



Growing Healthy Kids

I N K E N T U C K Y

Creating Communities to Reduce Childhood Overweight

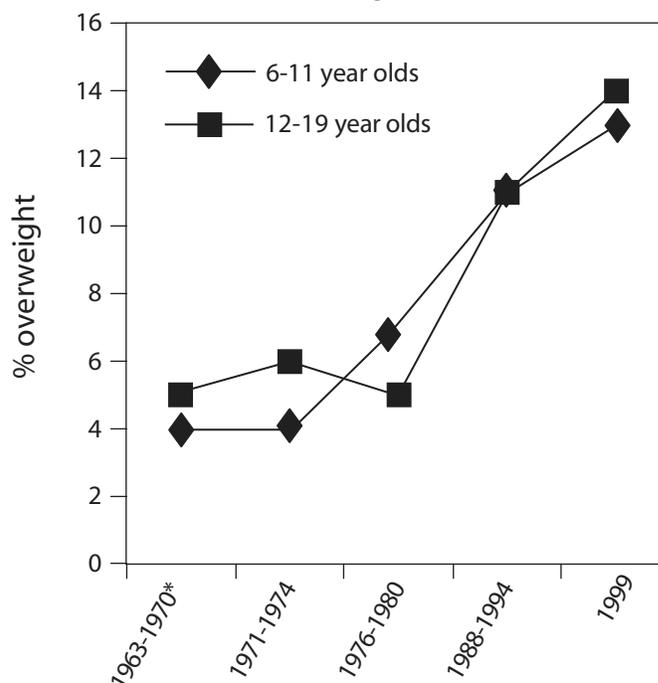
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In the last 25 years, the prevalence of overweight and obesity in the United States has increased dramatically. Sixty-one percent of American adults are considered overweight or obese. In 2000, American families, businesses, and governments spent approximately \$117 billion on obesity-related problems, primarily healthcare. Even more startling is the early onset of overweight in children. This publication is designed for anyone who wants to reduce the risk of overweight among Kentucky youth.

Prevalence and Implications of Childhood Overweight

The rise in the number of overweight or at-risk children is alarming. From 1980 to 1999, the number of overweight children rose from 7 percent to 13 percent, and the number of overweight teenagers nearly tripled over that same time period, from 5 percent to 14 percent. Compared to normal-weight children, overweight children are 10 times more likely to become obese adults. Overweight and obese adults are at greater risk for coronary heart disease, Type 2 diabetes, certain cancers, and osteoarthritis. Overweight children and adolescents are developing these adult-type diseases. Overweight youth experience a higher frequency of Type 2 diabetes, high blood lipids, high blood pressure, early maturation, and orthopedic problems. In addition to health problems, overweight children are often subjected to negative social stereotypes, prejudice, discrimination, and low self-esteem. Excess body weight has great economic consequences, primarily due to the health costs associated with Type 2 diabetes, coronary heart disease, and high blood pressure.

Overweight Children



*Data for 1966-70 is for adolescents ages 12-17.

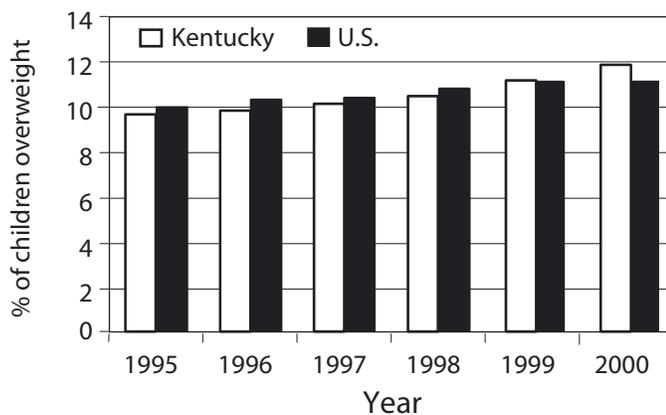
Overweight: Children at or above the 95th percentile of body mass index (BMI) by sex and age are considered overweight.

At risk of overweight: Children between the 85th and 94th percentile of BMI are considered at risk of being overweight.

How Does Kentucky Compare to the United States?

Sixty-one percent of American adults are either overweight or obese, and Kentucky's statistics are similar to national numbers. The prevalence of overweight among Kentucky's low-income children exceeds national figures for the Women, Infants, and Children (WIC) supplemental feeding program. In a low-income population of children aged 1 to 5 enrolled in the Kentucky WIC program, the percentage of children above the 95th percentile of weight for height increased 19 percent from 1995 to 2000.

Overweight Children in WIC Program



Why Are Children and Adolescents Gaining Weight?

Maintenance of weight is a balance between energy in and energy out. If more calories are consumed than burned, weight gain occurs. Thus, for the majority of people, being overweight or obese results from excess calorie intake and/or inadequate physical activity. Average adult calorie consumption has increased 200 calories per day from the late 1970s to the mid-1990s.

