

# Nutrition in the Classroom

To help prevent the development of childhood overweight and chronic diseases, it is important that healthful eating habits are established early in life. Children learn about foods through formal education, first-hand experiences, hands-on approaches, observation, and what is served to them. Therefore, a variety of healthy eating teaching strategies, behavior modeling, and education opportunities need to be presented to children everyday.

The preschool years are a critical time to introduce and encourage healthy nutrition because early exposure to healthful foods helps children establish good eating habits that carry into adulthood. Children establish food preferences and dietary habits during the first six years of life.<sup>1</sup>

It is essential to introduce a variety of healthy foods to children at an early age.

In the previous module, the causes and health concerns regarding childhood overweight were introduced. This module will suggest ways to support healthy eating in the classroom, support our choosy and slow eaters, link classroom activities to nutrition, provide parents with nutrition information, address food served at celebrations, and provide tips for incorporating nutrition into everyday classroom experiences.



## Supporting Healthy Eating

Head Start staff have the privilege of eating meals and snacks with children every day. This time is a great opportunity for staff to talk about food and model healthy eating behaviors. There are also many developmental and socialization benefits to children when meals and snacks are eaten together with their classmates and with adults. For these reasons, children should be encouraged to participate with the social and educational interactions of the meal or snack, even if they choose not to eat.

Socialization skills are practiced when children ask for food to be passed, assist each other, talk to each other and adults at the table, and practice their manners. Motor skills are developed when children serve themselves because they practice lifting, pouring, scooping, and aiming. Head Start classrooms should be equipped with furniture and eating utensils that enable children to eat, to serve, and to pass food without difficulty. Eating together should also include nutritional benefits and education.

Eating together at the Head Start table is a time when children develop some of their food preferences. Head Start meals provide the opportunity for children to become familiar with flavors, smells, textures and a variety of foods (PS 1305.23(c)(1)). Head Start staff should encourage children to help with meal service by setting the table and cleaning their own dishes by putting them in the dish pan (PS 1305.23(c)(7)).



Children should be verbally encouraged to serve themselves, and containers and scoops sized for children should be provided. Children who serve themselves and are properly supported by adults can learn to serve themselves reasonable portion sizes and learn how to self-regulate their food intake. This supports the division of responsibility concept for feeding children.

Ellyn Satter, a child nutrition expert, pioneered the concept of the division of responsibility for feeding children. She reminds us that caregivers and parents are responsible for the what, when and where children are fed. Children are responsible for how much they choose to eat and whether they choose to eat.

Based on the division of responsibility theory, Ms. Satter discourages power struggles relating to food. She notes that struggles have the potential to set children up for a lifetime of dysfunctional eating. Caregivers trying to control the amount of food children consume can override the child's natural ability to regulate intake. Repeated prompts to eat, using food as a reward or punishment, restricting non-nutritious foods, or using other forms of manipulation to control a child's food intake may promote a lifetime of overeating or refusals to eat (PS 1305.23(c)(2)).<sup>2</sup>

Head Start staff members need to understand this division of responsibility to help children develop healthy eating habits.





Positive role models can have great influence on children eating food and forming healthy eating habits. Children learn about foods through formal education, first-hand experiences, hands-on approaches and observation.<sup>3,4</sup> When staff eat the same foods as children, and serve as role models, they are sending the message “do as I do” not “do as I say.”

Since children are influenced by the foods they see staff eating, staff should not eat or drink foods in front of the children that are not on the daily menu (PS 1305.23(c)(4)). Staff should also avoid negative facial expressions, body language or verbal cues in regard to the food being served. Staff should also be careful to limit children seeing them eat high fat, especially sweet or salty snacks, or sugary beverages in the classroom and the community.

#### THE PROVEN POWER OF FRUITS AND VEGETABLES

Providing children and adults a positive message about what is healthy results in better eating habits.

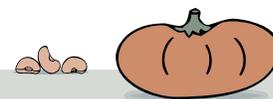
In one study, families were either counseled on increasing fruit and vegetable intake or decreasing fat and sugar intake. Those counseled to eat more fruit and vegetables ate a healthier diet than those told not to eat fat and sugar.<sup>5</sup> Therefore, encouraging healthy foods consumption is preferred over telling children what not to eat.

When eating meals with children, staff should talk with them about the foods served and the health benefits of the food. For example, staff can use positive messages like “steamed carrots are my favorite orange vegetable” and “I eat carrots to help me see better.” These simple statements reinforce the learning of colors, the categorization of vegetables, and the knowledge that carrots are important for vision. A child’s decision to eat foods will be influenced by what adults eat and by what he or she are encouraged to eat by adults.



