks
- Modeling Good Eating Habits for Children
- Nutrition Education for Young Children: Make it hands on and fun!
- Parent Fact Sheets
- Web and Print Resources

Measuring Outcomes

- Self-Assessment Results: Childcare Sites Offer Children More Fruits and Vegetables
- Assessment Tool
- Web and Print Resources

Sustaining Efforts

- A Review: What More Can We Learn From the Childcare Gardening Sites?
- Assessment Tool
- Web and Print Resources

Improving the Eating Behaviors of Young Children

How do we know what young children eat?

Most of what we know about how and what young children eat comes from the 2002 Feeding Infants and Toddlers Study (FITS) which sampled the eating habits of more than 3,000 U.S. infants and toddlers aged 4 to 24 months. A more recent study, published in 2005, analyzed the dietary patterns of children aged 2 to 8 from low-income families, using the Healthy Eating Index (HEI). Educational messages to help parents and childcare providers establish healthy eating habits for young children are derived from these studies.

Where have all the fruits and veggies gone?

The FITS study revealed that few children consume the variety of fruits and vegetables, necessary for a healthy diet.¹ In addition, “nutrient dense” or “powerhouse” fruits and vegetables such as dark green leafy vegetables and deep yellow fruits are generally missing from children’s diets. Fewer than 10 percent of infants and toddlers eat one dark green leafy vegetable a day.

Deep yellow vegetables increasingly share the same fate as infants and toddlers grow older. The number of young children eating one deep yellow vegetable a day falls from 39 percent at 7 to 8 months old, to only 14 percent of children 15 to 18 months old. By 19 to 24 months, french fries or other fried potatoes are the most commonly-eaten vegetables. The next top three vegetables eaten by this group are green beans, corn and peas.

At 7 to 8 months, 75 percent of infants drink fruit or fruit juice. By 19 to 24 months of age, only 66 percent of children have one serving of fruit or juice a day. Banana is the most common fruit eaten by children 15 months of age. Other common fruits are apples or applesauce and grapes.

The low vegetable and fruit consumption by infants and toddlers is a major health concern. FITS data show that many infants and toddlers did not eat any fruits or vegetables (as a distinct food item) in a day, and that the vegetables most commonly consumed are low in micro-nutrients and high in energy.

The HEI study categorized children into four eating patterns, with Big Eaters and Light Eaters being the predominant groups.² Big eaters made up 49 percent of

2- to 3-year-old children and 17 percent of 4- to 8-year-old children. The younger Big Eaters appeared to consume the recommended number of servings from the major groups of the Food Guide Pyramid (FGP). The 4 to 8 year old Big Eaters only met the FGP recommendations primarily for the grain and milk groups.

The Light Eaters accounted for 37 percent of the 2- to 3-year old children and 73 percent of the 4- to 8-year old children. Both groups of Light Eaters, on average, rarely consumed the minimum number of recommended servings from the FGP food groups.

Ideally, for infants eating solid foods and for all older children, the variety of vegetables and fruits they consume should be steadily increased especially the number of dark green, leafy vegetables; deep yellow vegetables; and colorful fruits.

Sweetened beverages, salty and high-fat snacks and desserts are replacing milk and other nutritious beverages and foods.

The FITS study showed that about 10 percent of infants 4 to 6 months old eat desserts and sweets, or drink sweetened beverages daily. After 6 months of age, the number of infants and toddlers eating these foods increases *sharply*. Almost half of infants 7 to 8 months old consume one or more foods from this group in a day. By 19 to 24 months of age, nearly all children (91 percent) eat at least one food from this group daily.

The HEI study found that the Big Eaters were characterized by high energy intake coupled with poor dietary moderation score for total fat, saturated fat, sodium and cholesterol. Both the younger Big Eaters (2 to 3 years of age) and the older Big Eaters (4 to 8 years of age) consumed approximately 41.7 percent and 45.5 percent, respectively, of their total energy from added sugar and discretionary fat. Although the total energy intake of the Light Eaters could be considered low, they consumed approximately 40 percent of their energy from discretionary fat and added sugars.

Overfeeding children a new concern

Parents and childcare providers can offer too much of a good thing to infants, toddlers, and children. The FITS data suggest that many children may be overfed. The reported number of calories eaten, particularly by

toddlers, is higher than the levels recommended. As the infant and toddler progress to table foods, the family diet exerts more and more influence. Even very young children are likely to consume french fries, cola, and fruitades, if their older siblings or parents eat/serve these foods. The HEI study also found that the eating patterns of the Big Eaters and Light Eaters mimic the diets of adult Americans and do not follow national dietary guidelines for children.

The developmental transitions young children experience further complicate their feeding. As children become more independent, they may prefer certain foods and want to choose their own food. Parents may find themselves giving into the child's demands for certain foods to minimize confrontations with the child about food.

The solution to this dilemma is straightforward. Everyone — childcare providers, parents and children — needs a healthy start when it comes to food. Parents and childcare providers need to provide healthy choices and model healthy eating. Caregivers of young children need to expose these children to a variety of healthful foods to improve nutrient intake and establish preferences for a varied diet of nutritious foods and beverages.

Portion sizes affect children's health

Children who eat more food energy than they use become overweight. Children will maintain a normal body weight when the energy they take in matches the energy they use. The soaring incidence of overweight American children points to an overconsumption of food energy for the child's activity level.

A study of preschool children found that children eat more when they are served large portions (double the recommended serving size). Children allowed to serve themselves ate 25 percent less food than when served by someone else. The tendency to give children too-large portions or the "super-size" could be countered by letting children serve themselves and by educating food providers about appropriate portion sizes for each age.

Fast food's effect on child nutrition

About 42 percent of children eat fast food regularly.³ Fast food is especially popular among adolescents, who on average visit a fast food outlet twice a week. In a 2003

survey, about 75 percent of 11- to 18-year-old students reported eating at a fast food restaurant at least once in the previous week. These adolescents ate more calories, fat, saturated fat, sodium, and carbonated soft drinks and less vitamins A and C, milk, fruits and vegetables than those who didn't eat fast food. Similar differences in intakes were observed on both the days that fast food was eaten and the days when fast food was not eaten.

Although fast food will continue to be a part of the American diet, families can be encouraged to make healthier fast food choices. Many fast food restaurants offer salads, milk, and 100 percent juice, which can replace french fries and soft drinks. In addition, encouraging all family members to select smaller entrees will reduce the amount of calories, fat, saturated fat and sodium in the meal.

How can we improve the eating patterns of young children?

Early childhood is a critical time for the development of food preferences and eating patterns. Factors that influence dietary intake and nutritional status of young children include food preferences, food availability, parental and caregiver modeling, praise or reward for food consumption, and peer behaviors.

- Parents and childcare providers need to be educated on how and why children learn to prefer certain foods and beverages over others.
- There must be an emphasis on the importance of repeated exposures to new foods and the need for variety and diversity in the diets of young children.
- Caregivers need to be informed of their children's nutrient and energy needs.
- Parents and childcare providers must model healthy eating behaviors.
- Where changes in eating habits are required, parents and childcare providers may need help in making small, incremental changes in dietary behaviors over time.

¹ *Feeding Infants and Toddlers study*. J Am Diet Assn. 2004; 104 (suppl 1)

² Knol LL, Haughton B, Fitzhugh EC. *Dietary Patterns of Young, Low-Income US Children*. J Am Diet Assn. 2005; 105:1765-1773.

³ Paeratakul S, Ferdinand D, Champagne C, Ryan D, and Ray G. *Fast-food consumption among US adults and children: Dietary and nutrient intake profile*. J Am Diet Assn. 2003; 1332-1338.

What are the Healthiest Foods to Eat ?