Weight regulation is influenced by a complex set of factors, including genetic, metabolic, environmental, cultural, and socioeconomic circumstances. Researchers estimate genetics contribute 40 to 60 percent of body size, and other factors contribute a combined 40 to 60 percent. The documented rapid weight increase across the U.S. implies that the environment is the major contributor to this epidemic. Several environmental factors could have contributed, including availability of affordable high-calorie foods, increased accessibility of food, and decreased opportunities for physical activity.

Affordable High-Calorie Foods

In 1998, food expenditures outside the home had increased to 47 percent compared to 34 percent in 1970. Fast food companies are marketing the convenience concept. U.S. food consumers report that time is one of their most limited resources, and they are willing to spend money for increased convenience. Eighty-four percent of children and adolescents are eating too much fat, 91 percent are eating too much saturated fat, and 51 percent eat less than one fruit serving per day. In addition, dairy consumption decreased between 1989 to 1991 and 1994 to 1995, but soda consumption increased. Research has found that only 1 percent of children actually eat the recommended servings from food groups, including dairy, fruits, and vegetables.

Not only has fast food consumption become more common, but portion sizes have also increased. As the portion sizes have grown in the last 20 years, so has the incidence of adult and childhood overweight and obesity. Sixty-two percent of Americans are unaware that portion sizes have increased in the last 10 years. Food companies encourage larger sizes by making larger sizes cheaper, having point-of-purchase displays, and verbally asking customers if they want to purchase a larger size. There is a nutritional cost for these fast food "bargains." For example, a McDonald's Quarter Pounder with Cheese Extra Value Meal costs \$1.41 more than the sandwich alone, but the drink and fries add an additional 660 calories and 4 grams of saturated fat to the 530-calorie sandwich.* A large-sized "value" meal can easily deliver 1,500 calories to an unaware consumer.

Americans are spending a smaller percentage of their income on food but are buying more calorie-dense foods. These high-calorie foods are relatively low in nutrients and are often snack foods. The sizes of snack foods have also increased. Portions of many snack foods have doubled in the last 10 years.

Food	1970s	2000s
French fries	2 oz	> 4 oz
Deli bagel	2 oz	4 - 7 oz
Muffin	2 oz	6 - 8 oz
Soda	6½ oz	12 - 20 oz
Chips	½ - 1 oz	2 - 4 oz
Candy bar	1½ oz	2 - 4 oz

* 2002 Kentucky figures

Accessibility of Food

A recent survey (Tietyen, Walters, and Courtney) of a representative sample of Kentucky schools (339 schools) found widespread availability of snack foods, use of foods as a reward, and minimal opportunities for physical activity. Sixty-six percent of the schools surveyed had vending machines available to students. Snack foods are a source of revenue for the schools surveyed, with an average annual revenue of \$6,016.69.

School Level	Percent with Vending Machines	Mean No. Vending Machines	Mean Annual Revenue per School
Elementary	44%	1.4	\$3,145.50
Middle	88%	4.7	\$5,933.13
High	97%	8.0	\$9,736.27
All schools	66%	3.5	\$6,016.69

A variety of beverages and snack foods are sold in school vending machines with these items having the highest number of slots: regular soft drinks, candy, chips/fried snacks, less-than-100-percent fruit drinks, and water.

School stores are another source of revenue for schools in Kentucky. Below is the percent of schools with a school store and revenue generated. The most stocked food and beverage items were similar to the vending machines, which included chips/fried snacks, candy, water, less-than-100-percent fruit juice, cookies, and regular soft drinks. Eighty-one percent of all schools surveyed used food as a reward for behavior, attendance, or academic achievement.

School Level	Percent with School Stores	Mean Annual Revenue per School
Elementary	42%	\$6,069.17
Middle	30%	\$13,233.07
High	30%	\$7,730.00
All schools	36%	\$7,788.33

Decreased Physical Activity

Lack of physical activity is a big contributor to the overweight epidemic. Physical activity is defined as any bodily motion that contributes to increased energy expenditure. Physical activity is a positive approach to weight management that increases energy expenditure, builds lean body mass, and helps increase or maintain basal metabolic rate. In addition, physical activity reduces the risk of chronic diseases, increases strength and endurance, reduces anxiety and stress, enhances self-esteem, and improves sleep habits.

Children 5 to 15 years old walk or ride their bikes 40 percent less today than children in 1977. Children are having minimal activity in Kentucky schools. Based on the Kentucky School Nutrition and Health Environment Survey, the following minutes were spent in physical education class.

School Classification	Mean No. of Minutes Spent in P.E. Class
Elementary	67
Middle school	34
High school – grade 9	36
grade 10	9
grade 11	4
grade 12	6

Recess in Kentucky schools contributes only an average of 14, 2.5, and 2 minutes a day for elementary, middle, and high school students, respectively.

Risk Factors for Weight Gain

Factors for Weight Gain

- Decreased physical activity.
- High fat/high sugar snack foods.
- Sweetened beverages, such as soft drinks, Kool-Aid, fruit-flavored drinks.
- Eating large, infrequent meals.
- Constant snacking.
- Eating fast food frequently.
- Increased television watching.
- Skipping meals.

No one factor is responsible for weight gain among the U.S. population over the past 25 years. The rapid onset and widespread prevalence of overweight does indicate that environmental, rather than genetic, influences are a major causative factor. Environment influences many lifestyle behaviors. The behaviors listed above likely increase risk of overweight and obesity.