### Supporting the Slow and Choosy Eater

Preschool-age children go through a normal developmental phase called “neophobia,” or fear of new things, such as new foods. This stage is often called the “picky eating” or “choosy eater” stage. Research by childhood nutrition experts note that it can take up to a dozen times before a food becomes familiar to a child. To help preschoolers overcome the natural tendency to reject new foods a variety of foods should be consistently offered.<sup>1</sup> Eventually food will become familiar to the child and this will lead to more healthful eating habits.



*In one study, families with obese parents and non-obese children were randomized to groups in which parents were provided a comprehensive behavioral weight-control program and were encouraged to increase fruit and vegetable intake or to decrease intake of high-fat/high-sugar foods. Child materials targeted the same dietary changes as their parents without caloric restriction.*

*Both groups received the same basic information, but the groups differed in the behaviors targeted for change. In the group that increased fruit and vegetable consumption, the goal was to increase intake of fruits and vegetables to reach at least two servings of fruits and three servings of vegetables per day. Participants in the decreased fat and sugar group were provided guidance to reach a goal of no more than 10 servings of high-fat/high-sugar foods per week.*

*The group counseled to increase fruit and vegetable decreased their intake of fat and sugar even though nutrition education did not address sugar and fat. Parents in the increased fruit and vegetable group showed significantly greater decreases in the percentage of overweight than parents in the decreased high-fat/high-sugar group. Education about how to eat healthy was more likely to lead to improved diets than education about what not to eat, as measured by increases in fruit and vegetables and decreases in fat and sugar.<sup>5</sup>*

And, just like children overcome their fear of going down the slide at the playground, they will also overcome their fear of new foods. Thus, the more times the food is introduced the less likely the child will be afraid and the more likely the food will eventually be eaten.



Food jags in children, when children only want to eat one food, are common. Food jags rarely last long enough to be harmful. Children who are energetic and growing are probably eating enough. The strategies for addressing choosy eaters can also be used to get children through the food jag phase.

Head Start staff can help children overcome their choosy eating by allowing them to explore and taste new foods. During Head Start meals and snacks, sit the choosy eater with adventurous eaters so they can observe and learn



to accept new foods. Suggest the choosy child try a very small serving, 1-2 tablespoons, of the food and praise the child for tasting instead of talking about what a choosy eater the child is. When a child says he is full or finished, let the child stop eating even if there is still food left on his plate. If there is a child in the class that always throws food away, work with that child individually to select more reasonable portion sizes.

Acceptance of new foods takes time. Children need to learn and become familiar with food by smelling, examining its texture, looking at it, and experimenting with it. Staff should be careful not to discourage this behavior by calling it “playing with your food” or referring to it in a negative way. Rather, staff can help children explore new foods by teaching about flavors, textures and colors.



Canned pineapple is tangy, carrots are crunchy, broccoli is green, milk is smooth and white.

Eating food also takes time. Some children will be slow eaters and should be allowed to eat their meal at their own pace. Research in adults suggests that slower eaters are less likely to be obese.<sup>6</sup>

A staff member or volunteer should stay with the child until she is done eating. It might help to sit slower eaters together and identify a staff member that will stay at the table with the children until finished. To allow slower eaters time to eat, schedule activities after meals that do not require group participation and cause the child to rush (PS 1305.23(c)(3)).

## Classroom Nutrition Education

Integrating nutrition and physical activity into all curricula and domains of learning provides children with repeated exposure to information and principles for healthy living. Repeated exposure and experience with nutrition education and physical activity will influence children in a positive way. Incorporation also tends to “normalize” healthy eating and lifestyles for children. Children will begin to understand that nutrition and activity are a regular and essential part of each day, thus reinforcing a lifetime of healthy eating and physical activity habits.



To improve the acceptance of new foods, staff can teach a lesson before meal time about the new food. For example, if the new food is pineapple, a book about characters in Hawaii eating pineapple could be read at circle time. Children could be asked if they have ever have eaten fresh or canned pineapple, if pineapple is a fruit or a vegetable, if they think pineapple grows in Alaska, and if anyone would like to try eating pineapple at lunch? Taste tests can be conducted of fresh versus canned pineapple to promote sensory exploration of new foods. Using circle time to set the stage for lunch will improve familiarity and curiosity about the foods served at lunch.





Circle time can also be used to teach children about ethnic or traditional foods before serving. For Alaska Native foods, an elder or fisherman can tell the story of fishing. Fishing gear such as nets and poles and a filleting demonstration can be shown to the children. To introduce and teach about ethnic foods and cultures spend a whole week to build up anticipation and end the week with a cultural meal.