The term “nutrient-dense,” is often used by nutrition professionals to describe a food that contains a significant amount of one or more of the nutrients needed for good health. Low-nutrient-dense foods, often called “empty-calorie” foods, are those that provide very few nutrients but have many calories. Cake and sweetened sodas are examples of low-nutrient-dense foods. Choosing nutrient-dense foods allows an individual to consume the nutrients needed for good health while staying within their caloric limits.

A system to score foods based on their nutrient content was developed by the Center for Science in the Public Interest (CSPI). The Center published lists of “Healthy Foods” based on this scoring system in 2003. The *Healthiest Choices* food list on the following page is derived from that publication.

Foods are listed in order of nutrient-density according to the Center for Science in the Public Interest’s scoring system. Foods with the greatest nutrient-density are at the top of the list. Still, all foods on this list are good examples of nutrient-dense foods and are good choices for healthy eating.

What is Vitamin C?

Vitamin C is a water-soluble nutrient and vitamin essential for life and for maintaining optimal health. It is also known by the chemical name of its principal form **ascorbic acid**. It is important in forming collagen, a protein that gives structure to bones, cartilage, muscle, skin and blood vessels. Vitamin C also aids in the absorption of iron, and helps maintain capillaries, bones, and teeth. Vitamin C may also help reduce the duration of colds.

How Can We Get Enough Vitamin C?

Eating a variety of foods that contain vitamin C is the best way to get an adequate amount each day. Healthy individuals who eat a balanced diet rarely need supplements. The food list on the following page can help you select foods that are good sources of vitamin C.

How to Prepare Foods to Retain Vitamin C?

Vitamin C can be lost from foods during preparation, cooking, or storage. To prevent loss of vitamin C:

- Serve fruits and vegetables raw whenever possible.
- Steam, boil, or simmer foods in a very small amount of water, or microwave them for the shortest time possible.
- Cook potatoes in their skins. Be sure to wash the dirt off the outside of the potato.
- Refrigerate prepared juices and store them for no more than two to three days.
- Store cut, raw fruits and vegetables in an airtight container and refrigerate—do not soak or store in water as Vitamin C will be dissolved in the water.

What is Vitamin A?

Vitamin A is a fat-soluble vitamin, important for vision, growth, and development. Vitamin A helps in the development and maintenance of healthy skin, hair, and mucous membranes, immune functions, and reproduction.

How Can We Get Enough Vitamin A?

According to recent surveys by the U.S. Department of Agriculture (USDA), the average intake of Vitamin A (and Carotene) by an American adult is adequate, and supplements are rarely needed by healthy people. In fact, too much Vitamin A could be harmful to your health. Beta-Carotene, found in orange and deep yellow foods, is a safer form of Vitamin A.

Eating a variety of foods that contain vitamin A (and Beta-Carotene) is the best way to get an adequate amount. Use the chart to help you select Vitamin A foods at least three times a week.

How to Prepare Foods to Retain Vitamin A

Vitamin A can be lost from foods during preparation, cooking, or storage. To prevent loss of Vitamin A:

- Use raw fruits and vegetables whenever possible
- Keep vegetables (except sweet potatoes and winter squash) and fruits covered and refrigerated during storage
- Steam vegetables and braise, bake, or broil meats instead of frying. Some of the Vitamin A is lost in the fat during frying

Healthiest Vegetable and Fruit Choices

Foods are listed by “score” according to “healthiest” ratings in the *Nutrition Action Healthletter*, published by the Center for Science in the Public Interest, 2003. The table below lists fruits and vegetables that are good sources of Vitamins A and C.

| Fruits | Vitamins | | Vegetables | Vitamins | |
|--------------------------------|----------|---|--------------------|----------|---|
| | A | C | | A | C |
| Guava | | * | Collard greens | * | * |
| Watermelon | | * | Spinach | * | * |
| Grapefruit, pink or red/juice | | * | Kale | * | * |
| Kiwifruit | | * | Swiss chard | * | * |
| Papaya | * | * | Bell pepper, red | * | * |
| Cantaloupe | * | * | Sweet potato | * | * |
| Orange/juice & Mandarin Orange | | * | Pumpkin | * | |
| Strawberries | | * | Carrots | * | |
| Apricots | * | | Broccoli | * | * |
| Blackberries | | | Okra | | |
| Grapefruit, white/juice | | * | Brussels Sprouts | | * |
| Raspberries | | * | Romaine lettuce | | |
| Tangerine & Tangelo | | * | Potato with skin | | * |
| Persimmon | | | Squash, winter | * | |
| Mango | * | * | Bell pepper, green | | * |
| Honeydew melon | | * | Mixed vegetables | * | |
| Star Fruit | | | Snow peas | | |
| Blueberries | | | Peas | | |
| Plums | | | Asparagus | | * |
| Banana | | | Endive | | |
| Cherries | | | Tomato | * | * |
| Peaches | | | Avocado | | |
| Grapes | | | Potato, no skin | | * |
| Rhubarb | | | Cauliflower | | * |

* *Excellent source of this nutrient*

Here are some other nutrient dense choices, according to the CSPIs ranking system.

Cold Cereals

- Bran – buds/flakes
- Shredded wheat
- Wheat Chex
- Oat rings (i.e.: Cheerios)
- Whole wheat flakes
- Multi-grain flakes

Hot Cereals

- Oatmeal, regular
- Oat bran
- Breakfast pilaf
- Cream of rye
- Multigrain
- Ralston 100% wheat
- Wheatena
- Hot ‘n creamy rice (Lundberg)
- Wheat-free 7 grain
- Brown rice cream

Other Grains

- Whole wheat macaroni &-spaghetti
- Spinach spaghetti
- Bulgur
- Barley, milled
- Wild rice
- Brown rice
- Spaghetti
- Macaroni
- White rice, converted

Beans

- Soybeans
- Pinto beans
- Chickpeas
- Lentils
- Cranberry beans
- Black-eyed peas
- Pink beans
- Navy beans
- Black beans
- White beans
- Lima beans, baby
- Kidney beans
- Adzuki beans
- Great northern
- Mung beans
- Lima Beans, large
- Broadbeans
- Peas, split, green

Leanest Meats (no skin)

- Turkey breast whole & extra lean ground
- Chicken breast
- Turkey wing
- Veal leg, top round
- Turkey leg
- Beef eye of round (select)
- Chicken drumstick
- Beef top round (select)

Childcare Gardening

A Natural Way to Promote Good Nutrition and Physical Activity



Fruit and vegetable gardening provides natural learning opportunities for children. In the childcare setting, gardening offers toddlers and preschoolers a new and exciting experience accompanied by physical activity. Children can dig in the dirt, watch plants grow around them and explore new foods from their garden.

Children learn that growing fruits and vegetables can be fascinating, especially when tasting! For example, they will be eager to try the carrots or lettuce that they helped grow. Children also grow in confidence and compassion when they are allowed to give their parents or others the vegetables from their garden.

A New and Exciting Experience

Gardening allows children to play in the dirt and to explore how the smallest forms of life around us – seeds, insects, water and other nutrients – all work together to sustain life. Gardening is a brand new experience for many children, offering them opportunities to plant, weed, water and harvest produce while getting them outside to play and be active.

In 2005, the Wisconsin Team Nutrition Program provided resources to 11 childcare centers, six family childcare homes, and three Head Start sites to help them improve children's eating behaviors through gardening.

Each childcare site had either an on-site garden, or they participated in a community garden or shared in the gardening experience at a nearby childcare site. Gardening was a new experience for many of the participating sites.



Both children and childcare staff found gardening to be a wonderful experience. The children were very interested and enthused about this new activity. Staff gained new knowledge about gardening, and were able to share in the children's excitement. The staff learned ways to serve new foods or new forms of foods in snacks and meals, and their attitudes about eating fruits and vegetables and modeling healthy behaviors for the children improved.



Sharing the Wonder

Many adults have experienced the joy of watching plants grow. Childcare gardening is one way of sharing that wonder with children and establishing a lifelong love of growing fruits and vegetables.

