Where can early childhood teachers and families find up-to-date information about young children’s nutritional and health needs? Online resources are abundant. A few are recommended here for use with children and their families.

Addressing the “Epidemic” of Overweight Children By Using the Internet

Mick Coleman, Charlotte Wallinga, and Diane Bales

The Internet can be of great assistance to early childhood teachers in planning educational activities for the classroom and with families. This article explores how early childhood teachers can use resources online to address what has been called an “epidemic” of overweight children (Krebs et al., 2003).

Why Address the Issue of Childhood Obesity?

A number of factors have contributed to an increase in overweight children.

• Quick-food restaurants and prepared snacks are convenient alternatives to in-home meals for families who lead busy lives. Unfortunately, many of these foods are high in fat (Centers for Disease Control and Prevention [CDC], 2005).

• In addition, food portions in general continue to increase in size, leading to greater caloric intake (CDC, 2005).

• Technological advances also have created passive television and computer entertainment that replaces many families’ more active outdoor play and exercise.

• At the same time, recess and physical education classes have been eliminated or shortened in many educational settings, depriving children of the positive experiences they need to develop the knowledge, attitudes, skills, and confidence to adopt physically active lifestyles (Pica, 2006; U.S. Department of Health and Human Services, 2000a; 2004; Wechsler, Devereaux, Davis, & Collins, 2000). A lack of exercise can cause children to become fidgety, interfere with their concentration, and become less attentive (Wechsler et al., 2000).

• Finally, many families today live in communities that are designed more for riding in vehicles than for walking or biking (Fierro, 2002).

The importance of combating these challenges is reflected in the physical and social risks that are associated with being overweight. Being overweight substantially raises the risk of blood pressure, high cholesterol, type 2 diabetes, heart disease and stroke, gallbladder disease, arthritis, sleep disturbances, and problems breathing (U.S. Department of Health and Human Services, 2000b). In addition, overweight individuals can suffer from social stigmatization, discrimination, and low self-esteem (Schwimmer, Burwinkle, & Varni, 2003; U.S. Department of Health and Human Services, 2000b).

For all these reasons, teachers and families of young children are seeking information and activities to help children develop and maintain a healthy lifestyle. Traditionally, early childhood health information has been delivered through workshops, brochures, and articles. The Internet now provides a convenient resource for

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The three authors have written two curriculum packages to help teachers and families promote an early healthy lifestyle among 3- to 5-year-olds. They have used both—Teaching Basic Health and Safety in the Early Childhood Classroom and Eat Healthy, Be Active: Hands-on Educational Activities for the Early Childhood Classroom—to train early childhood educators in Georgia. Their work has been supported by a grant from Bright From the Start: The Georgia Department of Early Care and Learning.
Here are a few ways selected Internet sites can be used in prekindergarten, kindergarten, and elementary classrooms, as well as in children’s homes.

