

Nutrition for Family Living

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September, 2003 Topics

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Pediatricians are urged to track BMI

The American Academy of Pediatrics (AAP) has developed its first-ever policy statement about identifying and preventing the problem of obesity and obesity-related disorders in children. While most pediatricians already track children's height and weight, the new policy asks doctors to keep obesity prevention in mind and to specifically measure body-mass index (BMI). This will help them spot unusual growth that might signal an increased risk of obesity.

In adults, a BMI of 30 or higher is considered obese but in youngsters the index depends on gender and age. Recent data indicate that about 15% of U.S. youngsters aged 6 through 19 are overweight or obese based on their BMI – a rate that has doubled over the past two decades. Studies also have shown increasing rates of obesity-related diseases, including adult-onset diabetes, in children.

In addition to yearly BMI checks, the new policy encourages pediatricians to:

- identify and track patients at increased risk because of family history, ethnic or cultural factors.
- routinely encourage physical activity and promote the Academy's existing recommended limit of no more than two hours of television or video viewing daily.
- encourage parents and caregivers to promote healthy eating.
- encourage breast-feeding, since studies have shown it may reduce children's risk of becoming overweight or obese.
- actively promote anti-obesity programs in their communities, including discouraging the sale of sugary sodas at schools and encouraging physical education programs that focus on personal fitness, not just team sports.

The AAP recommends that pediatricians monitor all children for weight problems, even those who appear fit, because many may face an increased risk of obesity due to family history or environment. The policy also aims to avoid stigmatizing youngsters who already are overweight or obese, and to focus less on labeling than on advocating healthful activities for all kids. Pediatricians agree that it's important to identify children at risk because it's much easier to make small changes in eating and exercise habits than to treat obesity.

Prevention of Pediatric Overweight and Obesity. Policy Statement of the American Academy of Pediatrics.
Pediatrics. 2003;112(2):424-430.



Physical activity and sedentary activities among teens

The August, 2003 issue of *Archives of Pediatric and Adolescent Medicine* includes a number of studies about physical activity and obesity in youth. One Canadian study looked at the relationship between the time adolescents spend in physical activity and the time they spend in more sedentary activities (watching television, playing video games, working on computers, or doing homework and reading). Seven hundred forty-three high school students from two inner-city public schools and one private school completed a written survey about time spent in physical activity, time spent in sedentary activities, musculoskeletal pain, and psychological issues.

More girls than boys reported low or moderate amounts of physical activity, and more boys than girls reported high levels. Boys spent more time playing video games but less time doing homework than girls. Neither musculoskeletal pain nor mental health was related to physical activity. However, working at a part time job outside of school was associated with increased physical activity for both boys and girls. In this study, students attending private school were more active than students attending public school. In contrast to other studies, physical activity was not associated with the amount of time spent watching television or playing video games. Teens who spent more time on the computer also spent more time being active.

This study suggests that teens who spend more time in “productive” sedentary behavior such as computer use, homework or reading are more likely to make time for physical activity. “Leisure” sedentary behavior (television and video games) was not associated, either positively or negatively, with physical activity. Teens who worked also tended to be more physically active. It may be that teens who use their time more productively in general are better at time management and are able to make time for physical activity. Another possibility is that those teens who are not active choose not to be, unrelated to their choice of other leisure activities (such as television). Reducing television viewing may not be enough to increase physical activity in teenagers. Time management skills or motivational strategies may be necessary to encourage teens to be more active.

Feldman DE et al. Is Physical Activity Differentially Associated with Different Types of Sedentary Pursuits? *Arch Pediatr Adolesc Med.* 2003;157:797-802.

View this issue of the journal at <http://www.archpediatrics.com>



Too many sweetened drinks put children at risk of obesity

Researchers at Cornell University found that children who drank more than 12 ounces of sweetened drinks per day gained significantly more weight than children who drank less than six ounces per day. Children in this study did not reduce the amount of food they ate at meals to compensate for the calories they consumed in sweetened drinks. The more sweetened drinks they consumed, the greater their daily caloric intake and the greater the weight gain.

The researchers followed 30 children, aged 6 to 12, for five days a week for two months while attending Cornell's day camp. To assess the effects of sweetened drinks on caloric and nutrient intake and weight gain, the researchers prepared breakfast, lunch, and two daily snacks and recorded what the children ate or drank. They defined sweetened drinks as soda, fruit punch, bottled tea or drinks made from fruit-flavored powders, such as grape and lemonade.