Children involved in the Team Nutrition project learned so much through the whole gardening experience. They found out that gardening can be a lot of work and that sometimes it doesn't turn out the way you expect. They also learned patience; the need to wait for plants to grow and crops to ripen before harvesting and enjoying them.

They enjoyed talking about the garden and were very interested in its progress. The children felt connected to their garden, and the gardening experience gave them a feeling of worth and accomplishment with the success of their new adventure.

An Opportunity to Explore New Foods and New Forms of Food

Toddlers and preschool children are naturally cautious about trying new things, including new foods. Before children accept a variety of foods, they often need repeated exposures to foods and the support of trusted adults. A garden is a great way to introduce unfamiliar fruits and vegetables and allow children to see, touch, and taste these foods. For example, a child who has helped plant green beans, watched them grow over time,

and smelled and touched them in the garden, may be much more willing to taste them.

Family-style meals, served both at home and at the childcare site, allow children to do a good job of eating. In family-style meals, children are offered a variety of healthful food and given the time and repeated neutral exposure to learn to like these foods. Children need adults to be supportive and to show them how to master eating a variety of foods. When adults, however, coerce, reward, or cheerlead children to eat, they can delay or halt children's acceptance of new foods.

Some parents don't eat a lot of different vegetables at home. Children may not be familiar with the vast array of fruits and vegetables available. A childcare garden with yellow pear tomatoes, a variety of peppers or leafy lettuce, for example, lets children and their parents explore new foods and new forms of food. Team Nutrition Gardening Projects found that the children were excited and eager — or at least willing — to try new foods that came from their garden. One childcare site reported that a child reluctant to eat any vegetables tried to eat and actually starting liking the vegetables that he helped grow in the garden!



Delivering Team Nutrition Messages through Fruit and Vegetable Gardening

Challenges-Solutions-Resources

Childcare gardening is a great way to introduce children to the joys of gardening, while inviting them to try a variety of new vegetables and fruits. It also offers parents and childcare staff the opportunity to get involved and to learn healthy nutrition messages.

With those benefits in mind, the Wisconsin Team Nutrition Program in 2004-05 provided grants of up to \$500 for seven childcare sites to grow their own fruit and vegetable gardens and promote nutrition messages among families and staff. Each site receiving a grant also mentored additional childcare sites in gardening with children. The experiences of sites involved in the project can serve as a model for other childcare sites.

Team Nutrition Gardening Project

As part of their training for carrying out grant duties and responsibilities, childcare staff attended a regional gardening training called, *Got Dirt?* When asked to rate this training on a scale from 1 (not helpful) to 5 (very helpful), participants gave it a score of 4.7. The *Got Dirt?* Garden Toolkit received a rating of 4.6 using that same scale. The connections that childcare staff made with University of Wisconsin horticulturists and Master Gardeners at the trainings proved to be very valuable to several sites.

A total of 17 childcare on-site gardens and one community garden were developed and maintained throughout the 2005 growing season. Children helped plant, water, weed, harvest, and prepare produce from the gardens. They also learned about fruits and vegetables through picture books and storybooks.

These books were rated 4.7 overall on the scale mentioned previously.

Children's books

Books provided to each childcare site included:

- *Growing Vegetable Soup* by Lois Ehlert
- *Eating the Alphabet. Fruits and Vegetables from A to Z* by Lois Ehlert
- *The Ugly Vegetables* by Grace Lin
- *Blue Potatoes, Orange Tomatoes: How to Grow a Rainbow Garden* by Roselind Creasy

Team Nutrition

Team Nutrition is an initiative of the U.S. Department of Agriculture that promotes good nutrition by

- Providing training to key decision-makers in schools and childcare sites,
- Providing training and resources to food service staff, and
- Facilitating collaboration among schools/childcare sites and the community.

The Wisconsin Department of Public Instruction administers the Wisconsin Team Nutrition Program.

Team Nutrition hoped to deliver several simple messages to children, families, and staff at participating childcare gardening sites, including:

- Eat a variety of foods.
- Eat more fruits, vegetables, and whole grains.
- Eat lower fat foods more often.
- Be physically active.

Reaching Children, Families, and Staff with Team Nutrition Messages

More than 500 children received healthful Team Nutrition messages in several ways during the gardening project, through active gardening, the use of garden produce in the classroom, in meals and at staff, family, and community events, and the reading of the children's books provided to each site.

More than 450 parents and 100 childcare staff members learned about good nutrition by visiting the gardens, reading newsletters, and attending meetings. For example, one site hosted a parent meeting attended by 25 parents and their children. The group planted seeds, made placemats, and enjoyed a nutritious meal.

Challenges and Solutions

The Head Start Program and the childcare centers that participated in the Team Nutrition Gardening Project as mentors to other childcare sites overcame a number of challenges in their efforts to deliver Team Nutrition messages through gardening.

Collaborating with Other Community Entities

Challenge

Recruiting mentor sites was a time-consuming task. Despite their best efforts, three of the grantees were unable to recruit the required minimum number of sites to mentor.

Solutions

Sites unable to recruit the required number of other childcare sites, instead, reached out to other community groups. The children from the Busy Bee Day Care center visited residents at the Deerview Meadows nursing facility. They shared the produce from the garden with the residents. Two other sites took extra produce to their local food pantry.

Gardening

Challenge

Most challenges centered on the gardens. Preparing the soil was difficult for a number of the sites. Many of these sites prepared plots that had not been cultivated recently.

Solutions

The sites overcame this challenge by adding peat moss and soil, renting equipment for tilling and removing sod, and using containers and raised beds. The site that chose to work in a community garden was able to avoid these challenges.



Gardening in a Childcare Setting

Challenge

Children walked on planted areas, plants died, and watering the garden proved difficult.

Solutions

Straw was placed between rows to keep children off planted areas. Additional plants and hoses were needed to remedy the other problems.



Wisconsin's "Got Dirt?" Initiative

Gardening is a great way to increase physical activity and access to healthful foods such as fruits and vegetables. To encourage these healthy lifestyle behaviors, the Wisconsin Department of Health and Family Services' Nutrition and Physical Activity Program and 5 A Day Program produced a garden toolkit in February 2005.

The garden toolkit, called, *Got Dirt?*, encourages school, community, and childcare groups to plant gardens as a way to increase fruit and vegetable consumption among the state's youth. This easy-to-use toolkit includes ideas for starting a fruit and vegetable garden, examples of successful gardens from around Wisconsin, and a multitude of gardening resources.

Local gardening experts were recruited to assist with the toolkit to ensure the inclusion of accurate and up-to-date gardening information. Local Master Gardeners, University of Wisconsin-Cooperative Extension horticulturists, community garden coordinators, and the Wisconsin Department of Public Instruction helped

develop the toolkit. These same individuals also helped design and present seven hands-on garden trainings held around the state in March and April 2005. With over 300 teachers, school staff, childcare providers, and community members attending, the trainings allowed attendees to access resources and to network with local gardening experts.

Future plans include expanding the *Got Dirt?* trainings to other areas of the state and piloting "hoop houses," or structures in which fruits and vegetables can be grown 10 to 11 months out of the year.

The *Got Dirt?* Garden Toolkit can be viewed and downloaded at <http://dhfs.wisconsin.gov/health/physicalactivity/gotdirt.htm>. Additional information on the toolkit can be obtained from:

Amy Meinen
Wisconsin Department of Health & Family Services
Nutrition & Physical Activity Program
608-267-9194
meineam@dhfs.state.wi.us



A Childcare Gardener's Best Friends

The Experts in Your Community

Every community has expert gardeners. Whether they are family members or horticulture professionals, these individuals can help childcare sites get their gardens off to a great start and make the process fun for children.

