



Nutrition for Family Living

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May, 2003 Topics

Why do kids eat healthful food? Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents.

Healthy Snacks in Schools

Making farmers markets attractive to low-income, African American seniors

New recommendation: Vitamin D supplements for breastfed infants

Why do kids eat healthful food? Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents.

Research has examined the factors that motivate or serve as barriers to healthy eating and activity habits in adults, but very little research has been done on this subject with children and teens. Two hundred thirteen students ages 7 through 17 participated in 38 focus groups. Students were asked to identify and rank the major perceived benefits of and barriers to healthful eating and physical activity and to suggest strategies for overcoming barriers.

Perceived benefits and barriers to healthy eating

| Major benefits | Major barriers |
|--|---|
| 1. improved concentration and alertness | 1. less healthful alternatives are more convenient |
| 2. feels good physically | 2. internal/physiologic preference (taste, satiety, cravings) |
| 3. psychological benefits | 3. social reinforcement |
| 4. improved fitness and sports performance | 4. reward driven/mood enhancement (eating when bored or stressed, or as reward) |
| 5. increased energy | |

Perceived benefits and barriers to physical activity

| Major benefits | Major barriers |
|--|-------------------------------------|
| 1. fun and enjoyment | 1. preference for indoor activities |
| 2. psychological benefits | 2. low energy level |
| 3. feels good physically | 3. time constraints |
| 4. improved fitness and sports performance | 4. social factors |
| 5. improved concentration and thinking | 5. low motivation |
| 6. coping strategy: relaxation, stress relief, outlet for aggression | |



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Participants in grades 5-11 were able to suggest strategies for overcoming barriers, while younger students were not. Older students suggested the following strategies for eating healthfully:

- Parental support: making healthy foods available at home
- Planning ahead to eat healthy: bringing healthy foods to school, making “junk food” less available at home and school
- Reminding oneself about the benefits of healthy food and the possible impact of “junk food.”
- Learning more about food and nutrition, increasing advertising of healthy foods to make them more appealing.

Strategies suggested for increasing physical activity included:

- Planning and organizing: joining a team, making plans to be active with friends
- Trying new activities: teens indicated boredom with existing programs and showed interest in new and unusual activities (martial arts, yoga, archery, hiking, water sports).
- Having parental support and involvement
- Managing time
- Making the physical education environment more welcoming/comfortable for girls

Some of the same benefits and barriers were mentioned for physical activity and for healthy eating. The health benefits of physical activity and healthy food, such as weight, appearance, and future health were mentioned by students but considered less important than other factors. Minor barriers to being more active were lack of interest in existing physical education/activity programs, self-consciousness, lack of transportation, and unsuitable outdoor environment. One of the most important strategies mentioned for overcoming barriers was parental support and involvement. These students wanted their parents to make healthy food available, and to be involved in outdoor activities with them.

Implications for educators:

This study provides information to help educators make their messages relevant to kids. As with adults, kids will be more motivated to change their behavior if they value “what’s in it for me.”

O’Dea, J. Why do kids eat healthful food? Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents. *J Am Diet Assoc.* 2003;103:497-501.



Healthy Snacks in Schools

Two recent projects have had success promoting healthy snacks to kids in schools.

USDA's Fruit and Vegetable Pilot Program provided free, daily fruit and vegetable snacks to children at 25 schools in Iowa, Indiana, Michigan, and Ohio, and six schools on one Indian reservation in New Mexico. High schools, middle schools, and elementary schools all participated and distributed fruits and vegetables using a combination of kiosks, vending machines, and in-class methods. USDA provided the funds and the schools implemented the program in whatever way best met their needs.

School administrators observed that students enjoyed the fruit and vegetables and asked for more at other times of the day. Foodservice staff reported that School Lunch Program participation increased and consumption of fruits and vegetables that were already part of the School Lunch Program increased. Some schools also reported fewer snacks sold from vending machines after the program was established. USDA has said they will continue to explore the Fruit and Vegetable Pilot Program based on the positive results it has achieved.

A study conducted by the University of Minnesota School of Public Health investigated whether lowering prices of healthy snack foods was an effective way to increase sales. In the first phase of the study, vending machines in 12 worksites and 12 secondary schools were stocked with lower fat snacks, and prices of lower fat snacks were reduced by 10%, 25% or 50% relative to higher fat snacks. Significantly more lower fat snacks were sold, with sales increasing 9%, 39%, and 93% respectively. In the second phase of the study, prices of fresh fruits and baby carrots were reduced in high school cafeterias. During the study, when prices were reduced 50%, sales of fresh fruit increased four-fold, and sales of baby carrots increased two-fold. Sales returned to usual levels when prices were returned to normal.

These studies confirm that price is an important motivator and have implications for marketing healthful foods as well as less healthful foods. Schools may want to consider lowering prices on healthy snacks to stimulate purchases while increasing prices on less healthy snacks to maintain their profit level.