On the first day introduce traditional-style clothing and place some in the dramatic play area. Have the children make decorations using traditional styles. The next day, play traditional music, practice dance steps, and play with musical instruments. The next day, read a book about traditional foods, show pictures from a cookbook, and talk about the foods. Then, practice making a food. For Mexican culture, roll out tortillas, for Italian use the pasta maker, or for Native Alaskan sort and wash blueberries. On the last day, the children will be excited to eat the new foods.



Another way to introduce children to new foods is to let them help prepare the food.

Classroom staff and food service staff will need to plan and work together to set up the classroom for these events. Smaller groups of children can also help with food preparation in the kitchen. When helping in the kitchen, food service staff need to assure children are properly supervised around hot stoves and sharp knives in addition to following proper sanitation regulations. In the kitchen, children can help measure and stir ingredients. Children will be curious about how food changes when cooked. Show children how food looks, smells, and tastes before and after it is cooked. For example, broccoli changes shades of green and is no longer crunchy, pasta noodles do not smell much before cooking, and toast becomes brown and crunchy.

## PLAY WITH YOUR FOOD

### Pea Salad

- 4 cups cooked peas  
(two 10-ounce packages frozen peas)
- ¾ cup finely chopped onion
- ½ cup finely chopped radish
- ¾ teaspoon crumbled dried tarragon
- 3 tablespoons olive oil
- 1½ tablespoons white-wine vinegar
- 1/8 teaspoon salt
- ¼ teaspoon pepper



In a bowl toss together the peas, the scallion, the radish, the tarragon, the oil, the vinegar, salt and pepper to taste until the salad is combined well.

Serve chilled. Makes eight ½ cup servings.

### Blueberry Compote

- ¼ cup water
- ¼ cup 100% apple juice
- 2 cups blueberries (10 oz)
- 1 tablespoons lemon juice

Boil water and 100% apple juice in a 1-quart heavy saucepan, uncovered, 5 minutes. Stir in blueberries and simmer, stirring occasionally, until blueberries begin to burst, 3 to 5 minutes. Remove from heat and stir in lemon juice.

Serve warm or chilled on whole wheat pancakes or French toast. Makes about 1½ cups.

### Vegetable Puppets

The ideal stage for a vegetable puppet show is, naturally, the dining table. The puppeteer hides below, holding the puppets above the edge.

Materials suggested:

- Large carrots • Popsicle sticks • Parsley
- Peanut butter (or cream cheese if students have peanut allergies) • Raisins or olives
- Celery • Green beans

To make a vegetable puppet, place a popsicle stick into the bottom of the fat end of a peeled carrot. Using peanut butter, or cream cheese if students have peanut allergies, as glue, affix raisins or olives for eyes and a nose, a slice of celery for the mouth, and parsley sprigs for the hair. For the arms and legs, cut green beans in half and affix with generous amounts of peanut butter or cream cheese. The puppets can be eaten as a snack when served with a glass of milk.

A small but growing number of students have severe peanut and/or tree nut allergies. Before providing foods made with peanuts, peanut butter or other nuts as a snack, make sure there are no food allergy restrictions (PS 1305.23(c)(6)).



Food preparation and demonstrations in the classroom are a wonderful way to increase familiarity and introduce new healthy foods to children. This will also increase understanding of cooking and begin



to develop some skills and interest in food preparation. Generally, preschoolers are able to mix or stir food, make sandwiches, spread soft spreads, tear greens, help to pour and measure, set the table, and help clean up.

Children could help make a cold green pea salad using thawed frozen peas. With assistance the children could measure the peas, chopped onion, chopped radish, oil, vinegar, salt and pepper, and stir it all together. Or children could make fruit compote from blueberries picked during a field trip. The blueberry compote can be eaten with pancakes the next day.

Meal preparation can be used to teach numbers, colors, textures, patterns and sequencing. While preparing, ask children questions such as “what shape are peas,” “what color are blueberries,” and “are peas crunchy or soft?” Helping prepare the food will increase the child’s interest in eating the food. (See previous page for recipe.)