Some Team Nutrition childcare gardening grantees agreed to mentor other grantees. What did mentors learn about how to make their projects successful? Who in their communities helped them? Listed here are the personal insights of mentors and their recommendations for working with community experts.

Lessons Learned from Mentors

- Anyone with gardening expertise, including family members, can offer very helpful ideas about what to plant, how to improve the soil, etc.
- The county horticulturist was essential to the success of our project.
- Experienced Master Gardeners are a wonderful source of information.
- Gardening club members are delightful to work with and are dedicated to the children.

Recommendations of Mentors

- Don't be afraid to ask for help and advice. The church where our childcare site is located was a major partner in preparing the garden site, and a parent donated supplies.
- Find partners who can really help. Get volunteers (who have been screened to work with children) involved.
- Keep your gardening project child-led. Do not add (many) adult materials.
- Get community experts such as gardening club members and Master Gardeners involved.
- Find an individual (or several) that has gardening knowledge to volunteer throughout the growing season.



Other observations from the gardening mentors include

- The gardening training, *Got Dirt?* was very valuable. Even experienced gardeners would benefit.
- Be sure that the staff is committed to involving the children in gardening in a serious way.
- The mentoring role was an opportunity to get to know other childcare providers in the community. Networking was a wonderful unplanned outcome of the project.
- Children learned about plants' need for water. They also took extra produce to a food pantry. Parents really liked the project.
- The garden was a wonderful learning experience, not only for children, but for staff and parents also.
- City children seemed to enjoy the gardening experiences the most.
- Attend gardening training.
- Keep the gardens simple, colorful, and easy to move around in.
- Be sure to have a reliable source of water.
- Fruit and vegetable gardening is an opportunity to train staff about nutrition.

Frequently Asked Questions

Best Plants, Food Safety, and Childcare Meals and Snacks

Most Frequently Asked Questions

The Childcare Gardening Project received rave reviews from participating childcare sites. Along the way, participants discovered they had several questions about gardening procedures. Below are answers to their questions that may help others considering embarking on this “adventure” for children.

What are the best plants for children’s gardens in Wisconsin?

First-time gardeners, young or old, need to choose easy-to-grow, hardy fruits and vegetables. Gardening project participants found they had the most success with radishes, carrots, and lettuce. Radishes are great to plant early in the growing season because they offer a quick reward when children see them sprout within days of planting. Another suggestion from the childcare sites is to grow fruits and vegetables that can be eaten “as is” from the garden (after washing them), allowing children to enjoy their success in growing food right away. Foods to eat “as is” include peas, beans, tomatoes, strawberries, carrots, zucchini, radishes, and cucumbers.

Can garden produce be used to meet Child and Adult Care Food Program meal and snack requirements?

Yes, produce from the garden can be used as components in the meals and snacks served to the children. Some examples include¹

- **Snack:** Fresh Vegetables with Dip and Milk. One-half cup of fresh vegetables from the garden = one fruit/vegetable serving.
- **Snack or components for lunch:** Garden Fresh Tomato Sauce² over Pasta. One-half cup of tomato sauce = one fruit/vegetable component.
- **Snack:** Wrap-Ups³. Two tortillas, each containing 1/4 cup grated fresh vegetables = one fruit/vegetable component and one grain/bread serving per tortilla.

Use high-quality seeds and plants for a successful garden. Plant disease-resistant seeds when they are available. A list of catalog seed companies and recommended cultivars is available from your Wisconsin County Extension office. The publication referred to

above, *A1653 Vegetable Cultivars and Planting Guide for Wisconsin Gardens-2004*, is available by calling toll-free 877-WIS-PUBS (947-7827).



What can sites do to ensure that garden produce is safe?

Eating produce from the garden brings up the issue of food safety. In children’s gardens, only chemical-free and plant-based organic matter should be used. These include leaves, grass clippings (from a non-chemically treated lawn), compost, crop residues and peat moss. Any insecticides used should also be “organic” — obtain a list of these from your Wisconsin County Extension office. For a listing of UW-Extension offices around the state visit: www.uwex.edu/ces/ctyl/. Pest control suggestions are also found in the *Got Dirt? Garden Toolkit*; check the “Resources” section of this booklet for the website to view and download this publication.

Finally, fresh produce must be washed before it is eaten. A thorough washing under running water is sufficient. If children are going to eat directly “from the garden,” proper hand washing just before washing the produce and before starting to eat is the most important food safety measure.

¹Based on portion sizes for children 3-5 years of age.

² *Food, Family, and Fun: A Seasonal Guide to Healthy Eating*, 1996, p. 74, published by the United States Department of Agriculture.

³ *What’s Cooking at Super Wednesday*, 1998, compiled and printed for Grace United Methodist Church, Des Moines, Iowa.

Modeling Good Eating Habits for Children

Adults who are role models for eating well teach children and learn from children. Good role models give children joyful, trusting models of eating and, in turn, let children teach them what normal eating is like.

Children trust what is going on inside them. They pay attention to sensations of hunger and appetite. As they eat, they automatically tune into their sensations of satisfaction to know when they've had enough to eat.

Children don't stop eating when the rules say they should stop, but when they *feel* like stopping. They also trust the adults caring for them. They know it's OK to stop eating because they trust that adults will give them another good meal or snack before too long.

Provide yourself with reliable eating times

Just as you do with the children you serve, have meals at regular times, and plan snacks so you can make it comfortably to the next meal without being famished and preoccupied with food. Don't spoil your appetite for meals and planned snacks by grazing.

Pay lots of attention to eating when it's time - forget about it between times

Offer wonderful food, satisfying eating times, and a predictable schedule for eating. Without these, food becomes an issue *all* the time: "Is it time to eat yet? What is there to eat?" Tune into your food and pay attention to yourself and the satisfaction of eating when you eat.

Make mealtimes pleasant

For you and children to stay connected with the experience of eating, mealtimes need to be relaxed and low-key. Lots of commotion makes it hard to tune in and eat the amount you need. Sitting together and having a good conversation is also important.

Make meals both nutritious and delicious

Keep in mind that nutrition suffers if the joy goes out of eating. A variety of tastes, textures and colors bring satisfaction to all the senses. A meal with crispy oven-baked fish can include creamy scalloped potatoes or a baked potato with sour cream. Steamed broccoli might taste better to children if it is served with a little butter or cheese sauce. And include a simple dessert such as fresh fruit or a cookie.

Choose a variety of foods

Cultivate an attitude of curiosity and anticipation about new foods, but give yourself time to learn to like them. Do what children do with a new food:

- Look at it but don't feel you have to eat it.
- Put it on your plate but ignore it.
- Put it in your mouth but take it out again if you don't like it.
- After anywhere from five to 20 times of having the new food available, you might be ready to swallow a bite. But don't feel you have to eat more.

Just as a child does, you'll accept food better if you give yourself an out. Pair something familiar with the food you haven't yet learned to like. The goal is not just eating the food, but finding pleasure in it. People with limited food acceptance miss out on a lot of pleasure.

Don't diet

If you try to eat less than you really want, you'll become preoccupied with food and overeat when you get the chance. And if you don't trust your own internal regulators to tell you how much to eat, you are unlikely to trust children's—or even know that those regulators exist. Adults who diet are often cranky, tired, and out of touch with their bodies.

The key is trust

You can trust your body. Your body regulates itself with two basic, very powerful drives: hunger and appetite. Rather than fighting these drives, you'll be better off working with them. Give yourself permission to eat. It sounds like a contradiction, but out of this permission will come control. Forbidden foods won't be so enticing when you can have them anytime. Virtuous foods will be more appealing when you don't *have* to eat them. You'll be better off in the long run because you will be more satisfied, and you will probably consume fewer calories.

Reference:

Satter, E. *Child of Mine, Feeding with Love and Good Sense*. Bull Publishing Company, Palo Alto, CA 2000.