Press release about fruit and vegetable snacks in schools:

<http://www.5aday.com/html/press/pressrelease.php?recordid=67>

French, SA. Pricing effects on food choices. *J Nutr.* 2003;133:841S-843S.



Making farmers markets attractive to low-income, African American seniors

A report prepared for the University of Maryland Cooperative Extension describes research that looked at factors determining African American seniors' shopping habits, to recommend ways to promote local foods through farmers markets.

Promoting farmers markets in low-income communities is challenging due to limited consumer incomes, low car ownership, and cultural differences between vendors and consumers. The high redemption rate of WIC and Senior Farmers Market Nutrition Program vouchers in the Washington DC area has been encouraging, however, and shows that farmers markets could be better utilized by low-income residents.

The farmers market held at RFK stadium in metropolitan Washington DC is a rarity in that area. Considered to be a "food desert," that part of the city has a small number of supermarkets for a large number of African American, low-income residents. Despite the large number of potential customers and relatively little competition, holding a successful farmers market in that environment is a major challenge. For small farmers struggling to earn a living, successful marketing can mean the difference between profit and foreclosure.

The researcher conducted interviews with African Americans over age 60 at a public housing project in Northwest Washington DC and at a senior center. Because of the small number of interviews conducted (n=29), the results cannot be generalized to a broader population. The practical suggestions for addressing the issues may prove useful in other locations.

These seniors were very concerned with the cost of food, a result of personal experiences with poverty and childhood experiences during the Depression. This sense of frugality has a major influence on their food buying habits. Consequently, sales advertisements or "sales papers" from supermarket chains are very important for conveying food-marketing messages that have the most impact on shopping habits. Whether the sales papers are distributed in stores, in newspapers or through direct mailings, these weekly ads dictate shopping habits in a strong and consistent fashion. This is a key finding for farmers markets and public health campaigns that promote fruit and vegetable consumption.

To promote farmers market products to low income, African American seniors, the author recommends combining a community organizing approach (using supporters of a market which include organizations that have a relationship with the consumers) with a publicity approach (banners, posters, newspaper ads, etc.). Recommendations for effective advertising campaigns would include:

1. Produce weekly "sales papers" or fliers that announce sales of key, high-demand items.
2. Distribute the sale papers through large or community newspapers, churches, schools and other community organizations in the market trade area.
3. Incorporate unique cultural values, traditions and food preferences of African American senior citizens in advertising language, product offerings and market operations.

Implications for Educators: Extension educators are often part of the community organizing approach – supporting the farmers market by promoting it along with their other activities. In some settings, they may also be able to serve as a link between customers and farmers to help farmers know which products will sell best with the low-income population in their area.

Marketing Regional Foods to an Urban Audience: Advertising Campaigns that Work. Matthew T. Hora, University of Maryland Cooperative Extension, March 2003.



New recommendation: Vitamin D supplements for breastfed infants

The American Academy of Pediatrics (AAP) says all exclusively breast-fed infants should receive vitamin D supplements to prevent rickets, a bone-weakening disease doctors believe may be becoming more common.

Breast-fed infants should receive vitamin supplements beginning at 2 months of age and until they begin taking at least 17 ounces daily of vitamin D-fortified formula or milk, the AAP says in a new policy statement. The AAP recommends multivitamin supplements containing 200 international units of vitamin D, available as over-the-counter liquid drops or tablets. Supplements containing only vitamin D generally are too concentrated to be safe for routine use.

The new recommendation also applies to infants who aren't breast-fed but who don't drink at least 17 ounces of fortified formula or milk daily, and children and adolescents who don't drink that much fortified milk (about 2 cups), who don't get regular sunlight exposure or who don't already take multiple vitamins with at least 200 international units of vitamin D.

Breast milk contains small quantities of vitamin D and doctors used to think babies could get adequate amounts if they also spent time in sunlight, which stimulates the body to produce vitamin D. However, growing concerns about skin cancer and recommendations that youngsters wear sunscreen and avoid excessive sun exposure may be putting some children at risk for vitamin D deficiency and rickets. The new recommendation, published April's *Pediatrics*, was prompted by reports of rickets nationwide in recent years.

It's not clear if the actual incidence of rickets has risen since there are no national statistics on the condition. Most recent cases of rickets have affected black children, whose skin does not absorb as much sunlight. Children who spend a lot of time indoors, perhaps because of parents' long work hours or safety concerns, also are at increased risk.

Symptoms include high fever and seizures in infants, and bone pain, delayed walking, small stature and bowed legs in toddlers. Youngsters can be deficient in vitamin D months before symptoms are obvious. Blood tests can diagnose the disease. Rickets can be treated with adequate vitamin D and sometimes braces or surgery, but short stature and bone deformities may be permanent if not corrected while children are still growing.

Implications for educators: Educators should be aware of this new recommendation and refer women to their pediatricians for further information specific to their situation.

Gartner LM, Greer FR, and the Section on Breastfeeding and Committee on Nutrition.
Prevention of Rickets and Vitamin D Deficiency: New Guidelines for Vitamin D Intake.
Pediatrics 2003;111(4): 908-910.