*Gregory, the Terrible Eater*  
Mitchell Sharmat

*Bread and Jam for Frances*  
Russell Hoban

*The Carrot Seed*  
Ruth Krauss

*Eating the Alphabet:*  
*Fruits and Vegetables from A to Z* Lois Ehlert

*Growing Vegetable Soup*  
Lois Ehlert

*Green Eggs and Ham* Dr. Seuss

*The Very Hungry Caterpillar*  
Eric Carle

*Stone Soup*  
Marcia Brown

*Bread, Bread, Bread:*  
*(Foods of the World)* Ann Morris

*Lunch*  
Denise Fleming

*Pancakes, Pancakes!* Eric Carle

*We Like to Nurse* Chia Martin

*Picky Nicky* Cathy East Dubowski

*Walter the Baker* Eric Carle

*Peanut Butter and Jelly:*  
*A Play Rhyme* Nadine Westcott

Children are curious about food. Allowing children to play with food provides children the opportunity to see it, smell it, touch it and test it before eating. Use food items in edible art projects, such as making flowers or faces from fruit and vegetable pieces. Making vegetable snack puppets helps children experiment with vegetables. Almost any fresh, thawed frozen, or canned vegetables can be used.

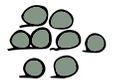


Display and read children’s books which relate to and present a positive view of healthy eating and physical activity. Children love listening to stories at circle time. Select books and activities to help weave a theme through the entire day or week. For example, if a book about baking is read, teach the children about yeast breads. They can even help knead dough as a classroom activity.



Teaching children about food sources can increase a child’s curiosity and acceptance of food.

Along with books and explanation of foods, consider growing edible plants in the classroom. Many plants can be started from seeds indoors in wax-lined Dixie cups or in plastic four or six-pack plant containers. When possible, provide opportunities to learn gardening and growing of fruits and vegetables by having a garden at the center or by participating in a community garden.



VEGETABLE PUPPETS INSPIRED BY  
[familyfun.go.com/arts-and-crafts/cutpaste/feature/famf38foodart/famf38foodart3.html](http://familyfun.go.com/arts-and-crafts/cutpaste/feature/famf38foodart/famf38foodart3.html)

READ IT! READ IT! for Early Childhood Educators.  
Books for reading with your preschooler, as well as music, puppets and other giggly fun!  
[lexicon.ci.anchorage.ak.us/guides/kids/booklists/storypackets/index.html](http://lexicon.ci.anchorage.ak.us/guides/kids/booklists/storypackets/index.html)

Alaska may not have many traditional orchards or farms, however most areas have a local gardener or person with farm animals. Ask your local gardener or farm animal owner if your class can take a field trip to his or her place. For gardens, visit several times throughout the year to help the children understand the progression of the plant growth cycle. Integrate the learning of the garden or farm field trips into the curriculum by teaching why certain foods grow in Alaska's climate. Watch the farm animal owner milk his or her cow or collect eggs from nests. When possible match the foods seen at the garden or farm with foods served in the Head Start classroom that week.



There are many opportunities in Alaska to teach about local and traditional food sources. Field trips can be taken to pick wild foods such as blueberries, fiddleheads, or beach asparagus. Invite a local hunter to share a story about fishing or hunting, talk about gun safety, and teach children how to butcher an animal. If Department of Conservation Alaska Food Code regulations are followed, the blueberries, fiddleheads, beach asparagus and meat can be prepared and served to the children as a meal.

Designing and decorating the classroom can support nutrition education. The creative play area can be stocked with models of healthy food, cooking utensils and empty boxes or containers of healthy food. The classroom walls can be decorated with posters showing good food. Pictures of vegetables can be used to help teach letters and numbers, name tags can be made with the child's favorite fruit, placemats can depict a plate with reasonable child-sized portions.



## Parent Nutrition Education

A clever idea to educate parents, improve nutrition at home and establish healthy habits is to assign Head Start children "homework" that promotes good eating and physical activity. On the weekend "homework" could be: eat five servings of fruits and vegetables over the weekend; be active for at least 30 minutes each day; help your parent in the kitchen; sleep more than eight hours on Saturday night; and eat breakfast each morning.

Teachers must be careful to assign homework that is attainable for the children. Homeless children may be unable to help in the kitchen, some children may not have breakfast foods at home, and some may not have access to canned, frozen or fresh fruits and vegetables. However, adjust the homework to meet the needs of the children in your classroom.

Head Start menus and newsletters are an excellent way to inform parents about the nutrition education learned in the classroom (PS 1305.23(d)). Newsletters can include healthy recipes that emphasize foods provided to Women, Infants and Children (WIC) recipients since a large percentage of Head Start families are eligible for the WIC program. The recipes found on the state of Alaska WIC Web site use WIC ingredients and ingredients common to Alaska.



Classroom menus can be written to emphasize nutrition messages such as "low-fat milk," "whole wheat rolls," and "vitamin A-rich sweet potatoes." Adding nutrition information to menus and newsletters will help educate families and provide them with useful information.