Nutrition Education for Young Children

Make it Hands On and Fun

Nutrition education can help young children learn healthy eating habits that they will carry into adulthood. Childcare providers help shape lifelong eating habits by introducing healthy foods and modeling healthy eating. Caregivers can teach basic nutrition concepts by leading children in a variety of simple nutrition education activities that are fun to do.

Preschoolers are very curious and eager to learn about the foods they eat. Nutrition education fundamentals include:

- Explaining the names and sources of different foods.
- Introducing a variety of foods.
- Exploring different textures, shapes, colors, smells, sounds, and tastes.
- Exploring the foods of different cultures.
- Discussing appetite; learning the body's signals for hunger and fullness.
- Discussing food safety, such as proper hand washing.

Children are more likely to eat specific foods if they have had a chance to look at, smell, feel, and taste them in a variety of settings and on a consistent basis. Food-based activities geared to the developmental level of participating children can also increase children's acceptance of a variety of foods. Such activities may include vegetable and fruit gardening, helping with food preparation, engaging the five senses with food, tasting parties, and eating with peers and adults.

Use simple, creative cooking projects to meet cognitive (language, art, math, and science), social, and emotional goals for children. Cooking activities expand vocabulary, allow children to predict, investigate, and experiment; and encourage cooperation and taking turns. Cooking projects also endow children with a sense of pride and accomplishment.

Mealtime can be more than just sharing good food. Meals and snacks are excellent nutrition education opportunities, especially when the atmosphere is pleasant and relaxed. Caregivers or parents should sit at the

table and eat the same foods that children eat. Eating is a social time and children can learn a lot from the conversations that take place at the table. Allow children to explore food by sight, touch, smell, taste, and even sound. Encourage them to describe the food. Talk about where the food came from, how it was prepared, and why our bodies need different foods.

What NOT to Teach Young Children About Nutrition

Researchers found that students in Kindergarten through Grade Six have difficulty understanding dietary guidelines and related graphics like the My Pyramid Food Guide. Children in Grades Three to Six still had problems understanding concepts like "avoid high-fat food" and "eat a variety of food." Dietary guidelines and the My Pyramid are tools for adult use. The abstract thinking needed to use and understand them is beyond the ability of most children under age 11.

Rule- and avoidance-based nutrition education lessons stress negativity and restraint. Such strategies are destructive and frightening for children. In contrast, optimism, self-trust, and adventure are a child's way of learning and doing things.

A list of nutrition education resources for the childcare setting is found in the "Resources" section.

Teaching Kids About Food, Step by Step

- Learn and practice the basics of good nutrition yourself.
- Serve meals consistent with current nutrition guidelines.
- Fill children's environment with nutrition-positive decorations, toys, and books.
- Equip your classroom or home for food preparation activities.
- Set up some food-growing experiences for children.
- Take children shopping for food.
- Arrange field trips to places where food is grown or manufactured.
- Use mealtimes as occasions to talk about food origins, cultural food habits, and age-appropriate nutrition concepts.

“Role Modeling the ABCs of Good Health” Nutrition Workshop for Childcare Garden Sites

The Team Nutrition staff developed a nutrition workshop, “Role Modeling the ABCs of Good Health,” to train childcare staff and parents about the importance of good nutrition for young children. Initially, the workshop focused on the 2000 Dietary Guidelines for Americans (DGA) but was revised to reflect new guidelines published in 2005.

The workshop included an overview of the current overweight-child epidemic, causes of the epidemic, and how childcare staff and parents can model the nutrition and health behaviors recommended in the 2005 DGA. Participants also had an opportunity to complete a personal assessment and develop an action plan to reach their own healthy lifestyle goals. In addition, participants received resources and healthy snacks at the workshops.

Childcare gardening grantees hosted seven workshops, reaching 110 childcare staff and five parents. Since

local nutrition professionals presented the workshops at host sites, the gatherings provided wonderful opportunities for childcare staff and nutrition professionals to share ideas and experiences. Reviews by participants were generally excellent.

In June, Team Nutrition staff invited all Childcare and Adult Care Food Program participants to help present the workshop to childcare staff and parents, resulting in 39 additional workshops attended by about 1,350 childcare staff and 55 parents. Team Nutrition provided the resource materials and helped identify and train instructors. Each childcare site was responsible for any honorarium or reimbursement for the instructor. Instructors from the community were used whenever possible and childcare staff received two hours of continuing education credit for participating in the workshop.

Improve Family Nutrition through Gardening

Today’s families are very busy. Good nutrition for many families is often a challenge when fast foods and convenience foods are easy, quick, and close at hand. But fruit and vegetable gardening at childcare sites offers many innovative possibilities for improving a family’s nutrition.

The Team Nutrition Childcare Gardening project showed that children’s enthusiasm about the fruits and vegetables they were growing pulled their families into the project in many ways. Children were excited to tell their parents at the end of the day about what they did in the garden and what new fruits and vegetables they had eaten. Parents were invited to visit the garden with their child(ren). Most parents enjoyed seeing the results of the gardens.

In addition to garden visits, parents often took home excess fruits and vegetables from the gardens. Several sites served garden produce at parents’ nights. Some

childcare sites also featured information about the garden and its produce in their parent newsletters. Several parents provided garden supplies and helped with the garden.

Overall, parents were very pleased with their children’s enthusiasm and interest in gardening. They were especially pleased when they learned that a child was trying new fruits and vegetables. Sharing in the bounty of the garden was also positive for the families.

Results suggest that the gardening project caused families to eat more vegetables and to try some new ones. Families providing snacks and treats also began sending more nutritious items to school after the garden project started. Finally, families learned more about growing fresh vegetables. We anticipate that some of these families will have their own fruit and vegetable gardens in the coming years.

Self-Assessment Results

Childcare Sites Offer Children More Fruits and Vegetables

Pre- and post-project assessments for childcare gardening sites showed that the sites improved the overall nutrition environment for children and involved children more in helping to prepare and choose fruits and vegetables. Participating sites improved both nutrition-related policies and practices.

Self-assessment results were analyzed for 19 childcare sites. Each site completed a pre-assessment of their nutrition and physical activity environments in winter 2005 at the start of the Team Nutrition Childcare Gardening Project and at the completion of the project in September 2005. When scores were compiled for the participating sites, the pre-project overall score was 1,344 compared to 1,388 on the post-project assessment.

The assessment asked childcare sites about their practices and if there was a policy in place to support each practice. Copies of the assessment tool can be found in the Resource section.

Assessments revealed that the sites improved policies and practices in several areas, including:

- Requiring prior approval of food brought from home to share during special occasions.



- Providing parents with a recommended list of foods, including fruits and vegetables, that are acceptable to bring and share.
- Allowing children to serve themselves all foods, within their capabilities.
- Using many opportunities during the day to teach children about food and healthy eating.
- Involving children in planning nutrition activities using real foods.

Improvements

Childcare sites said they specifically improved nutrition practices by:

- Serving children new and familiar fruits and vegetables.
- Featuring more fruits or vegetables as snacks.
- Using child-sized utensils and dishes.
- Giving children more opportunities to help prepare fruits and vegetables for meals and snacks.

Results from Gardening Project

As a result of the childcare gardening project, participating sites said they regularly:

- Communicated with parents about children's food and physical activity choices.
- Served meals and snacks that met Federal requirements and were based on the Dietary Guidelines for Americans.
- Served food in a form that young children could eat without assistance and without choking.
- Instructed children in hand-washing techniques and the need to wash their hands before and after meals and snacks.
- Gave children frequent access to water.

A Review

What More Can We Learn From the Childcare Gardening Sites?

Hoping to spread the practice of childcare gardening to centers across the state, Wisconsin Team Nutrition asked grantees for their final thoughts about the gardening projects. Following, is a summary of their observations.

What motivated you to participate in the childcare gardening project?