How to Get Involved

The prevention of childhood overweight requires a public health approach. Families, communities, schools, and government need to take action by promoting healthier food choices and increased physical activity for children and adolescents. No matter who you are, you can play an important role in these efforts. Below are some suggestions for how to become involved. Select one or two that are right for you and your community. Then work to make a difference by creating an environment that promotes a healthy weight for Kentucky children.

Children

- Try some low-fat, low-sugar snacks.
- Eat more fruits and vegetables.
- Record what you eat for a few days. If what you eat does not resemble the Food Guide Pyramid, make some changes.
- Be active by doing something you like to do, such as dancing or jumping rope.
- Aim for 60 minutes of moderate physical activity most days of the week.

Parents

- Set limits on TV and computer time. Time spent with these electronic devices tends to reduce physical activity and often increases consumption of high-calorie snacks. The American Academy of Pediatrics recommends limiting TV, movies, and video and computer games for children to no more than 1 or 2 hours per day.
- Offer children healthier foods. Snack foods are a great place to start. Buy more yogurt and fruits and fewer chips and cookies at the grocery. Serve more ice water and fewer sodas. Regular soft drinks add 110 to 160 calories per 12-ounce serving.
- Encourage youth to be involved in something active and enjoyable. Suggestions include organized sports (such as softball or soccer), outdoor activities (such as scouting or 4-H clubs), or active playtime at home (such as roller skating, throwing frisbees, or biking).
- Make time for the entire family to enjoy regular physical activities together.
- Assign active chores to all family members, such as vacuuming, washing the car, or mowing the lawn. Rotate chores among family members to avoid boredom.
- Be a healthy role model for your children. Children will be more likely to eat fruits and vegetables and be physically active if parents are setting a good example.
- Let your school know that you are concerned about what your child eats at school and how much physical activity is included in the school day. Have nutrition and exercise experts come speak to the PTA, school board, and site-based councils.
- Buy only 100-percent fruit juice. Just a ½ cup of fruit juice will supply one serving of fruit, so be aware of calories and serving sizes.
- Eat meals together at the dinner table.
- Avoid watching TV during mealtimes.
- Limit fast food eating to no more than once per week.
- Avoid using food as a reward or using the lack of food as a punishment.

Teachers

- Incorporate some form of movement into the classroom curriculum. Active students are more alert and ready to learn.
- Ask parents to bring healthy snack options when your class is having a bake sale or class event.

- Do not reward students with food and do not punish students by taking away recess.
- Start a program at your school to raise awareness on the importance of physical activity among students and staff.
- Have a health educator speak to your classroom about different activities or places in your area where students can be involved in physical activity.
- Invite the school foodservice director to speak to your classes about healthy meal planning.
- Host a career day to help students learn about employment opportunities in healthcare and promotion.

School Foodservice Directors and Managers

- Make sure school breakfast and lunch options are healthy and appealing. Invite teachers and students to work on ideas for marketing healthier food choices.
- Offer fruits, vegetables, whole grains, and low-fat dairy foods.
- Reduce access to high-fat, high-calorie, high-sugar foods, and excessive portion sizes.
- Use the cafeteria setting to increase awareness of healthy food choices with brochures or posters about “Five-a-Day” fruits and vegetables or “1% or Less” dairy foods.
- Seek student input for school menu plans through contests, focus groups, or classroom activities.

School Administrators

- Promote healthier eating and physical activity in your school.
- Have a registered dietitian or certified nutritionist come to your faculty/staff meeting to bring unity on this issue.
- Make wellness programs available to school faculty and staff.
- Work with your school foodservice director to create an environment of healthy food choices for meals.
- Give the students healthier options in the vending machines. Try the new milk machines.

Site-Based Decision-Making Councils

- Set policies for what can and cannot be sold in school.
- Re-evaluate the contracts between your district and soft-drink industries. The money and perks from these agreements may not be in the best interest of your students.
- Be involved in assessing the school’s eating environment, developing shared vision, and creating an action plan to achieve it.
- Help schools offer daily opportunities for physical activity and inclusive health education.
- Work with schools and community organizations to ensure that exercise equipment and supervised programs are available to meet the physical needs and interests of all students and school staff.

Communities

- Create a community that promotes physical activity for children and youth.
- Increase access to food choices for a healthy diet, such as dairy, fruits, and vegetables.
- Work with your Cooperative Extension Service office, state and local health departments, and other partners to promote community physical activity programs.
- Increase public access to gyms, playgrounds, and walking/biking trails.

Civic Leaders

- Work with city planners and engineers to plan for sidewalks and bicycle paths. In addition, widen sidewalks so that they are less crowded, safer, and more inviting.
- Designate a place for and promote a farmers' market.
- Create a community coalition to address childhood overweight.
- Increase accessibility for use of public facilities.

Government

- Create policies to promote healthy eating and physical activity.
- Provide educators with health education materials to help students develop the knowledge, attitudes, skills, and behaviors for development of healthy eating patterns and a physically active lifestyle.
- Allocate funding for health promotion and monitoring programs.

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