



# Nutrition for Family Living

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## July, 2008 Topics

Promoting healthful food and lifestyle choices of low-income mothers  
Obesity Research at UW-Madison

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## Promoting healthful food and lifestyle choices of low-income mothers

By Susan Nitzke

Three recent articles from the Journal of the American Dietetic Association provide clues to help educators target nutrition messages to low-income mothers. Jeanne Freeland-Graves and colleagues from the University of Texas identified attitudes of new mothers about nutrition and weight. They conducted assessments among 340 low-income white, Black and Hispanic mothers from central Texas at 1.5, 6 and 12 months after they had given birth to their youngest child. Compared to normal-weight women, obese women were likely to perceive more barriers to healthful eating and respond more to emotional cues to eat. Obese women reported eating more when they were depressed, stressed/anxious or angry, regardless of age, number of children, ethnicity, or lactation status. In contrast, women who had healthy weights a year after giving birth were more concerned with taste, hunger/satiety and cravings than overweight or obese women. Healthful eating scores were higher for women who were older and more educated than the other low-income mothers. Cost, time and lack of understanding of nutrition were important barriers to healthful eating and the barriers tended to increase during the first year after childbirth.

Mei-Wei Chang from the Michigan State University School of Nursing worked with Susan Nitzke from UW-Madison/Extension and WIC colleagues in Michigan to identify motivating factors and barriers via focus group interviews with 80 Black and white overweight and obese mothers who were participants in Michigan's WIC program. The interview questions and analysis of responses were guided by Social Cognitive Theory (SCT). Personal appearance, fit in clothes, inability to play with their children, and social support were found to be important motivating factors for healthful eating and physical activity. In addition, stressful experiences triggered emotional eating and made it more difficult to eat healthfully. Chang et al made the following recommendations to educators based on their findings:

- Emphasize the benefits of healthful lifestyle behaviors such as being a positive role model and having more energy.
- Encourage learners to reward themselves for accomplishing their goals for improved personal behaviors.
- Help learners set personal goals, make improvements via a gradual series of positive changes, and keep personal diaries to track progress
- Encourage learners to set up healthier eating environments in their homes by keeping nutritious foods handy, finding practical ways to be more active in their home environments, soliciting support from friends and family members, planning to overcome common barriers to healthful lifestyle choices, identifying stressful situations that trigger less healthful eating, and managing time more effectively.

A commentary on food choice by Madeleine Sigman-Grant from University of Nevada Cooperative Extension adds context and helps interpret the meaning of findings such as two studies cited above. Reflecting on what she learned in contributing to a report on seafood



## Nutrition for Family Living July, 2008

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nutrition, Dr. Sigman-Grant points out that both risks and benefits must be addressed by educators especially when consumers hear contradictory information that may be confusing. For example, albacore tuna contains more methylmercury, a contaminant or “risk”, than light tuna but it also is higher in n-3 fatty acids, a “benefit.” She reminds fellow educators that learners’ culture and economic situations must be considered and “guidance in food choices should present information in a clear and easy-to-understand format, with multiple layers of information to meet the needs of all individuals... and structured in a manner that supports informed decision-making.”

*Implications for Extension Educators.* Sigman-Grant’s advice to take learners’ cultural preferences and economic limitations into consideration and making nutrition information clear to support informed decision-making are familiar advice for Extension educators. Specific factors that are likely to be important when conducting nutrition education with WIC mothers are identified by community-based research, including the Texas and Michigan studies described above.

### References:

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## Obesity Research at UW-Madison

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By Gayle Coleman

In the December 2006 Nutrition for Family Living, Sherry Tanumihardjo described nutrigenomics, the study of why one person's genetic makeup (genotype) causes his or her body to interact with their diet differently than another person. The summer 2008 issue of the UW-Madison, College of Agriculture and Life Science "Grow" magazine features nutrigenomic work being done by James Ntambi and Eric Yen at the University of Wisconsin-Madison. Dr. Ntambi, a professor in the Departments of Biochemistry and Nutritional Sciences, studies the SCD gene and showed that mice that lack this gene are unable to store fat from food or make new fat from carbohydrate. He found that certain nutrients such as omega-3 and omega-6 fatty acids suppress the SCD gene and other nutrients such as simple sugars boost SCD's activity. Dr. Yen, an assistant professor in the Department of Nutritional Sciences, studies the gene and an enzyme called MGAT. He found that mice without MGAT took up the same amount of fat as control mice but more slowly. Instead of storing the extra calories, mice without MGAT used more energy and had a higher body temperature than control mice. The professors acknowledge that while having a pill that suppresses genes that promote obesity is a tantalizing idea, it's not that simple. Suppressing genes could have side effects for humans such as liver problems or decreased longevity. The complete article entitled, "*Do these genes make me look fat?*", is accessible at <http://www.grow.uwcalscommunication.com/2008/06/13/do-these-genes-make-me-look-fat/>.

In a side bar article in the same issue of "Grow" (not available online), Dale Schoeller, another professor in the Department of Nutritional Sciences, talks about the need for multi-pronged approaches to deal with complex problems such as obesity and diabetes. Dr. Schoeller provides leadership for the Wisconsin Prevention of Obesity and Diabetes (WiPOD), a recently formed university-wide initiative that is a joint effort of the College of Agriculture and Life Sciences and the UW-School of Medicine and Public Health. The goal of this initiative is to bring new knowledge about obesity to the public, both by collaborating with community programs and by educating government agencies about actions they can take to promote healthy lifestyles. Currently, Susan Nitzke and Gayle Coleman represent UW-Extension on WiPOD and they are making fellow WiPOD members aware of UW-Extension efforts such as their work with healthy lifestyle coalitions.

Implications for Extension Educators: Sherry hit the nail on the head in her 2006 article, *Chances are high that the majority of us will not have the genetic makeup to be able to eat a high-fat, high-calorie diet and still stay slim and fit into our jeans. The good news for all of us is that the Dietary Guidelines for Americans 2005 (DGA) contain the most current information on diet recommendations that will not cause nutrient deficiency and will promote optimal health for the overwhelming majority of the U.S. population. The DGA are research-based and include a diverse population foundation. While nutritional genomics may play a role in the future for rethinking individualized nutritional requirements based on genetics, for now we can rely on the DGA to guide our nutrition education efforts.*

Source: University of Wisconsin-Madison, College of Agricultural and Life Sciences. Grow, Summer 2008. <http://www.wisc.cal/grow/>

Escaron A. and Tanumihardjo S. Will testing your genes help you fit into your jeans?

Nutrition for Family Living, December 2006.