- We were excited because we felt it would be fun as well as educational. We hoped it would motivate our kids into trying new things to eat.
- My goal as a Master Gardener was to educate children with gardening and nutrition. When this grant became available, I knew it was for my center.
- My family has always had a garden, and I knew the children would enjoy the harvesting. I thought they would like to experience all the stages of gardening.
- We are advocates of good nutrition, and a garden sounded like a great teaching tool for staff, parents, and children. Also, the additional products, training, and funds help our program.
- Years ago we had a small flower garden here, and the children really enjoyed it. I liked the idea of getting a garden going again. I knew the fun of watching plants grow.
- We were working with members of our Garden Club on a regular basis. This seemed a natural extension to the already established gardening program.
- We wanted to try something new; we also wanted to show our class that you can grow your own food.

Do you see any changes in eating or physical activity since starting the gardening activities? If yes, what changes?

Staff observations about gardening

- We talk about foods in the garden; we walk more.
- We tried new veggies, fruits, and recipes.
- The children are better eaters now that we have

learned not to make faces or comments about the food in front of the children.

- We have a better awareness of gardening. This was another opportunity to create something new in the classroom.
- We are better role models. Helping the children taught us gardening tips.
- We see children trying new foods or foods served a different way. A few teachers asked for the recipes for vegetable dishes served at our center.
- We eat more fruits and veggies.
- We learned about growing, harvesting, and preparing fresh vegetables.

Staff observations about children's experiences

- The children's physical activity increased with their planting, weeding and picking their veggies. It also gave them a feeling of worth and accomplishment that they succeeded in their new garden adventure. They (the summer kids), I feel, were healthier than usual. I believe some of it was from physical activity in the garden, more vitamins from veggies, better mental health, and learning to work together. They also tried new dishes and fresh veggies that they may never have tried before. They shared their crops and some recipes with their families.
- The children learned how to improvise. They helped fill and carry water jugs after our faucet broke.
- They have been more receptive to trying new foods. They talk about the garden and enjoy visiting it and reaping the harvest.
- We had one child who would never eat veggies. He helped with the garden and then tried the veggies and started liking them.
- The children seemed excited about gardening, and talked about the veggies that they planted and how they like to eat them.
- The children enjoyed playing in the soil.

Staff observations about the involvement of families and parents

- Some parents were delighted that their children were so excited about trying new veggies.
- Families talked about it being a great program. Some said that even though they didn't eat many veggies at home; the project made them want to try to eat better.
- Children were excited about talking to parents at the end of the day about what they did in the garden or ate for a snack. Families tried new things such as yellow pear tomatoes, and red and yellow peppers.
- "Nutrition Notes" are a regular feature of our center's newsletter. We regularly hear how they help children become good eaters of veggies at home.
- Parents liked to see the results of the garden.
- Parents were able to take home veggies and looked forward to children gardening again next year.
- Parents enjoyed sharing in the bounty and helped by supplying seeds.
- Parents are sending more nutritious snacks and treats to school. They are limiting the junk food sent in the morning with children.
- Parents asked how well their child liked a particular vegetable and said they would try it at home.
- Initially some parents were opposed to the project, but as the summer went on and they saw their children responding, they became more positive.
- Families told us that children were talking about the garden.
- Families said they learned about growing fresh vegetables, the soil, watering and harvesting veg-



etables, plus taking harvested food home to serve at family meals.

- Parents wanted to help.

Additional comments on the impact of childcare fruit and vegetable gardening on eating and physical activity

- We had fun and would like to try it again next year.
- Some of my families don't eat a lot of different veggies or fresh veggies. This gave them a chance to eat some at my center and take some home to share.
- Many children hadn't seen different types of tomatoes or peppers. This was a great way to introduce children to them while caring for them. Getting outside and working in the garden increased our physical activity.
- The children enjoyed special vegetable snacks, as well as meeting the children from the center that we mentored who came to see our garden.
- The children learned so much through the whole gardening experience, i.e., how it can be a lot of work; how sometimes things don't turn out the way you think they will; and how we could have done things differently. They learned patience and did enjoy eating their crops. I would definitely do it again.
- Watching the garden grow and watering it provided calmness for the children. I think some of them will enjoy gardening when they get older. Thank you for this opportunity.
- I wish we had more time and fewer hot days so we could do more in the garden.

Resources

Web and Print Resources

Parent Fact Sheets

Enjoy the Benefits of Family-style Meals

How Do I Teach My Kids About Good Nutrition?

Keep Fresh Fruits and Vegetables Safe — Avoid the “Six Common Mistakes”

Your Child is Watching! You Are a Role Model for Eating

Quick Ideas for Healthy Family Meals and Snacks

Assessment Tool





Web and Print Resources for Gardening, Nutrition, Nutrition Education, and Produce

Gardening

Got Dirt? Garden Toolkit. The toolkit can be viewed and downloaded from following website: <http://dhfs.wisconsin.gov/health/physicalactivity/gotdirt.htm>.

Kids Gardening website: www.kidsgardening.com

Wisconsin Farm Bureau website with links to other produce sites (*includes Agriculture in the Classroom*): www.wfbf.com

Wisconsin Fresh Market Vegetable Growers Association website: www.wisconsinfreshproduce.org/index.html

Wisconsin Home Grown Lunch Project website: www.reapfoodgroup.org/farmentoschool

Nutrition

American Dietetic Association website: www.eatright.org

Centers for Disease Control website: www.cdc.gov/od/oc/media

National Cancer Institute, Produce for Better Health Foundation website: <http://cancercontrol.cancer.gov/5aday/>

New England Journal of Medicine website: www.nejm.org

Team Nutrition's website: www.fns.usda.gov/tn

United States Department of Agriculture's Agricultural Research Service Nutrient Data Laboratory website: www.nal.usda.gov/

United States Department of Agriculture's Food and Nutrition Information Center website: www.nal.usda.gov/fnic

Wisconsin Department of Health & Family Services WIC Nutrition Education website: www.dhfs.state.wi.us/WIC/nutritioneducation.htm

Nutrition Education

Cooper, J. & Levy, P. *Five A Day, Let's Eat and Play: A Nutrition Education Program for Preschool Children*. 1998. Order from NFSMI, 1-800-321-3054. Cost; \$18.00 + S&H.

National Food Service Management Institute. *More Than Mud Pies: A Nutrition Education Curriculum for 3 to 5 Year Olds in Day Care Centers and Preschools*. 1998. Order from NFSMI, 1-800-321-3054. Cost; \$11.75 + S&H.

Florida Department of Education. *Exploring Foods with Young Children*. Reprinted 1995. Order from NFSMI, 1-800-321-3054. Cost; \$7.25 + S&H.

Produce

California Asparagus Commission website: www.calasparagus.com

Chiquita Banana website: www.chiquitakids.com

Dole Produce Company website: www.dole5aday.com

Fresh for Kids by Sydney & Brisbane Markets website: www.freshforkids.com.au

Growers of Washington State Apples Healthy Choices website: www.healthychoices.org

Produce for Better Health Foundation website: www.5aday.com

Sunkist Company website: www.sunkist.com

Turbana Corporation website: www.turbanaland.com

Washington Apple Commission website: www.bestapples.com/kids/

Wisconsin Apple Growers Association website: www.waga.org/index.html

Wisconsin Berry Growers Association website: www.wiberries.org

Wisconsin Corn Growers Association website: <http://www.ncga.com>

Wisconsin Potato & Vegetable Growers Association website: www.wisconsinpotatoes.com

Wisconsin Red Cherries Growers Association website: www.wisconsin-cherries.org (*currently under construction*)

Wisconsin State Cranberry Growers Association website: www.wiscran.org

Parent Factsheet

Enjoy the Benefits of Family-Style Meals

Advantages

Family-style meals are a great way to introduce food and valuable skills essential for any child. They are meals in which children serve others and themselves, rather than the child sitting down to a plate of food already fixed for them.

