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Preventing Childhood Obesity: Strategies to Help Preschoolers Develop Healthy Eating Habits

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McBride, Brent A. and Dev, Dipti A., "Preventing Childhood Obesity: Strategies to Help Preschoolers Develop Healthy Eating Habits" (2014). *Faculty Publications, Department of Child, Youth, and Family Studies*. 112.

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Brent A. McBride
and Dipti A. Dev

Preschool



Preventing Childhood Obesity: Strategies to Help Preschoolers Develop Healthy Eating Habits

DURING THE PAST THREE DECADES, childhood obesity rates increased dramatically in the United States. Despite new evidence suggesting a decrease in obesity rates in 2- to 5-year-olds during recent years (Ogden et al. 2014), the prevalence of obesity in this age group remains high and is a major concern for families and early childhood educators alike.

Researchers and policy makers now recognize the critical role of early childhood teachers in shaping children's eating habits through their mealtime interactions with children (Savage, Fisher, & Birch 2007). As a result, local, state, and federal entities have introduced obesity prevention programs in early childhood set-

tings. Although such programs are designed to improve children's nutrition and increase physical activity, many require considerable teacher time and training for successful implementation. In this article we introduce a low-cost, feasible approach teachers can use to encourage children's healthy eating. Through mealtime conversations, teachers help children recognize their own internal cues for hunger and satiation. Strategies to encourage healthy eating during program mealtimes are also discussed.

Childhood obesity and early childhood settings

The rate of obesity among US preschool children is at an all-time high. More than 27 percent of

children ages 2 to 5 years are considered overweight or obese (Ogden et al. 2012). Preschoolers who are obese are at risk for serious health conditions, including type 2 diabetes and heart disease in adolescence and adulthood (Biro & Wien 2010). It's important to note that the eating behaviors children develop during the preschool years continue to shape their food attitudes and eating patterns through adulthood (Birch & Ventura 2009).

Self-regulation is considered part of childhood obesity prevention because it is related to children's weight throughout childhood.

Early childhood education settings, including home- and center-based programs, Head Start, and pre-K, strongly influence young children and are therefore ideal places for preventing childhood obesity. Evidence suggests that early care and education experiences during the preschool years have a significant impact on weight status in childhood (Maher et al. 2008). More than 12 million preschool children attend early childhood centers, where they spend most of their waking hours and consume as many as five meals and snacks a day (Larson et al. 2011). Outside of the home, there is no other setting where adults have as much continuous and intensive contact with young children (Hughes et al. 2010). Further, adults are more likely to have an influence on young children than they are on older children (Addessi et al. 2005). Therefore, early childhood teachers can play an important role in shaping children's food intake and healthful eating habits through the foods they offer, the behaviors they model, and their interactions with children at mealtimes (Savage, Fisher, & Birch 2007).

Adult-child mealtime interactions

Most early childhood teachers understand that helping children develop healthy eating behaviors and creating supportive mealtimes are among their most important responsibilities (Johnson et al. 2013). Yet, when interviewed, teachers describe mealtimes as one of the most difficult parts of the program day because they feel overwhelmed by the children's needs during these times (e.g., gauging when children are hungry, knowing how much food to provide children, managing all of the activity that occurs during meals) (Lumeng et al. 2008). The following is an overview of six specific teaching strategies that encourage pre-

schoolers' healthful eating at mealtimes and can be easily integrated into early childhood settings.

1. Support children's internal cues of hunger and fullness

Children are born with cues for hunger and fullness that allow them to regulate how much food they eat. However, they often lose the ability to recognize these cues at an early age because many adults take over the children's job of deciding how much to eat. Adults—both parents and teachers—often make comments such as “One more bite and you will be done.” When they do this, they are suggesting to children, “I don't trust your cues.” Eventually such repeated messages cause children to no longer trust their own cues and instead to make decisions about how much to eat based on external cues or pressure from others (e.g., “You need to try the carrots,” “Clean your plate”).

In contrast, when teachers provide verbal cues such as “Are you full?” or “You can have more if you are hungry,” they help children pay attention to their internal signals of fullness and hunger. Offering verbal cues to help children recognize hunger and satiation supports their self-regulation of food and drinks they consume (Satter 2005) and increases the likelihood that children will make healthy eating decisions. The comments teachers make at mealtimes, along with their modeling of healthy eating habits, are important because of the link between these behaviors and children's self-regulation of the food they need to fuel their bodies. (See “Mealtime Comments to Encourage Preschoolers' Healthy Eating,” pp. 38–39.) Self-regulation is considered part of childhood obesity prevention because it is related to children's weight throughout childhood. When adults hinder children's self-regulation, children are at increased risk of obesity (Sigman-Grant et al. 2008).