<table>
<thead>
<tr>
<th>Internet Sites With Information and Curriculum Ideas Related to Healthy Eating and Exercise for Young Children</th>
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<tbody>
<tr>
<td><strong>KidsHealth</strong></td>
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<tr>
<td><a href="http://www.kidshealth.org/parent">www.kidshealth.org/parent</a></td>
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<tr>
<td>Kids Health was developed specifically for parents and other adults in search of childhood health and safety information. For the classroom. Use the information under Nutrition and Fitness to learn more about a range of issues related to children’s nutritional and activity needs. For example, Healthy Eating summarizes the importance of family meals. It also lists five tips for families to follow in promoting healthy eating. Deciphering Food Labels can be used to plan a family workshop or newsletter article on shopping for healthy foods. Fitness and Your 4- to 5-Year-Old summarizes the amount of physical activity this age group needs and provides fun activity ideas that families can pursue. Similar information can be found for families with 2- to 3-year-olds and 6- to 12-year-olds.</td>
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<tr>
<td><strong>Fruit Health Education</strong></td>
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<tr>
<td><a href="http://www.thefruitpages.com">www.thefruitpages.com</a></td>
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<tr>
<td>This site provides background information, tips, and activity ideas related to fruit. For the classroom. The Fruit Alphabet introduces children to letters of the alphabet using different fruit from around the world. Try the following activities. Purchase a few of the fruits. Invite young children to taste the fruits, name them, and identify their beginning letters using the pictures as guides. Encourage basic math skills by asking young children to classify different fruits by their colors, shapes, or weights. Use Why Is a Tomato a Piece of Fruit? to introduce elementary school-age children to the concept of “fruit-vegetables.” Geography is a topic to explore by clicking on W (for watermelons) under The Fruit Alphabet. Different watermelons are grown around the world. Introduce various watermelons. Visit a farmer’s market or international grocery to look at and taste the melons. Grow two or three different types of watermelons to sample. Suggest that elementary children research countries in which the different melons are grown. Encourage children to explore the languages and cultures of those countries.</td>
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<tr>
<td><strong>MyPyramid</strong></td>
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<td><a href="http://www.mypyramid.gov">www.mypyramid.gov</a></td>
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<tr>
<td>The U.S. Department of Agriculture provides information about dietary guidelines. For the classroom. Begin by clicking on MyPyramid for Kids. Then, go to Classroom Materials for lessons guides for grades 1 to 2 and grades 3 to 4, including learning objectives, individual and group activity ideas, and suggestions for turning lunchrooms into educational settings. Lesson guides for grades 1 to 2 include an introduction to the food pyramid, using the pyramid to make healthy eating choices, and varying one’s diet with fruits and vegetables. Teachers are urged to invite children to draw their own food pictures. For families. MyPyramid for Kids has a separate link for families (Tips for Families) to learn about exercise and healthy eating. In addition, the classroom lessons include family handouts. This site includes a link on the home page where adults can fill in the age, gender, and activity level of a child to get a nutritional plan with the following information: Total number of calories the child should take in each day. Amount of each food group the child should eat each day. Tips on how to make the daily servings of each food group more interesting. Calorie limitations for fats and sugars. After consulting with a nutritionist and/or family physician, families may decide to use the information to monitor or address a child’s eating and exercise patterns.</td>
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<tr>
<td><strong>Nutrition Explorations</strong></td>
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<tr>
<td><a href="http://www.nutritionexplanations.org">www.nutritionexplanations.org</a></td>
</tr>
<tr>
<td>This site, produced by the National Dairy Council, contains links for parents and teachers of preschool and school-age children. For the classroom. Begin by clicking on Educators. Then click on the Nutrition Lessons link. This leads to theme-based lessons for children from prekindergarten through elementary school. Teacher Idea Exchange provides activities that teachers have submitted. For families. The separate Parents link can be used to offer healthy snack and recipe ideas to busy families. Teachers can invite parents to send in their children’s favorite healthy breakfast menu or share tips on how they encourage children to eat breakfast. Invite a community nutritionist to speak at a family workshop on quick and healthy breakfast recipes.</td>
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</tbody>
</table>

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accessing immediate health information and activity ideas. Reading through the thousands of online health links can be frustrating and time consuming. In addition, few health sites are designed with early childhood teachers in mind.

A list of useful Internet sites on early childhood healthy eating and exercise can be found in Table 1. Each entry includes activity ideas for use with preschool and/or young school-age children. Suggestions are also provided for using these sites to support families’ involvement in their children’s understanding of healthy eating and physical activity.

Guidelines for Using Online Resources

In the process of developing an early health and safety curriculum for teachers of 3- to 5-year-olds, the authors worked with young children and a children’s librarian (Bales, Coleman, & Wallinga, 2004). The following guides were found to be most helpful in conducting Internet searches.

Guide 1: Repeatedly check each site to make sure it provides current information.

Sites often update their purpose and/or design. They periodically update or change articles, links, and graphics. Some sites just disappear. Before recommending a site to others, recheck the site. All the sites described in Table 1 provided useful information for developing the health and safety curriculum. A check on June 2008 indicated that all the sites were still valuable sources of information.

Guide 2: Check out the links.

Pay special attention to any links from one site to another. Many such links are selected specifically to reinforce information presented on the site being visited. These links often provide supplemental information about healthy eating and exercise. Make sure the links provide information suitable for children, too.

Guide 3: Use directed searches to save time and focus the search.

Some sites contain a broad range of information. If a search box is provided, type in the title of the document or a key word or phrase to better focus the search. A listing of useful key words is provided in Table 2.