Among the findings:

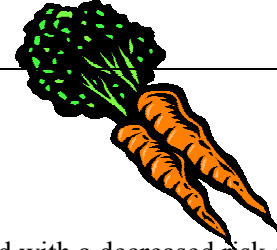
- Children who drank more than 16 ounces a day of sweetened drinks consumed 4 fewer ounces of milk and 16% less calcium a day than children who avoided sweetened drinks.
- Children consuming sweetened drinks took in 244 more calories a day than on days when they did not drink these beverages. Their solid food intake on these two occasions varied only by about 2 ounces.
- Over the two months of the study, children who drank more than 16 ounces a day of sweetened beverages gained an average of 2.5 pounds, compared with a 0.7 to 1 pound gain in children who consumed on average 6 to 16 ounces of sweetened drinks a day.
- When given a choice between sweetened drinks and milk, children chose the sweetened drink.

These findings suggest that sweetened drinks may be a significant factor in obesity among children in the United States. The degree to which sweetened drinks displace milk in children's diets is a concern, especially for girls. Noting that children often choose sweetened drinks over milk when both choices are available, educators can encourage parents to limit sweetened drinks and serve milk as the primary beverage with meals.

Mrdjenovic G and Levitsky D. Nutritional and energetic consequences of sweetened drink consumption in 6- to 12-year-old children. *J Pediatr.* 2003;142:604-610.



A consumer taste evaluation of five multi-colored carrots



And the winner is...ORANGE!

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Consumption of a variety of fruits and vegetables has been associated with a decreased risk of cancer and other chronic diseases. The different colors of fruits and vegetables are often due to different disease-fighting *phytochemicals* (*phyto* = plants), which is one reason the Dietary Guidelines recommend choosing a variety of fruits and vegetables daily. Under the financial support of the United States Department of Agriculture, the Tanumihardjo Laboratory evaluated the consumer acceptance of five specialty carrots of different colors for flavor, sweetness, crispiness and overall taste.

Why study different colored carrots? Due to the health benefits and/or better availability, the proportion of adults who consume fruits and vegetables at least 5 times daily has increased from 19% in 1990 to 23% in 1996. Among these, the average consumption of carrots has increased by 25% between 1993 and 1999. Because of their pleasant flavor, carrots are popular as snacks, side dishes, salad ingredients, juice mixtures, and dessert ingredients. Recently, Simon *et al.* cultivated dark orange, yellow, red, and purple carrots high in beta-carotene, lutein, lycopene, and anthocyanins, respectively. Beta-carotene has been studied extensively for both its pro-vitamin A activity and its role in disease prevention. An association between the consumption of lutein and prevention of age-related eye diseases has been documented as well as a study on dietary lutein and reduced risk of atherosclerosis. Dietary lycopene has an inverse association with various cancers, heart disease, and diabetes. Anthocyanins potentially act as antioxidants, anti-inflammatory agents, anti-clotting agents and anti-carcinogens. Thus, because people like carrots in general, introducing carrots with a broad range of colors could also increase the range of “good compounds” consumed.

How was our study conducted? To determine if the color of the carrots could influence taste perception of an average consumer, we asked volunteers to try each type of carrot with and without a blindfold. A panel of students and faculty (34 male, 62 female) aged between 18 and 56 years, with an average carrot consumption of 2.3 per week, volunteered and signed consent forms. Individual evaluations were performed in the Nutritional Sciences’ research kitchen under normal lighting. During their first visit, volunteers were blindfolded and rated each carrot’s flavor, sweetness, crispiness, and overall taste with a number between 1 (*like extremely*) and 9 (*dislike extremely*). Volunteers were offered tap water between each carrot sample. At least 3 days later, subjects repeated the process without a blindfold. During both visits, volunteers were free to give overall comments on each carrot.

What did we find? The results of the study were encouraging in that the average scores for each characteristic were between 2 and 4. With or without blindfolds, the orange carrots had the best score for carrot flavor, followed by the white carrots and then an equivalent score among the yellow, red, and purple carrots. Similar results were found with respect to sweetness, with orange and white having equivalent scores, followed by the yellow, red, and purple carrots being alike. In regards to crispiness and overall taste, the orange and white carrots had the most favorable scores, followed by the yellow, red, and then purple carrots with no difference between the yellow and red or the red and purple scores. Interestingly, a previous trial by Alasalvar *et al.* using trained panelists found the purple carrot to be the sweetest. One must keep in mind,



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however, that many factors affect carrot flavor and the carrots that Alasalvar used may not have been grown under the same environmental conditions as the carrots we used.