The Academy of Nutrition and Dietetics (formerly the American Dietetic Association) 2011 benchmarks recommend creating a mealtime environment in which teachers recognize and support children's internal cues of hunger and fullness (Benjamin Neelon & Briley 2011). These benchmarks are based on Satter's (2005) widely accepted model of the division and shared responsibility for child feeding. Under this model adult caregivers are responsible for choosing, preparing, and offering foods and for determining when and where food is served. Children are responsible for how much of these foods they eat and whether they eat at all. This division of responsibility reflects an authoritative, or cooperative, feeding style and is the most effective

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approach for helping children develop healthy eating habits (Satter 2005).

Gubbels and colleagues (2010) found that during mealtimes in a program serving 2- to 3-year-olds, teachers could stimulate children to eat more than they wanted using directions such as “Finish your sandwich!” Such stimulation occurred multiple times during a meal. The same study noted that among the social factors in early childhood settings, teachers’ mealtime practices were highly associated with children’s dietary intake (e.g., staff talking with the children about healthy foods was associated with children’s increased consumption of dietary fiber). This evidence underscores the importance of the comments teachers make during mealtimes.

To help children recognize their hunger and fullness cues, educators can

- Teach children vocabulary to express their hunger and fullness signals.
- Ask questions such as “Are you still hungry?” and “Are you full?” Make statements such as “You’re taking care of your body by noticing that your tummy is full.”
- Model and talk about their own feelings of fullness by saying, for example, “I’m full, so I’m not going to eat any more apple slices.”
- Respect children’s cues once expressed. For example, if a child tells you she is full, stop talking to her about food and converse about something else.
- Discuss hunger signals, such as rumbling in tummies. Talk about signs of fullness; have children place their hands on their stomachs to feel how their stomachs extend after eating. Help children focus on feeling a little full rather than very full. If they wait until they are very full to stop eating (e.g., their tummy is extended), they will have overeaten.

2. Avoid controlling feeding practices

Feeding practices are the specific behaviors parents and teachers use to control what, how much, and when children eat. Adults often use them to encourage children to eat a greater amount of food or more healthy foods. But practices such as pressuring children to eat and restricting access to certain foods or groups of foods—saying, for example, “You can’t eat the applesauce until you try the green beans” or “You need to finish all the vegetables on your plate before you can have more fruit”—have negative long-term outcomes both for children’s weight and for their eating habits.

Pressuring children to eat and restricting certain foods can lead to picky eating and cause children to overeat when they are not hungry, which can result in obesity. Research suggests that highly restrictive feeding practices are consistently associated with child weight gain (Clark et al. 2007). For example, one study found that greater restriction of certain foods at age 5 predicted greater weight gain at age 7

Mealtime Comments to Encourage Preschoolers’ Healthy Eating

Refer to hunger and fullness while talking to children during meals to help them recognize their internal cues.

Use this	Instead of this
“Are you full?”	“Are you done?”
“If your tummy is full, you can put your plate back on the cart, wash your hands, and then play.”	“When you play with your cup, you’re showing me you are done.”
“You should eat until your tummy feels full, and then you can play.”	
“If you are still hungry, you can have some more.”	“Do you want some more?”
“Does it make your tummy happy?”	“Let’s see you make a happy [clean] plate.”
“Does your body have what it needs?”	“Hurry up, it’s time to go. Lunchtime is over.”
“When we run out of bread, if you’re still hungry you can try some green beans and fruit.”	“Eat your green beans and fruit now. You had enough bread already.”
“Start with one scoop, and if you are hungry later you can have more.”	“Don’t take two scoops. Take one scoop, okay?”
“It is okay to not eat if you are full. But you should eat now if you are hungry.”	“You did not eat anything, and you will be hungry later. Eat something now.”
“If you are full, you don’t need to keep eating now. We have a lot of food in the kitchen for everyone. We will also have snacks soon, so if you’re hungry later you can eat during snack time.”	“You ate a lot. Your tummy will hurt if you eat more.”
Even if there is food on your plate, gently push the plate away and tell children, “I am full, and my tummy is happy. I don’t want to eat more.”	“I don’t like this food.”
“We should eat when we are hungry, and we can stop eating when our tummy is full. It is okay to stop eating if you are full, even if there is food left on your plate.”	“We cannot waste food by leaving any on our plates. Let’s make a happy [clean] plate.”

Mealtime Comments to Encourage Preschoolers' Healthy Eating (cont.)