Family-style meals also let parents model healthy eating behaviors. Role modeling is one of the best ways parents can introduce little ones to healthy behaviors that children can emulate.

At family-style meals, children learn many skills to fuel their development: social skills, language, manners, and motor skills. Children learn to use various utensils, to say, “please” and “thank you,” and to show patience in waiting to be served.

Besides learning skills that help children in school, career, or social situations as they grow older, family-style meals can greatly expand their food preferences. Seeing others try new foods can motivate the “choosy” eater to do the same. Children may also be more likely to try new foods if they have helped prepare the meal and set the table.

1-2-3’s of Family-style Mealtimes

- Turn off the TV. **Do not** allow it on until everyone is finished eating and the table is cleared.
 - Ask children to help set the table, giving each child appropriate tasks.
 - Make sure everyone has washed their hands properly and has the proper utensils.
 - Allow children to serve themselves small portions. Assist a child who needs help.
 - Offer second helpings when appropriate. It’s OK to **not** offer seconds on such foods as meat and dessert. Be sure to have extra servings of bread or other carbohydrate foods for a child who is extra-hungry.
 - Model good food safety practices when serving and passing food, and let children know what to do.
- For example, children need to know the “no double-dipping” rule and that it’s not appropriate to “taste” with the serving spoon. Be ready to replace a serving utensil with a clean one or even to replace food that is contaminated.
- Have enough bowls of food and serving utensils so a child doesn’t have to wait long for food.
 - Give children opportunities to practice skills such as spreading butter or jam, cutting soft food with a table knife, and rolling their own burritos.
 - Expect children to clean up their own spills but don’t make a fuss about it.
 - Keep the conversation at the table light. Don’t allow fighting or rudeness.
 - Do talk about the food being served (where it comes from, how it tastes or smells, or why it’s healthful to eat).
 - Adults should eat the **same** foods as the children, unless they have a medical or religious reason for avoiding certain foods, which should then be explained to children.
 - Respect children’s food preferences, and resist the temptation to interfere by using such tactics as rewarding a child who tries new foods or cleans his plate.
 - Expect the child to stay at the table for a reasonable length of time (about 20 minutes).
 - Allow a child who finishes early to leave the table and engage in a quiet activity.
 - **Do not** offer substitute foods to a child who ate very little or nothing. Just remind him when food will be offered again – at the next snack or mealtime.
 - Accept that some food will be wasted because of children’s changing appetites and food preferences. Don’t take it personally and don’t give up on serving new foods.

Parent Factsheet

How Do I Teach My Kids About Good Nutrition?

The best way to teach a child about good nutrition is to let them “help” you provide nutritious meals and snacks for your family. Allow children to have fun with food. Every meal contributes to the child’s knowledge and attitudes about food. It is extremely important that you act as a role model for nutritious eating and positive attitudes about food.



Offer hands-on learning opportunities about nutrition.

- Have a vegetable garden and let your child plant one or two fruits or vegetables that are “his” to water and watch grow.
- Find opportunities to let children experience food where it is grown, such as a visit to an apple orchard.
- Let your child help select nutritious food at the grocery store. You might let her choose one of the fresh fruits that you plan to buy. Or, be adventurous, and let her pick a new fruit to try together.

A common mistake that parents make when talking about food with children is to tell them there are “good”

and “bad” foods. Children should learn that all foods in moderation can fit into a healthy diet. Children also do not need “shoulds” and “oughts” to help them with their eating. When children are offered regular and nutritious meals and snacks in a positive environment, children have the ability within them to achieve nutritional adequacy, regulate food intake, and maintain a healthy weight.

Another great way to help children learn and develop positive attitudes about food is reading to them. Here are some suggestions for preschoolers:

Grandpa’s Garden Lunch. Caseley, Judith. New York: Greenwillow, 1990.

Eating from A to Z. Ehlert, Lois. New York: Harcourt Brave Jovanovich, 1989.

Growing Vegetable Soup. Ehlert, Lois. New York: Harcourt Brave Jovanovich, 1987.

Feast for 10. Falwell, Carolyn. New York: Clarion, 1993.

Parent Factsheet

Keep Fresh Fruits and Vegetables Safe Avoid the “Six Common Mistakes”

Keeping food safe is **very** serious business. Careful handling of food will prevent food-borne illnesses that may cause nausea, vomiting, diarrhea, and fever in children and adults. Often blamed on the “flu,” most food-borne illnesses result from these **six common mistakes**.

- 1. Poor personal hygiene.** To correct this mistake, make sure you and your child
 - Always wash hands before handling food.
 - Wash hands again after doing anything that might contaminate them such as sneezing, handling a pet or garbage, or digging in garden soil.
- 2. Using food that has already been spoiled or contaminated.** To prevent this mistake
 - Don’t use any fruits or vegetables that look spoiled (moldy foods, food with insect holes or rotted spots, anything that looks or smells suspicious) or infested with insects.
 - Buy only from reputable stores or dealers and check “use by” and “sell by” dates.
- 3. Storing food without proper care.** To correct this mistake
 - After harvesting or buying perishable fruits and vegetables put them into the refrigerator. Freeze any extra produce that cannot be used within a few days.
 - In the refrigerator, store fresh fruits and vegetables in crispers or on shelves **above** packages of raw or thawing meat or poultry. Put thawing meats in pans to catch drips.
 - Put prepared fruits and vegetables in glass or plastic containers, cover, label, and date.
 - Keep your refrigerator clean and check every day for foods that should be thrown out.
 - Toss leftovers that have been in the refrigerator more than 24 to 36 hours. Date, label, and freeze leftovers that you want to keep more than 24 to 36 hours.
 - Store foods away from chemicals, cleaners, and other non-food products.
- 4. Handling food carelessly.** To prevent this mistake
 - Keep perishable foods at **safe temperatures**. Prepared fruits and vegetables that will be eaten cold need to be kept in the refrigerator until serving time. Once a fruit or vegetable that is to be served hot is cooked or heated, it must be kept at 150°F or above. If you won’t be serving the hot foods soon, immediately refrigerate them in shallow pans. **Never leave foods out at room temperature to cool.**
 - Wash all fruits and vegetables thoroughly before using them.
 - Use a clean spoon each time you taste a food. **Never put a spoon used for tasting back in the food.**
- 5. Using unclean equipment or working in a dirty kitchen.** To correct this mistake
 - Don’t allow animals or cat litter boxes in the kitchen.
 - Air-dry rather than towel-dry dishes and utensils.
 - Use only cleaned and sanitized cutting boards and utensils to prepare fresh fruits and vegetables. Use a separate cutting board for raw meats and other foods. Get rid of any cutting board that has deep grooves.
 - Do not use cracked tableware or containers. Do not store or serve fruits and vegetables in imported or antique pottery or leaded crystal. Lead from these containers can leach into the food and cause lead poisoning.
 - Sanitize sponges daily in bleach water or in the dishwasher.
- 6. Allowing insects or rodents to infest food.** To correct this mistake
 - Remove garbage promptly and keep the outdoor garbage area clean.
 - Don’t store food under the sink.
 - Caulk openings and cracks around sinks, drain pipes, and water pipes.

Parent Factsheet

Your Child is Watching! You are a Role Model for Eating

Being a role model for your children lets you both teach and learn from them. Give your children a joyful, trusting model of eating. In turn, let your children teach you what normal eating is like.

Children Who Engage in Healthful Eating

- Trust what is going on inside them. They pay attention to sensations of hunger and appetite. They automatically tune in to their sensations of satisfaction to know when they have had enough to eat.



- Don't stop eating when the rules indicate but when they feel like stopping. They also trust the adults caring for them. They know it's OK to stop eating because they trust that an adult will give them another good meal or snack before too long.