Our conclusion: This study was to determine if the average consumer would like the multi-colored carrots. From the results, we can conclude that not only did the untrained volunteers like all the carrots, but also that the color did not discourage their perception. We believe that offering these carrots to the public would increase the consumption of beneficial phytochemicals and thus play a positive role in decreasing the risk of cancer and other chronic diseases.

Supported by USDA-IFAFS grant number 2000-4258, Hatch-Wisconsin Agricultural Experiment Station WIS04533, and the UW-Madison Graduate School.

Resources used:

Alasalvar, C., Grigor, J.M., Zhang, D., Quantick, P.C., Shahidi F. (2001) Comparison of Volatiles, Phenolics, Sugars, Antioxidant Vitamins, and Sensory Quality of Different Colored Carrot Varieties. *J Agric, Food Chem.* 49:1410-1416.

Meilgaard, M., Civille, G.V., Carr, B.T. *Sensory Evaluation Techniques, 2nd Edition.* CRC Press, Boca Raton, Ann Arbor, Boston, London. 1991.

Putnam, J.J. and Allshouse, J. (2001) *Food Consumption, Prices, and Expenditures, 1970-99.* U.S. Department of Agriculture, Economic Research Service.

Ruowei Li, Serdula M., Bland, S., Mokdad, A., Bowman, B., Nelson D. (2000) Trends in Fruit and Vegetable Consumption Among Adults in 16 US States: Behavioral Risk Factor Surveillance System, 1990-1996. *Am J Public Health.* 90:777-781.

Simon, P.W. (1997) Plant Pigments for Color and Nutrition. *HortScience.* 32:12-13.

Resource: Fabulous fruits... Versatile vegetables.

Fabulous fruits... Versatile vegetables is the fourth in a series of consumer brochures based on the Dietary Guidelines for Americans, 2000. This brochure provides information on the health- and nutrition-related aspects of consuming fruits and vegetables, and offers tips to help consumers include a variety of fruits and vegetables into both their diets and the diets of children.

Other titles in this series include:

Where Do Your Favorite Foods Fit?

Get on the Grain Train

How Much Are You Eating?

These brochures, as well as Dietary Guidelines and Food Guide Pyramid materials, can be viewed and downloaded from <http://www.cnpp.usda.gov>.

To order additional copies, see ordering information on the website.



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Resource: Food Counts in the African American Community: Chartbook 2001.

This is a 115-page book that presents data about food consumption, food attitudes, and demographics specific to African Americans. The data are from the USDA's 1994-96 Continuing Survey of Food Intakes by Individuals and 1994-96 Diet and Health Knowledge Survey, and are presented in colorful chart, graph, and table formats. The accompanying text outlines currently recommended dietary guidance and discusses current dietary practices among African Americans, as measured by the national surveys mentioned above.

This book does not go into great detail on any one topic, but does provide some very useful general information for those working in nutrition education with African American populations.

The book can be ordered free of charge by contacting one of the co-authors at their respective email addresses:

Ellen Harris, Assistant Director, Beltsville Human Nutrition Research Center, USDA
eharris@rbhnrc.usda.gov

Yvonne Bronner, Director of MPH/DrPH Program, Morgan State University, Baltimore MD
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Wisconsin Family Day -- a day to eat dinner with your children

The Wisconsin Dept. of Public Instruction, PTA and FCE are promoting a Wisconsin Family Day initiative with an event to encourage more family dinners on Monday, Sept. 22. This is a great opportunity for us to coordinate our educational activities with colleagues at schools in our communities. Please help promote family meals via newsletter articles, press releases, displays, posters, etc. whenever it fits your nutrition or other Family Living Program plans. A poster and brochure with ideas for story lines are available in DPI's brochure at this website:

<http://www.dpi.state.wi.us/dpi/dltcl/bbfcsp/tnfamday.html>

Update: 2005 Dietary Guidelines Revisions

HHS Secretary Tommy G. Thompson and Agriculture Secretary Ann M. Veneman have designated 13 professionals to serve on the Dietary Guidelines Advisory Committee, the group responsible for reviewing the Dietary Guidelines for Americans report, published every five years.