## Celebrations

Head Starts can help promote a positive learning environment by providing healthy celebrations that shift the focus from food to the event. Replace food with a variety of activities, games and crafts that children enjoy. If food is served, make it count with healthy choices and as part of the regular meal or snack. Head Starts can take advantage of classroom celebrations and serve food that tastes good, is nutritious, and provides a consistent healthy food message. Centers should have established food policy or nutrition guidance regarding celebrations available to parents and community members that help plan Head Start events.



### ALASKA'S FOOD CODE

SECTION ONE: 18 AAC 31.205: *Traditional wild game meat, seafood, plants, and other food donated to an institution or a nonprofit program.*  
SECTION TWO: 18 AAC 31.210: *Prohibited food.*



The policy or nutrition guidance regarding celebrations should include information about why the policy is important. Party planners can be reminded that healthy kids learn better and that Head Start wants to provide consistent messages about healthy behaviors. The policy should support the classroom lessons students are learning about health instead of contradicting them. Healthy celebrations promote positive lifestyle choices to reduce children’s health risks and improve learning. The excitement children feel from the event may help improve their acceptance of healthy foods.



Development and adoption of the celebration policy should involve parents, community members, Head Start staff and food service staff (PS 1305.23(b)(4)). In general, the policy should discourage celebrating with especially high sugar foods such as soda pop, candy bars and cakes. The policy should address food with trans fats and high fat foods such as fried or highly processed foods. Communities have been supportive of no smoking and weapon policies at the Head Start. With the proper information, parents and communities will support a healthy celebration policy too.



## Establish Healthy Eating Habits

Head Start staff have the opportunity to help children establish healthful eating habits early in life by increasing exposure to foods through a variety of teaching and support strategies. Providing children with hands-on experiences, formal education, healthy modeling of eating, proper support, consistent messages, and educating parents will help children develop good eating habits that carry into adulthood. Establishment of healthy eating habits is critical to prevent and reduce the incidence of childhood overweight and associated chronic diseases.

### MODULE TWO REFERENCES

- 1 Birch, L. Dimensions of preschool children’s food preferences. *Journal of Nutrition Education and Behavior*. 1979;11:77-80.
- 2 Ellyn Satter Associates. [www.ellynsatter.com](http://www.ellynsatter.com). Accessed October 18, 2006.
- 3 Ray, J.W., & R.C. Klesges. Influences on the eating behavior of children. *Annals of the New York Academy of Sciences*. 1993;699:57-69.
- 4 Nicklas, T., T. Baranowski, J.C. Baranowski, K. Cullen, & L. Rittenberry. Family and child care provider influence on preschool children’s fruit, juice, and vegetable consumption. *Nutrition Reviews*. 2001;58:224-35.
- 5 Epstein LH, Gordy CC, Raynor HA, Beddome M, Kilanowski CK, & Paluch R. Increasing Fruit and Vegetable Intake and Decreasing Fat and Sugar Intake in Families at Risk for Childhood Obesity. *Obesity Research*. 2001; 9:171-178.
- 6 Shigeta H, Shigeta M, Nakazawa A, Nakamura N, & Yoshikawa T. Lifestyle, Obesity, and Insulin Resistance. *Diabetes Care*. 2001;24:608.

### RECIPES, MENUS AND MORE!

#### THE STATE OF ALASKA WIC

[hss.state.ak.us/ocs/nutri/WIC/recipes/default.htm](http://hss.state.ak.us/ocs/nutri/WIC/recipes/default.htm)

#### THE AMERICAN DIABETES ASSOCIATION

[vgs.diabetes.org/recipe/index.jsp](http://vgs.diabetes.org/recipe/index.jsp)

#### THE AMERICAN DIETETICS ASSOCIATION

[eatright.org/ada/files/Healthy\\_Eating\\_Recipes.pdf](http://eatright.org/ada/files/Healthy_Eating_Recipes.pdf)

#### THE AMERICAN HEART ASSOCIATION

[americanheart.org/presenter.jhtml?identifier=1200010](http://americanheart.org/presenter.jhtml?identifier=1200010)

#### PROVIDENCE HEALTH SYSTEMS IN ALASKA

[providence.org/alaska/library/whatscookin.htm](http://providence.org/alaska/library/whatscookin.htm)

#### U.S. DEPARTMENT OF AGRICULTURE

[healthymeals.nal.usda.gov/nal\\_display/index.php?info\\_center=14&tax\\_level=2&tax\\_subject=230&topic\\_id=1191&placement\\_default=0](http://healthymeals.nal.usda.gov/nal_display/index.php?info_center=14&tax_level=2&tax_subject=230&topic_id=1191&placement_default=0)