

# Gently guiding young children to eat their broccoli

Lunch is served, and two 4-year-olds look at their plates.

“What are those little green trees?” asks Jason.

“It’s broccoli,” says Marty. “I eat it at home all the time. It makes me strong and fast.” He plunges his fork into a small floret, pops it into his mouth, and chews proudly.



Getting young children to eat vegetables can be a constant struggle for child care providers. Children enter child care with a wide variety of food preferences. These preferences begin to develop as babies transition from a milk-based diet to solid food.

Many young children have been raised on fast foods as parents struggle to juggle their personal and professional lives. Parents often rely on child care providers to help their children enjoy eating vegetables, whole grains, and other nutritious foods thought to prevent chronic disease (Dietary Guidelines for Americans 2015). For this article, *vegetables* refers to vegetables, fruits, and whole grain-rich foods as a collective term.

Child care providers are obligated to serve certain types and amounts of foods to meet state and national nutrition standards. Pressure to feed young children nutritious meals can also come from busy parents who often do not have the time to cook or eat with their families.

Child care provides an optimal environment to influence young children’s relationship with nutritious food (Birch and Fisher 1998). More than two-thirds of children between 3 and 5 years of age attend some form of child care each week (National Center for Education Statistics 2016).

What’s more, child care providers and teachers play a large role within the context and environment

of their programs by encouraging, modeling, and promoting the development of healthy food preferences. Providers play this role through choosing which vegetables to serve to children in their care, how often they serve vegetables, and whether or not they consume vegetables themselves while sitting with children during meals.

## Why are vegetables important?

According to the Centers for Disease Prevention and Control (2014), children do not eat enough vegetables every day. About a third of their vegetable intake consists of white potatoes, mainly fried potatoes and potato chips, which are high in fat.

A high-fat diet can cause extra weight gain and obesity. The prevalence of obesity in young children between 2 and 5 years of age in the United States is 8.9 percent, with the highest percentages among Hispanic and non-Hispanic black children (CDC 2016).



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Obese children are at high risk for a host of health problems, including type 2 diabetes, heart disease, bone and joint disease, asthma, and sleep apnea (CDC 2017). They are also more likely to be teased by peers and to develop low self-esteem. In the long term, obese children will likely develop serious health problems, including cancers, as adults.

We can help reduce the risk of these health problems by helping children develop a preference for vegetables and providing ample vegetables in meals and snacks.

## A recent child care study

Collaborative research, by child development and nutrition educators as well as child care specialists at Texas Woman's University in Denton, has been conducted in child care learning environments over the past five years. Using assessment data on an existing bilingual health program collected in a Head Start school, researchers developed five nonfiction books, each covering one food group. The food groups were based on MyPlate ([www.choosemyplate.gov/](http://www.choosemyplate.gov/)), an education program of the USDA that replaces its Food Pyramid.

The books were designed to test whether or not visual exposure to healthful foods using real pictures of foods and children eating them would increase consumption of these foods. The materials were then tested in 17 child care centers in North Texas.

Results indicated intake of healthful foods increased from pre- to post-intervention in all inter-

vention groups. Although the increase was low (7 percent), participating preschoolers did change their attitudes and behavior toward the different foods when visually exposed to them, possibly indicating an increase in familiarity, acceptance, and consumption over time.

Studies like this, combined with previous research, suggest important practices that can help children prefer and consume more vegetables.

## Avoid controlling behaviors

Current obesity prevention research and policy recommends avoiding practices that seek to control how children eat. Among these controlling practices are using food as reward and praising children to clean their plates, including eating their vegetables (Satter 2000). Studies have shown that providers and teachers who avoided these practices found the controlling behaviors unnecessary.

To encourage children to eat vegetables, consider these strategies:

- Provide a stress-free experience. Children will be more likely to try vegetables when they feel comfortable when served them.
- Don't force children to eat what they don't want. Forced consumption can cause young children to associate negative consequences with these foods, preventing them from eating vegetables in the future.
- Sit with children and talk to them while they are eating. Teachers and providers can help children develop healthful food preferences while also modeling social skills and positive conversation.
- Remember that parents and providers are responsible for what foods are served and when and where they are served. Children are responsible for how much food they consume.
- Be aware that a liking for vegetables develops slowly through a process of learned preference. Repeated serving and eating of vegetables, accompanied with pleasant consequences, helps children develop eating habits that include food preferences and the amounts eaten.

## Improve food preparation and presentation

Besides satisfying hunger, food appeals to the senses—how it looks, smells, feels, and tastes. How food is prepared and presented can greatly affect children's willingness to try it.