Full text of the press release can be found at:

<http://www.usda.gov/news/releases/2003/08/0283.htm>



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Notes from the Society for Nutrition Education annual conference, July 26-30, 2003

- Trish Britten from USDA/CNPP reported on consumer focus groups conducted by USDA to study understanding of the Food Guide Pyramid. Consumers' definitions of "healthy eating" were mostly appropriate (fruits and vegetables, moderation, balance, avoid/limit fats, etc.) but servings and portion distinctions were not understood and the ranges were not helpful. People were not willing to "do the math" to convert portions to multiples or fractions of Pyramid servings. A Federal Register notice in August or September will update the science/research basis for Pyramid messages.
- Mothers of overweight children rated strategies to prevent/manage overweight in children as follows, from highest to lowest importance: feeding cues, food selection, physical activity cues, parenting information, physical activity, play skills, food preparation. Fifteen of the 19 women told researchers from the University of Nevada that their physicians had mentioned nothing to them about their child's weight.
- An opening discussion of factors affecting food choice included a socioeconomic summary by Professor Jeff Sobol from Cornell. Factors that are most important include life course (one's cumulative experiences with food); personal food systems; cultural ideals; personal factors such as identifying oneself as a picky eater; resources (time, money); and interpersonal relationships. Studying these factors is every bit as complex as studying the biological factors affecting the way people eat and/or overeat.
- Shirley Gerrior from USDA presented a poster describing changes in the US Food supply from 1970 to 2000. Consumption of dairy products decreased by 18%, with a 68% decline in whole milk consumption. Compensating somewhat for this decline, consumption of lower fat milks and cheese doubled and yogurt consumption increased five-fold. Consumption of red meats dropped by 16%, while that of poultry doubled due to popularity of fast food chicken items and turkey cold cuts. Consumption of fruits and vegetables rose by 25% due to increased variety and year-round availability of many items, such as tropical fruits. Grain consumption increased by 43% with some products, such as breakfast cereals, providing consumers with additional nutrients through fortification. A 41% increase in the consumption of fats and oils occurred as consumers replaced butter and margarine with salad and cooking oils. A 25% increase in sugars and sweeteners was due in part to increased use of caloric sweeteners to sweeten drinks and food. *Implications:* The food supply provides a variety of food choices to Americans. To better balance their diet and health, Americans need to take advantage of this variety by consuming low fat dairy and meat products as well as more fruits, vegetables, and enriched grains, and fewer beverages and foods with added sugar and fat.



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For the record: family/parenting factors and obesity; trans fatty acids

As sent to flp-all listserv by Susan Nitzke, July, 2003

As you may know, **family/parenting factors related to the nationwide obesity epidemic** will be a topic of discussion at our November conference. This series of articles in the Milwaukee Journal-Sentinel provides some thought-provoking information related to the broader topic. You can read the stories online at

<http://www.jsonline.com/> or

<http://www.jsonline.com/alive/well/jul03/153742.asp>

The articles nicely complement the information in the "Children and adults need to choose more nutritious food and be more active" section of the Trends Analysis 2003 that you're using as you get into the nuts and bolts of program planning.

The final rule on **trans fatty acid information on food labels** is being issued. There's a press release briefly explaining the new rule at

<http://www.hhs.gov/news/press/2003pres/20030709.html>

It states: "Under the new FDA regulations, by Jan. 1, 2006, consumers will be able to find trans fat listed on food nutrition labels directly under the line for saturated fat. The new information is the first significant change on the Nutrition Facts panel since it was established in 1993."

An extensive FDA fact sheet on trans fatty acids and the new labeling rule has a Q/A format. You can link to it at:

<http://www.cfsan.fda.gov/~dms/qatrans2.html>

In a nutshell, the amount of trans fat in a serving will soon be required to be listed on a separate line under saturated fat on the Nutrition Facts panel (see figure in the fact sheet). Trans fat will not have to be listed if the total fat in a food is less than 0.5 gram per serving and no claims are made about fat, fatty acids or cholesterol content. If it is not listed, a footnote will be added stating that the food is "not a significant source of trans fat."

When the new rule takes effect, we will need to adapt some of the label information in our teaching resources. Please notify us if you come across archived pieces that need to be revised or tossed (for this or any other food/nutrition issues).