

Right-size Your Portions



**SCHOOL-AGE
CHILDREN
& YOUTH:**
**Trends, Effects,
Solutions**

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Eating smart and moving more are the cornerstone of a healthy lifestyle and provide a solid foundation for children and youth to succeed in school and in life.



There are many health benefits associated with good nutrition and physical activity. Eating smart and moving more help children and youth maintain a healthy weight, feel better and have more energy. These positive health benefits have the potential to translate into academic benefits at school. Good nutrition and physical activity nourish the brain and body, resulting in students who are present, on-time, attentive in class, on-task and possibly earning better grades.

As students work hard to achieve high academic standards, it is more important than ever that we provide opportunities for them to be active and eat healthy throughout the day. Families, schools and communities must share the responsibility of promoting and supporting children and youth to eat smart and move more.

Research points to seven key behaviors that can help children, youth and adults eat healthier and be more active:

1. Prepare and eat more meals at home
2. Tame the tube
3. Choose to move more every day
4. Right-size your portions
5. Re-think your drink
6. Enjoy more fruits and veggies
7. Breastfeed your baby



This paper will examine trends in and effects of super-sized portions. It will also offer solutions for schools, government, communities and families to support children and youth in right-sizing their portions.

Trends in Portion Sizes

Portion sizes in restaurants, grocery stores and homes continue to increase.¹ In the 1950s, a Burger King® hamburger was 2.8 ounces and 202 calories. Today, a Burger King® hamburger is 4.3 ounces and 310 calories. In the 1950s, McDonald's® offered only one size of fries, a 2.4-ounce portion with 210 calories. Today, fries come in orders as large as seven ounces with 610 calories.²



Fast food portions from the 1950s and today.

The trend toward larger portion sizes is most evident in restaurants and fast food outlets, but is also significant in homes.³ Identical recipes for cookies and desserts in old and new editions of classic cookbooks such as *Joy of Cooking* yield fewer servings in new editions when compared to old recipes. Recipes that have been used for decades produce fewer portions today because portion sizes are larger.⁴

The trend of large portion sizes applies to beverages as well as foods. In 1916, a bottle of Coke® was 6 fluid ounces.⁵ By the mid 1970s, the average portion size of sweetened drinks (soft drinks and fruit drinks) among Americans was 13.6 ounces. By 1996, it had increased to 21 ounces.⁶

Why are food and beverage portion sizes increasing? Restaurant owners and food manufacturers know that consumers shop for value. Surveys show that people choose restaurants based on portion sizes. Americans buy and consume larger portions under the premise that it is a good value. For 50¢ or less, a person can add

A “portion” is the amount of food or beverage a person chooses to eat or drink. A “serving” is a standard amount established by the U.S. Food and Drug Administration. People commonly portion out more than one serving to eat or drink at a time. For example, a serving of soda is 8 fluid ounces. Sixteen-fluid-ounce bottles of soda are common and many people choose to drink 16 fluid ounces in one sitting. Even though a 16-fluid-ounce bottle is commonly viewed as one “portion,” it is actually two servings.



up to 400 calories in a fast-food meal.⁷ Have you ever walked into a donut shop to buy half a dozen donuts and discovered that you could buy a whole dozen for the same price? “Good deals” like this one attract value-hungry customers, while also promoting larger portion sizes.

Larger portion sizes have also made their way into schools—not as part of the meals offered through the National School Lunch and School Breakfast Programs, but as à la carte items sold in addition to school meals. North Carolina schools are working to limit the size of à la carte foods and beverages, but their progress is challenged by the prevalence of super-sizing in our society.

Since school meals are required to meet the Dietary Guidelines for Americans 2005, they are more likely than à la carte items to be of an appropriate portion size for the child or teen’s age and activity level. The National School Lunch Program meals provide approximately one-third of the recommended daily calories for students. The School Breakfast Program meals provide about one-fourth of the recommended daily calories.⁸ Students—teens especially—often make meals out of à la carte foods and drinks rather than purchasing school meals.

Many à la carte foods, produced and packaged by manufacturers, come in larger portion sizes. Not only are these items often excessive in size, but they also tend to be lower in nutritional quality.⁹ Students may choose to purchase à la carte items in place of, or in addition to, school lunch or breakfast meals. In doing so, they may eat more calories than they need, yet miss out on some of the important nutrients that they need.