<table>
<thead>
<tr>
<th>Table 2. Key Words to Search</th>
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<tbody>
<tr>
<td>These key words are useful in locating sites related to healthy eating and exercise. Type the words or phrases listed here in the search box.</td>
</tr>
<tr>
<td>“childhood health”</td>
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<tr>
<td>“childhood obesity”</td>
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<tr>
<td>“children and exercise”</td>
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<tr>
<td>“children and food”</td>
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<tr>
<td>“children and health activities”</td>
</tr>
<tr>
<td>“children and health”</td>
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<tr>
<td>“children and obesity”</td>
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<tr>
<td>“children and play”</td>
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<tr>
<td>“food activities”</td>
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<tr>
<td>“food guide pyramid”</td>
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<tr>
<td>“food safety”</td>
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<tr>
<td>“health and exercise”</td>
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<tr>
<td>“health” and “nutrition”</td>
</tr>
<tr>
<td>“nutrition activities”</td>
</tr>
<tr>
<td>“nutrition games”</td>
</tr>
<tr>
<td>“nutrition”</td>
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<tr>
<td>“overweight”</td>
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<tr>
<td>“physical activity”</td>
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<tr>
<td>“play”</td>
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<tr>
<td>“recess”</td>
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<tr>
<td>“teaching health”</td>
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<tr>
<td>“teaching nutrition”</td>
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</table>

Guide 4: Recognize the limitations of the relevance of health and exercise sites for young children.

Many online resources related to healthy eating and exercise have two limitations for early childhood educators. First, there are more sites targeted at elementary, middle, and high school children than preschool and kindergarten children. In some cases, teachers of younger children may be able to make these activities age-appropriate by adapting them. For example, it may be possible to reduce the number of steps needed to complete an activity or to substitute complicated procedures with simpler ones.

Second, many sites on the topic contain worksheets and coloring pages. Some are intended to be copied and incorporated into teacher-directed lessons. Others are designed to be interactive online, for example, using a mouse to electronically color in fruits and vegetables. Most of these worksheets and coloring pages are inappropriate because they limit children’s creativity, problem solving, and group sharing.

In a few cases, however, they can lead teachers to generate ideas for alternative activities that are more
developmentally appropriate. Instead of printing out pages of fruits to be colored, for example, teachers can draw a simple version of the USDA Food Pyramid (2005) and spread it out on the floor. Children can help find and cut out magazine pictures of healthy foods to place on the pyramid for each of the five food groups:

- **grains** (breads, pasta, rice)
- **vegetables** (potatoes, tomatoes, green beans, carrots)
- **fruits** (apples, oranges, grapes, bananas)
- **milk** (cheese, yogurt)
- **meat and beans** (chicken, eggs, ham, tuna, peanuts)

In small groups, children can then be invited to help plan a balanced meal.

After explaining how the foods are grouped into five types on the pyramid, children can be asked to identify the foods represented in each group. Each child then selects a food model from a large platter. Children name the food and describe its color, taste, and texture. Then, children identify where the food fits on the food pyramid. Children can be encouraged to help each other. To conclude, children compare the number of food items in each of the five colored blocks to decide if they had a balanced meal and make adjustments as needed.

**Guide 5: Decide how to facilitate children’s exploration of online resources.**

Children’s developmental skills must be taken into account in order for them to successfully use the Internet. These are a few strategies teachers can use.

*Identify a focal point.* Choose a key picture or word to use when introducing the purpose of a site. This will help children focus attention and gain their interest.

*Adapt activities to make them age-appropriate.*

*Identify an appropriate group size.* Decide if a site will be suitable for an adult to work with one, two, or more children at a time. Some Web pages are easier for children to maneuver through than others, depending upon their age and computer experience. Some sites may contain a number of links that can confuse and frustrate young children. In these cases, it is best to work with one or two children. If there are only a few links, it may be possible to work with a small group of children by presetting all the classroom computers to a certain page.

*Provide age-appropriate cues.* Use cues to facilitate children’s experiences online. With younger children,
make a poster with pictures of the key icons or graphics they will click on. Use these cues to guide children through different links. Present elementary-age children with a printed list of steps to follow after accessing a site. Engage children to discuss their Internet experiences to facilitate learning. For example, asking young children to review rules for using classroom computers will help them to remember and think through directions. Asking young children to identify and distinguish between arrow keys on the keyboard will help them navigate the Web, as well as introduce them to directional symbols found elsewhere in their physical environment. Asking children to describe what they liked best about different sites will promote independent thinking while encouraging respect for differences of opinion.

**Integrate online information and activity ideas into the curriculum.**

Provide support. All sites require children to hit a certain key or space bar, move the mouse, type a few key strokes, recognize computer images, and follow directions. In order to accomplish these tasks, some children may require more practice than others with more advanced motor skills, picture-recognition skills, and reading or problem-solving skills. This situation opens up a good opportunity to help children learn how to cooperate and learn from each other. However, care must be taken to structure and monitor these cooperative-learning situations in order to ensure children benefit from their work together. Provide children with support by offering suggestions for how they might work with each other. Remind them to take turns, wait patiently to use a computer until another child is done, and talk to each other about their online experiences. Always monitor their work and offer assistance as needed.