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- Look at what other foods you are serving vegetables with. When children are served burgers or chicken nuggets, they are less likely to eat their vegetables than when serving them with less-loved foods such as baked chicken or fish sticks.
- Avoid overcooking that can make vegetables mushy and tasteless, decreasing their acceptance. Instead, try cooking them to the point they retain their natural, bright color and a softer texture, but are not mushy. Frozen vegetables are colorful and just as nutritious as fresh.
- Sneak green vegetables into more familiar and well-liked foods such as spaghetti with pasta sauce and casseroles.
- Serve vegetables first before other foods, and allow children to eat them first.
- Serve foods family style, allowing children to determine whether or not they choose to consume the vegetable being offered.
- Model an enjoyable eating experience during meals and snacks.
- Serve one or two bites, and give children space to try the new food.

## Interaction as learning

Nutrition education starting in child care provides an opportunity to develop healthy eating at a time young children are establishing their food preferences. Teaching nutrition at this critical age is effective in influencing young children's food choices (Williams, et al. 2014).

Child development pioneer Jean Piaget believed young children learn best by interacting with their environment and developing their own understanding of concepts and not by passively acquiring knowledge through instruction. Learning occurs when children can incorporate new concepts into their current understanding to construct new knowledge.

Children can interact with vegetables in many ways in the classroom, including sensory experiments and social experiences. Below are some easy and inexpensive examples:

**Sensory experiments.** *Food neophobia* or fear of new foods can occur as young children develop food preferences. Children often avoid eating vegetables because of their texture and taste. While fruit tends to be sweet, vegetables—especially dark, leafy green ones—are often bitter tasting. As a result, few young children are willing to eat them.

One way to increase young children's familiarity with vegetables is through visual exposure with real vegetables and hands-on activities. An inexpensive option is to print pictures from the Internet and laminate them. A change of perception and attitude can increase children's willingness to try and eat a new vegetable during meals and snacks.

- Pass around a vegetable and engage children in a group discussion. Ask questions such as: "What is the vegetable's name?" "What is its shape?" "What is its color?" Some children will enjoy smelling the vegetables and discussing the scent as well.
- Invite children to draw and color the vegetable. Clarify its name and color.
- Conduct a taste testing. Some vegetables, such as cucumber and tomato, can be served raw, while others, such as broccoli and carrots, are best cooked to avoid choking. Consider serving a cooked vegetable plain, such as a baked potato with nothing but a little salt, or serving the vegetable as usually prepared by your cooks, such as eggplant in veggie lasagna.

## DON'T FORCE CHILDREN TO EAT WHAT THEY DON'T WANT.

**Precautions with raw vegetables:** Wash your hands and the vegetable thoroughly to remove germs. Cut into small, easily chewable pieces or shred to avoid choking.

**Precautions with cooked vegetables:** Some vegetables such as green beans, okra, and celery can be stringy and cause choking. Cut cooked vegetables into small pieces and test the texture before serving.

**Cooking in the classroom.** It can be a struggle to get children to eat more than corn with their lunch. They are more likely to eat a vegetable if they have a hand in preparing it. That's because cooking creates a feeling of ownership and accomplishment. It can also be fun.

In addition to increasing children's familiarity with vegetables, cooking helps them begin learning a basic skill they can use for the rest of their lives. Moreover, cooking helps them learn math (counting,

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measuring), science, language, and social skills.

Before children handle food and implements, make sure they wash their hands. Allow each child to add something to the soup pot or salad bowl, and allow children to serve themselves.

- Make soup in a crock pot as a class. Lots of soup recipes are available online. A popular recipe is called “Stone Soup” and uses potatoes as the stones, as well as several other vegetables. Frozen vegetables and canned tomatoes can be used.
- Make salad together as a class. Use precut or diced vegetables (lettuce, cucumber, tomatoes, and shredded carrots) stored in clear containers or bags. Or invite children to tear lettuce, cut cucumbers and tomatoes with a serrated plastic knife, and shred carrots with a grater or vegetable peeler.

## Educating children about nutrition

Child care providers and teachers need to trust children as they engage in the selection of the foods to eat and the regulation behaviors that happen when eating those foods. Feeding practices exist on a continuum, with supportive and positive behaviors on one end and controlling and insensitive behaviors on the other. Caregivers decide which feeding behaviors they use.

Helping children learn to prefer and enjoy eating vegetables helps them to control weight and reduce their risk of health problems, including type 2 diabetes (even if it is genetic), high cholesterol, and high blood pressure. Caregivers can enjoy eating vegetables with young children in their care.

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