



# Nutrition for Family Living

Susan Nitzke, Nutrition Specialist; [susan.nitzke@ces.uwex.edu](mailto:susan.nitzke@ces.uwex.edu)  
Sherry Tanumihardjo, Nutrition Specialist; [sherry.tan@ces.uwex.edu](mailto:sherry.tan@ces.uwex.edu)  
Amy Rettammel, Outreach Specialist; [arettamm@facstaff.wisc.edu](mailto:arettamm@facstaff.wisc.edu)  
Betsy Kelley, Outreach Specialist; [kelly@nutrisci.wisc.edu](mailto:kelly@nutrisci.wisc.edu)

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## EFNEP Helps Reduce Food Insecurity

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EFNEP provides community-based nutrition education to low-income families with children with support from the U.S. Department of Agriculture. The program's goal is "to assist limited resource audiences in acquiring the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sound diets, and to contribute to their personal development and the improvement of the total family diet and nutritional well-being."

To study the impact of EFNEP on food insecurity, researchers in New York state compared answers to a food insecurity question from approximately 15,000 graduates of EFNEP with answers for almost 300 participants who entered but did not complete EFNEP, using data from 1999-2001.\* Answers to the standard EFNEP evaluation pre-post question on "how often do you run out of food before the end of the month?" were used to determine the relationship between EFNEP graduation and the individual's food insecurity status. Multiple regression analysis was used to take confounding factors into account (racial/ethnic designation, age, place of residence, number of lessons, individual/group/combined program delivery method, and food assistance at entry).

EFNEP participants who terminated before graduation were younger, were more likely to identify themselves as White, lived in less-populated areas, were more likely to participate in food assistance programs prior to EFNEP, and they were more likely to be taught through individual vs. group instruction than EFNEP graduates. Both early terminators and graduating EFNEP learners reported running out of food less often. The learners who graduated from EFNEP tended to have better scores than those who terminated before graduation, but the difference between their scores was not large enough to be statistically significant ( $p=.055$  in an independent t test). Regression analysis showed that White and Hispanic EFNEP learners showed significantly greater improvements in food insecurity than Asians. Farm residents did not show a significant change in food insecurity; residents of small towns showed a greater improvement than residents of cities. Older participants did not reduce food insecurity scores as much as younger participants. Participants completing more lessons and those taught individually rather than in groups or individual/group combinations had greater improvements in their food insecurity score.

The main result was that the food insecurity score of graduates decreased by 0.2 points on the 5-point food insecurity item/scale, and the pre/post difference was highly significant ( $p<0.001$ ). Specifically, the mean scores for EFNEP learners who terminated their lessons before graduating went from 2.43 to 2.18 and the scores for graduates went from an average of 2.44 to 2.06 (lower scores show improvements).

The article concludes with the following statement:

"This study supports the importance of education in decreasing the food insecurity of low-income families and suggests that there is a dose response relationship between the number of lessons received and decreases in food insecurity. Programs such as EFNEP that educate families in food selection and resource management skills can decrease the risk of food insecurity, although effects clearly vary by both the sociodemographic characteristics of participants and program delivery methods."



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Comments: The fact that the individual teaching method had more early terminators and showed greater improvements in the food security measure is puzzling. It is possible that the participants who were more interested in the subject matter vs. social interactions were more likely to stay with the individual teaching mode more than participants who attended for the social benefits, but this cannot be determined from the current report.

A single question such as the EFNEP reporting system's question on running out of food has definite limitations for measuring a phenomenon as complex as food insecurity. Nevertheless, a test of this question with over 5,000 low-income women showed a very modest but statistically significant relationship between "running out of food before the end of the month" and dietary quality based on a 24-hour recall (Keenan D, Olson C, Hersey J. Measures of food insecurity/security. *J Nutr Educ & Behav* 2001;33:S49-S58.)

Cost-benefit analyses of EFNEP in Virginia and Oregon have shown favorable results of \$10.64 and \$3.63 in estimated savings associated with potential prevention of diet-related chronic diseases and conditions for each dollar of program cost, showing that the benefits of EFNEP exceed the costs of providing the program. A similar study in Tennessee compared food expenditures among EFNEP and non-EFNEP participants and found that reported family food expenditures decreased by \$124-\$234 per year, intakes of iron, vitamin C, vitamin B-6 and fiber increased, they added less salt when cooking, read nutrition labels more often, and reported that they were less likely to run out of food at the end of the month. (Burney J, Haughton B. EFNEP: A nutrition education program that demonstrates cost-benefit. *J Am Diet Assoc* 2002;102:39-45.)

There may be more EFNEP benefits than those that can be measured and given economic value in cost-benefit studies. For example, participants with improved nutrition habits may do a better job of providing foods to other family members who may also experience tangible benefits such as reduced disease risks.

What does this mean to nutrition educators in UW-Extension and other programs serving low-income audiences? Although we can take pride in the documented benefits of EFNEP nutrition education, we continue to strive for program improvements. As plans are being developed for 2004, consider suggestions from a previous study and literature review by Cornell researchers who recommend that EFNEP and FSNEP "...build on existing abilities of participants, provide opportunities for self-directed learning and activities, and build on social support, social networks, and trust among participants while linking them to the broader community" (Arnold CG, Ladip P, Nguyen CH, Nkinda-Bhaiban P, Olson CM. New concepts for nutrition education in an era of welfare reform. *J Nutr Educ* 2001;33:341-6).

\*Primary source: Dollahite J, Olson C, Scott-Pierce M. The impact of nutrition education on food insecurity among low-income participants in EFNEP. *Family and Consumer Sciences Research Journal* 2003;32:127-139.