Tips for Parents

Establish reliable eating times

Have meals at regular times. Plan snacks so you can get comfortably through to the next mealtime without being preoccupied with food. Don't spoil your appetite for meals by grazing.

Pay lots of attention to eating when it's time — forget about it between times

The idea is to provide wonderful food, satisfying eating times, and a predictable schedule for eating. Without these, food becomes an issue **all** the time: "Is it time to eat yet? What is there to eat?" Tune in to your food and pay attention to yourself when you eat.

Make mealtimes pleasant

For you and your children to stay connected with the experience of eating, mealtimes need to be relaxed and low-key. If there is a lot of commotion, it is hard to tune in and eat the amount you need. Turn off the TV, sit together, and have good conversation.

Have meals that are both nutritious and delicious

Keep in mind that if joy goes out of eating, nutrition suffers. A meal with crispy baked fish can include creamy scalloped potatoes or a baked potato with sour cream. Steamed broccoli might taste better served with butter or even cheese sauce. And include a simple dessert such as fresh fruit or a cookie.

Choose a variety of foods

Cultivate an attitude of curiosity and anticipation about new foods. But give yourself time to begin eating a new food. Like a child, you will do better with food acceptance if you give yourself an out. Pair something familiar with the food you haven't yet learned to like. Throughout, the goal is not just eating the food, but finding pleasure in it. People with limited food acceptance miss out on a lot of pleasure.

Don't Diet

If you try to get yourself to eat less than you really want, you'll become preoccupied with food and overeat when you get the chance. If you don't trust your own internal regulators to tell you how much to eat, you are unlikely to trust your children's — or even know that those regulators exist. Adults who diet tend to be cranky and tired. And you can trust your body. Your body regulates itself with two basic, very powerful drives: hunger and appetite. Rather than fighting these drives, it's better to work with them. Give yourself permission to eat and enjoy food. It sounds like a contradiction, but out of this permission will come control.

Parent Fact Sheet

Quick Ideas for Healthy Family Meals and Snacks

You're running late and you don't have a plan for supper. How can you put a healthful meal on the table? Here are a few timesaving steps to help you prepare easy and healthy family meals in just a few minutes.

Plan ahead

- Plan what you will serve. Plan at least the main courses for the week's meals.
- Keep meals simple. Healthy family meals can be quick to fix.
- Cook when you have more time. Make soups, stews, and casseroles ahead of time to freeze for those busy days.
- Do some tasks ahead of time. If you have a little extra time in the morning, wash and trim vegetables, make fruit salad, cook the pasta for salad or meat for tacos.

Shop smart

- Make a detailed shopping list arranged according to your store's set-up. Check your refrigerator, freezer, and pantry or other food storage before going shopping.
- Buy partly prepared food. Try grated cheese, cut-up chicken, and mixed salad greens.
- Stock your kitchen. Get foods you can make and serve

in a hurry such as canned or frozen fruits and vegetables, canned chicken and tuna, pasta, rice, and cheese.

Quick-to-Fix Family Meals

- **Hearty soup:** Add canned or frozen vegetables to tomato or chicken soup. Serve with crackers and cheese. Add a cookie for dessert.
- **Pasta dish:** Mix chopped lean ham or other deli meat and cooked vegetables into macaroni and cheese. Canned fruit (*in its own juice*) could be dessert.
- **Hearty stuffed potato:** Serve chili or chili-flavored beans and grated cheese over a baked potato. Short on time? Cook the potatoes in the microwave oven.

Fun lunch ideas

- **Muffin pizza:** Top half an english muffin with tomato sauce, slightly cooked and chopped broccoli, and cheese. Heat in toaster oven or broiler.
- **Waffle sandwich:** Slice a toasted frozen waffle in half. Make a sandwich with tuna or egg salad. Try a peanut butter and banana waffle-wich, too.
- **Peanut butter roll-ups:** Spread a soft tortilla with peanut butter and grated carrots. Roll it up. Try a roll-up with your favorite lean meat and chopped vegetables, too.



Easy-to-make healthy snacks

- **Milk shake ups:** Pour milk, fruit juice, and ice in a covered container. Shake and serve!
- **Cinnamon toast:** Toast whole wheat bread. Moisten with margarine spray. Sprinkle with cinnamon sugar. Serve with milk or juice.
- **Fruit pops:** Freeze fruit juice or pureed fruit in small paper or ice cube trays.
- **Snack mix:** Combine finger-sized cold cereal (*shredded wheat or oat rings*) with raisins.

2004 – 2006 Team Nutrition Project – Childcare

Promoting Healthy Eating Through Gardening

| | |
|----------------|------|
| Childcare site | Date |
|----------------|------|

Instructions

- A. Read each statement about practices in childcare settings and determine the extent to which it is implemented in your center or home. Also indicate if you have a **written** policy that addresses the practice by writing “yes” or “no” in the *Policy?* column.
- B. Write in the Comments column additional information, ways to improve, gaps or barriers.
- C. This assessment will be used to develop the Action Plan for the gardening projects.

Site self-assessment: all childcare sites must complete the assessment at the beginning and again at the end of project period.

| Statement | Never | Some-times | Always | Policy? | Comments |
|--|-------|------------|--------|---------|----------|
| Parents receive information about our nutrition and physical activity policies when they enroll their children. | | | | | |
| We/I provide parents with information about how to foster healthy eating and physical activity at home. | | | | | |
| We/I regularly communicate with parents about food and physical activity choices of their children. | | | | | |
| Meals and snacks meet the requirements of the CACFP and are based on the Dietary Guidelines for Americans. | | | | | |
| New and familiar foods are served to children. | | | | | |
| Snacks include a fruit or vegetable. | | | | | |
| Children decide how much and which foods they will eat. | | | | | |
| Mealtime is relaxed and calm. | | | | | |
| Food is served in a form that young children can eat without assistance and without choking. | | | | | |
| If bringing food from home is permitted for sharing during special occasions, prior approval of the food is necessary. | | | | | |
| If bringing food from home is permitted, parents are given a recommended list of foods which includes fruits and vegetables. | | | | | |
| Quiet activity precedes mealtime. | | | | | |
| Meals and snacks are scheduled at regular times. | | | | | |
| Sticky, sweet foods are served only at meal or snack times. | | | | | |

| Statement | Never | Some-times | Always | Policy? | Comments |
|--|-------|------------|--------|---------|----------|
| Children serve themselves all foods within their capabilities. | | | | | |
| Utensils and dishes are sized for children and designed for their easy use. | | | | | |
| Furniture is small enough to allow children to eat, serve themselves, and pass food. | | | | | |
| Adults sit and eat the same foods with children. | | | | | |
| Adults join in physical activities with children while providing adequate supervision. | | | | | |
| Adults discuss characteristics of food and foods of different cultures during mealtimes. | | | | | |
| Neither food nor physical activity is used as an incentive or punishment. | | | | | |
| Children with special needs have their nutrition and physical activity needs taken into account. | | | | | |
| We/I take advantage of many opportunities during the day to teach children about food and healthy eating. | | | | | |
| We/I take advantage of many opportunities during the day to teach children about physical activity. | | | | | |
| Children are involved in planned nutrition activities using real foods. | | | | | |
| Children are given opportunities to help prepare fruits and vegetables for meals and snacks. | | | | | |
| Television is used as an educational tool—otherwise its use is restricted. | | | | | |
| Children are instructed in hand washing techniques and wash their hands before and after meals and snacks. | | | | | |
| We/I monitor sanitation, hygiene, and food handling to assure a healthy eating environment. | | | | | |
| Our/My activities, equipment, and facilities are developmentally appropriate and safe and based on the National Association for Sport and Physical Activity guidelines for young children. | | | | | |
| We/I have a physical activity and nutrition curriculum. | | | | | |
| Our/My program includes play and planned movement experiences, both indoors and outdoors. | | | | | |
| Children have frequent access to water. | | | | | |