Use this	Instead of this
Gently encourage children to try new foods without pressuring them. Give children repeated exposure to new foods. Model healthy eating by trying each food yourself.	
"You can touch and smell the section of orange first to see if you might like to try it. You don't have to eat it. You can try it next time."	"Can you put a little tiny bit on your plate? Just try it, please."
Try some of the food yourself and comment on its taste: "Yummy! The yogurt and berries taste sweet. Would you like to try some?"	"Even if you do not want to eat it, you need to take a no-thank-you bite."
Give children choices. Ask them to choose between two healthy choices they have not tried yet: "Would you like to have carrots and dip or cheese and apple slices?"	"You have not touched the salad; you need to try some."
Avoid praising children for finishing the food on their plates.	
"You ate all your vegetables; you must have been hungry. If you are still hungry, you can have more milk."	<p>"Sarah ate all her vegetables. Good girl!"</p> <p>"That's great! You cleaned your plate! Mommy will be happy today."</p>
Educate children about nutrition outside of mealtime to avoid pressuring children to eat.	
Find free resources for nutrition education activities—such as games, books, posters, and brochures—on these and other websites: www.fns.usda.gov/tn/child-care-providers , www.fns.usda.gov/tn/resource-library .	<p>"Drink your milk; it will make you strong."</p> <p>"Vegetables are good for you."</p>
Avoid restricting foods.	
Keep offering a variety of foods. Model by eating new foods yourself so children become more familiar with them.	"You need to eat your veggies before I give you some fruit."
Remind children that if there is a particular food they really like, you will always have it again.	"You won't get more crackers if you don't eat your veggies."

among children considered at low risk for obesity (defined as children having mothers who are not overweight) (Faith et al. 2004).

Restricting foods—for example, allowing desserts only on special occasions—also sends the contradictory message that it is okay to eat unhealthy foods on happy occasions (Johnson & Krebs 2009). If children are allowed to eat desserts only on these special occasions, the food eventually becomes associated with the "happy" or "feel-good" emotional response. This then increases the likelihood that children will turn to these feel-good foods to satisfy their emotional needs as opposed to eating to satisfy their hunger. As a result, children are actually more likely to eat more of the restricted foods in later years. Thus, the child who is seldom allowed sweets may become an adult who overeats cookies and candy. In contrast, research shows that when children are provided with but not pressured to eat certain foods, such as soup or vegetables, they consume more of these healthy foods and have fewer negative reactions to them (Galloway et al. 2006).

Like parents, early childhood teachers sometimes attempt to control children's food choices and portions, stating the order in which food may be eaten (e.g., trying vegetables before fruit) and exhibiting attitudes and beliefs that can encourage children to overeat (e.g., insisting that children finish their food before they leave the table, making the children eat foods the teacher thinks are good for them) (Freedman & Alvarez 2010). Teachers may do this because they want to be sure children get enough food, since they may be experiencing food insecurity (i.e., not having reliable access to affordable, nutritious foods) at home (Lumeng et al. 2008). Although understandable, such practices are not healthy for children in the long run.

Following are some strategies for avoiding controlling feeding practices:

- Eat meals together with children
- Let children decide whether they want a second helping
- Let children decide how much to eat
- Let children choose the foods they want from what is offered

3. Communicate with families

In some settings, families may pressure early childhood teachers to make sure their children eat well—that is, the children eat healthy foods and get enough of them. These instances are great opportunities to engage families and share information about their children's eating habits. If needed, teachers can talk with families about the importance of helping children learn whether to eat and to choose how much to eat in order to self-regulate their food intake. Teachers can also discuss how pressuring children to eat may lead to unhealthy eating habits and obesity. The Academy of Nutrition and Dietetics benchmarks for child

care settings recommend that teachers engage families in the program's nutrition education to ensure that children receive consistent nutrition messages at home and at the program (Benjamin Neelon & Briley 2011). Drawing from these benchmarks, educators decide what is offered and continue to serve children a variety of foods while also communicating with families their reasons for this approach.

To help educators communicate better with families, they can

- Include clearly articulated policies regarding food service in parent handbooks that include explanations for the policies
- Develop clear guidelines for meals brought from home that are based on best practices for children's nutrition

4. Model healthy eating behaviors

Children learn about food and nutrition from messages conveyed by the important adults in their lives, including teachers (Hughes et al. 2007). Modeling is an important tool to convey these messages and encourage children's healthy eating behaviors. When teachers sit down with children, they can show them how to try new foods, eat a variety of foods, and self-regulate their eating. Because children are more likely to eat the foods they see adults eating, modeling is an effective way to increase children's healthy eating behavior. Teachers also model self-regulation by eating when they are hungry and stopping when they are full, pushing their plates away even when food is still left. Teachers and families can discuss how modeling healthy eating is a more effective strategy than using pressure to encourage children to try new foods.