Community members sometimes question why schools offer à la carte items in addition to school meals, since the à la carte items usually are not the healthiest options. The fact is that many school food service program directors need the revenue from à la carte sales to maintain an operational

program. Increasing numbers of school districts provide no local operating funds for school food service programs. Programs must generate revenue by selling à la carte items to continue feeding the students who depend on school meals.

In addition to meals and à la carte items in the cafeteria, students may have access to foods and beverages in school stores, through fundraisers or other sources. These foods or beverages, sold or offered to students in competition with the National School Lunch or School Breakfast Programs, are called competitive foods. Competitive foods are often made available in larger portions and may be of lower nutritional value.

Effects of Super-Sized Portions

Research indicates that larger portion sizes encourage people to eat and drink more. This leads to weight gain because people consume more calories than they need. Weight gain over time leads to overweight and eventually obesity.

Large portion sizes at restaurants and other food venues now have a greater impact than ever before. In the past, eating out was a special treat; a large restaurant dinner on one night of the week was balanced by smaller dinners at home the other nights. Today, people eat out more often, so they are exposed to large restaurant portions more frequently. Several societal shifts—more women in the workforce, dual-income households and smaller household sizes—have increased the

demand for foods prepared away from home. Research indicates that as children grow older, the proportion of meals eaten away from home increases. Among preschoolers, 18 percent of meals are eaten away from home; among adolescents, 30 percent of meals are eaten away from home.¹⁰ Furthermore, as people grow accustomed to the larger portions of away-from-home foods, they serve larger portions at home.

The increase in portion sizes over the past few decades is one of several trends that have contributed to the obesity epidemic. When people are presented with a larger portion, they tend to eat more. Several research studies indicate that providing children (age 5 and older) and adults with larger food portions can lead to significant increases in calorie intake.¹¹ One study gave people a bag of potato chips for a snack and a subsequent meal each day for several days. The package size of the potato chips varied each day. People ate more chips when the package size was larger. It is worth noting that when they ate more chips as a snack, they did not eat less at mealtime.¹²



Because of the need for smaller portions and healthier away-from-home food options, North Carolina passed a law in 2005 requiring the State Board of Education to establish statewide nutrition standards for school meals, à la carte foods and beverages and items served in the after-school meal program. The N.C. Nutrition Standards for Elementary Schools¹³ were adopted by the State Board of Education in 2006 and will address portion sizes for à la carte items. Mandatory implementation of the standards is required by the end of the 2008-09 school year. Nutrition standards for middle schools and high schools are soon to come.

Even though middle and high school nutrition standards have not yet been developed, many middle and high schools are beginning to offer healthier, more appropriately portioned à la carte items. School food service staff try to accommodate students' preference for à la carte items by providing healthier versions of popular items in appropriate portion sizes. For example, schools may use low-fat cheese on their à la carte pizza or 100% fruit juice in their à la carte fruit slushies.



Overweight in Children and Youth

According to the 2001 Surgeon General's *Call to Action to Prevent and Decrease Obesity*, today there are nearly twice as many overweight children and almost three times as many overweight adolescents as there were in 1980.¹⁴ Results from the 2003-04 National Health and Nutrition Examination Survey (NHANES), using Body Mass Index (BMI), indicate that an estimated 13.9 percent of children ages 2-5 years, 18.8 percent of children ages 6-11 years and 17.4 percent of adolescents ages 12-19 years are overweight.¹⁵ North Carolina 2005 data from children seen in public health settings show an even greater increase in the number of overweight children.¹⁶

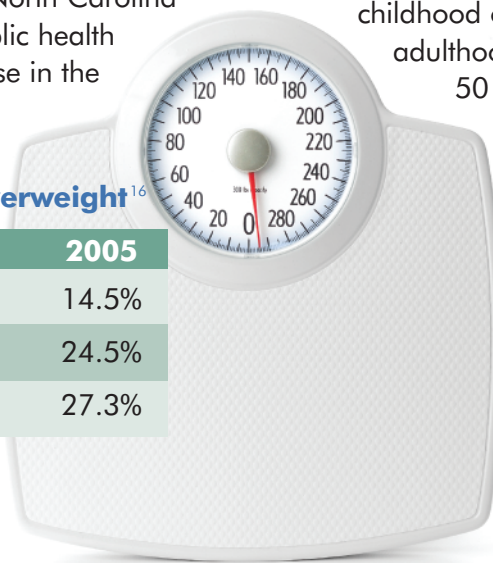
Percent of North Carolina Children and Youth Who Are Overweight¹⁶