Try out Internet sites first. If there are any concerns about how well a particular site might work, initially introduce a few children to the site to assess their reactions. Do they show an interest? How easily do they maneuver through the site? What comments do they make? What support will be needed to make sure all children successful navigate the site?

Pursue an integrated approach to online learning. Identify ways to integrate information and activity ideas found online into the curriculum. Table 1 suggests how some sites related to healthy eating and exercise can be used to plan math, science, geography, and other educational activities. Other activity ideas for learning centers can be found in the *Put These Ideas Into Practice* section.
Facts about childhood health and safety can change quickly. Early childhood educators need convenient access to the latest information about health issues. Teachers are always looking for suitable health activities for children and current information to share with families. The guides and resources described here are likely to be useful in helping to meet these objectives.

References


U.S. Department of Health and Human Services. (2004a). Promoting better health for young people through physical activity and sports: A report to the president from the secretary of health and human services and the secretary of education (rev). Available from the Centers for Disease Control and Prevention, P.O. Box 8817, Silver Spring, MD 20907.


Put These Ideas Into Practice!

Addressing the “Epidemic” of Overweight Children
By Using the Internet

Mick Coleman, Charlotte Wallinga, and Diane Bales

Key Information About Childhood Obesity

• Fast-food restaurants, prepared snack food high in fat, large food portions, and a lack of recess and outdoor play are some of the factors contributing to the “epidemic” of overweight children.
• Being overweight raises the risk for health problems. It can also result in social stigmatization and low self-esteem.

Guidelines for Internet Use

Many Internet sites offer information and curriculum ideas for teaching young children about healthy eating and exercise.
• Repeatedly check each site before using it with children to make sure the content and format are suitable.
• Check out links provided.
• Use search boxes to save time and focus the search for health and nutrition information.
• Actively monitor and facilitate children’s exploration of Web sites.

Learning Center Experiences for Young Children

Large group. Help children learn about the five food groups by asking them to select food models or pictures to feed to a puppet. “Who would like to select a vegetable to give to Hungry Fred?” “Who would like to feed Hungry Fred a fruit?”

Math. Present a variety of apples, melons, or tomatoes. Encourage children to smell and taste each one. Graph class preferences according to tastes, colors, shapes, or smells.

Art. Invite children to make their own food placemats by drawing foods or gluing pictures from magazines on poster board. Laminate with self-adhesive plastic. Use the placemats whenever children eat to remind them of the importance of choosing a variety of foods. Use placemats to facilitate snack-time discussions about the variety of colors, shapes, sizes, and tastes associated with food.

Science. Challenge children’s creativity to use common food in unusual ways. During snack, invite children to use cheese cubes, raisins, crackers, celery, carrots, and/or slices of fruit to construct a building or sculpture. Offer whipped cream cheese as “cement.” Encourage children to share their creative snacks with each other.

Outdoor play. Set up an outdoor obstacle course that includes chairs for children to run around, short benches or logs for children to hop over, and plastic tunnels or large cardboard boxes for children to crawl through. Invite children to take turns going through the obstacle course. Congratulate each child who completes the course.

Dramatic play. Set up a dance studio with a boom box, music CDs, dance costumes, and water bottles. Invite a community dance instructor to introduce children to different dance moves. Remind children to drink water to keep their bodies healthy.

Internet Sites for Early Childhood Teachers

Use these sites to keep up to date on community, family, and childhood health issues, including those related to healthy eating and exercise.

Council of State Governments www.healthystates.csg.org
Healthy States Quarterly Newsletter includes articles on a wide range of human and community health issues.

American Heart Association www.americanheart.org
Children’s Health covers healthy national and exercise practices related to young children. For parents articles relate to maintaining a healthy heart, including articles on nutrition and exercise. Click on “Kids” for health and exercise activities.

Health, Mental Health, and Safety Guidelines for Schools www.nationalguidelines.org
This site was developed by more than 300 health, education, and safety professionals. Guidelines are provided on a range of topics including physical education, nutrition and food service, and family and community involvement.

National Association for Sport & Physical Education www.nassp.org
This professional organization seeks to enhance knowledge and professional practice in sport and physical activity. Order manuals online to assess and plan appropriate activities for children ages 3 to 8, at school or home.

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