Following are some strategies teachers can use to model healthy eating behaviors for children:

- Sit with the children during meals and try the foods yourself. Even if you don't like a food, put it on your plate and show children that you are taking a bite.
- Make enthusiastic comments about food: "These grapes look so sweet and juicy. I can't wait to taste them!" and "Mmm, the lettuce in this salad tastes fresh and crunchy."
- Engage children's senses by describing the color, texture, and taste of the foods: "These pears are soft and juicy," "The pineapple is tangy and sweet," and "The apple slices we had for snack yesterday were crisp and crunchy, but when Miss Anna cooked some apples today, they turned soft!"
- Ask questions about the food: "This fruit blend is so colorful and yummy! What colors do you see?" "How do these beans taste to you? I like the way they are a little bit soft and a little bit crunchy."

5. Let children serve themselves

Serving meals family style can help children self-regulate their energy intake. During family-style eating, children serve themselves from bowls and platters of food with help, as needed, from teachers who sit and eat the same foods with them and engage them in conversations. Children learn over time to take the right amount of food, based on their internal cues of hunger and satiety (Johnson & Krebs 2009). They tend to take smaller amounts of food than when adults serve them, and they eat more of what they take. When children receive preportioned food, such as crackers in a snack pack, they lose the opportunity to recognize for themselves their hunger cues and understand what an appropriate amount of food is. In centers that use a preportioned food service, teachers need to help children recognize their needs at mealtime. Such centers might serve at least one meal a day family style, with teachers using verbal cues to support children's self-regulation and sitting with children to model healthy eating (Benjamin Neelon & Briley 2011). (See "Family-Style Dining Strategies.")

Family-style meal service is widely recommended as best practice in early childhood settings, yet teachers often struggle with how to implement it. Drawing from the voices of teachers, Dev and colleagues (2014) identify several practical strategies for overcoming common barriers that limit the use of family-style meal service:

- Teach children self-help skills during playtime that can transfer to the mealtime setting
- Use verbal cues that help children recognize and trust their internal signals that guide the selection of accurate portion sizes

- Use child-size serving utensils, cups, and plates
- Start early in practicing family-style meal service—even as young as 2 years of age

6. Encourage children to try new foods without pressure

A number of early childhood settings have a “no-thank-you bite” rule that says children must try at least one bite of all the foods on the table. The goal is to encourage children, particularly those who eat only a few foods and refuse to try others, to eat a variety of foods. We discourage this practice because children are very subtly being forced to eat something they don’t like, which reinforces their dislike for that food. Adults might succeed in the short term to get the children to eat, but not in the long term (Galloway et al. 2006).

It is important to understand that hesitancy to try new foods is a stage that most children go through. Teachers can successfully encourage many children to try new foods by modeling or trying the foods in front of the children, helping them understand that healthy foods help them grow, continuing to offer a variety of foods, and providing repeated exposure to new foods. In addition to making comments to accompany such strategies, teachers can help children try new foods by engaging their senses at meal-

times. Smelling and touching new foods may encourage children to try them. It often takes 8 to 15 times offering a food before children accept it, so teachers should be patient and continue to offer foods that children have rejected.

Family-Style Dining Strategies

- Start with family-style snack time before using this approach with main meals. Help children acquire self-help skills such as scooping, pouring, and passing bowls by
 - Providing tools for practicing these skills when playing with clay, water, and sand
 - Using ladles and child-size dishware at mealtimes
 - Modeling how to scoop and pour foods and drinks
- Accept that messes are a part of learning—help children learn to clean up any messes or spills
- Engage children in every aspect of mealtime, such as setting the table, serving themselves, passing the food, and cleaning up after the meal

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The following strategies can be used to encourage children to try new foods without pressure:

- Provide repeated exposure to new foods.
- Encourage touching and smelling foods as a step toward tasting them.
- Talk with children about ways healthy foods help their bodies and brains.
- Offer the same foods in different forms or in different combinations.
- Make trying new foods fun by, for example, eating three different crunchy vegetables and determining which ones crunch the loudest.
- Have children help with cooking or preparing foods. Handling and smelling the foods during these processes may make children curious about what they taste like.

Conclusion

Using these six adult-child mealtime strategies, teachers help shape children's food habits and encourage them to develop healthful eating patterns that will ultimately aid in reducing the alarming rates of overweight and obesity in children.

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