	1995	2000	2005
Ages 2-4	9.0%	12.2%	14.5%
Ages 5-11	14.7%	20.6%	24.5%
Ages 12-18	22.7%	26.0%	27.3%

BMI, an index of a person's weight in relation to height, is commonly used to classify overweight and

obesity among adults and is also recommended to identify children who are overweight or at risk of becoming overweight. Children with a BMI \geq 85th percentile but $<$ 95th percentile are overweight (formerly considered at risk for being overweight) and children with a BMI \geq 95th percentile are obese (formerly considered overweight).¹⁷

Studies have indicated that overweight children (especially adolescents) are at higher risk of becoming obese adults.¹⁸ The likelihood that childhood overweight will persist into adulthood ranges from approximately 50 to 70 percent, increasing to 80 percent if one parent is overweight.^{19,20} Obesity is no longer a concern for adults only. Signs of chronic disease associated with obesity are showing up in overweight children. These include atherosclerotic plaques,²¹ hypertension,^{22,23,24} increased triglycerides,^{22,24} increased insulin resistance and Type 2 diabetes.^{21,25}



Solutions for Right-sizing Portions for Children and Youth

In order to halt and eventually reverse the trend of increasing portion sizes, school officials, policy makers, community members and families must recognize the positive impact that right-sized portions will have on the health of children and youth.

Schools

- Enforce policies that prohibit the sale of foods in competition with school food service programs during school hours.
- Implement and maintain the N.C. Nutrition Standards for Elementary Schools.
- In middle and high schools, replace unhealthy super-sized à la carte items with healthier right-sized ones.
- Educate school food service staff, teachers and students about the importance of right-sized portions.
- Promote fundraisers that sell healthy foods (e.g., citrus fruit, nuts, etc.) or non-food items (e.g., plants, wrapping paper, etc.) instead of unhealthy foods in large portions (e.g., super-sized candy bars, etc.).

Government

- Support the development, implementation and enforcement of state and/or national School Nutrition Standards.
- Require or incentivize local school systems to help fund school food service programs.
- Restrict the marketing of large portions of high-calorie foods and beverages to children and youth.

Communities

- Advocate for appropriate portion sizes in vending machines in parks, recreation facilities, schools and other community buildings.
- Advocate for a reduction of aggressive marketing of large portions of high-calorie foods and beverages targeting children.

- Advocate for adequate funding and resources for school food service programs and nutrition education in schools.
- Advocate for nutrition standards for all foods and beverages available at school.
- Support and promote fundraisers for schools and other community organizations that sell healthy foods (e.g., citrus fruit, nuts, etc.) or non-food items (e.g., plants, wrapping paper, etc.) instead of unhealthy foods in large portions (e.g., super-sized candy bars, etc.).

Families

- Prepare and eat more meals at home. We tend to eat larger portions when we eat out.
- Help children learn what a serving looks like. For example, measure cereal in the child's bowl and discuss that a bowl of cereal and a serving of cereal can be different.
- Divide the contents of a large snack package into smaller containers.
- When eating out, avoid all-you-can-eat buffets, "value" meals and other deals that promote overeating. Select restaurants that offer smaller portions.
- Share restaurant meals or take part of the meal home. Research suggests that purchasing a larger portion leads to an increase in calorie intake.
- Beware of mindless eating while watching TV. If you snack in front of the TV, put an appropriate portion of food in a dish and leave the food package in the kitchen.
- Grab a healthy snack if you are hungry between meals. It will prevent overeating at meal time.
- Eat more fruits and vegetables and you can worry less about large portion sizes. Fruits and vegetables take up lots of space on your plate without adding many calories.
- Serve food on a smaller plate to make portions look bigger. Limit your favorite sweetened beverage by drinking from a smaller glass.

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Developed by the North Carolina School Nutrition Action Committee (SNAC), a partnership of the N.C. Department of Public Instruction, the N.C. Division of Public Health and the N.C. Cooperative Extension Service. The goal of SNAC is to coordinate school nutrition activities that link the cafeteria, classroom and community to eating smart and moving more.

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