

IMPACT

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IMPACT is a series of publications highlighting how UC Davis' College of Agricultural and Environmental Sciences makes a difference in the lives of Californians. Through research, teaching and outreach programs, UC Davis research touches almost all aspects of Californian life. Today, millions of people eat safer foods, breathe cleaner air and drink healthier water with the help of our researchers. We're making discovery work -- for California and the world.

IMPROVING NUTRITION CHOICES

THE ISSUE

In 1994, Amy Block Joy, a Cooperative Extension (CE) specialist in nutrition, saw the need to reach more parents and teachers to ensure that children are better nourished for the future. She developed a nutrition education program for California that targets low-income children and adults.

In 10 years, the Food Stamp Nutrition Education Program (FSNEP) has expanded from serving 20 California counties to serving over 40 and from a budget of \$750,000 to \$8.8 million. Trained staff teach food skills in choosing healthy foods, budgeting and shopping smart, and cooking.

WHAT WE'RE DOING

The program has two interactive components: Cooperative Extension and university research. Last year, FSNEP educated over 25,000 children and 20,000 adults.

In California, 75 percent of those eligible are not enrolled in the food stamp program. For the 25 percent who are enrolled, food stamps helps feed their families and FSNEP uses education to stretch their limited resources.

Outreach through Cooperative Extension. FSNEP continually designs new classes to spread the nutrition message. One class teaches people to shop wisely.



For example, instant rice costs \$3.49 a box. But, a consumer can save money and eat the same number of servings by buying rice in bulk at \$1.49 a bag.

Joy has produced a collection of eight-minute videotapes titled FOR GOODNESS SAKE! that shows how easy it is to cook. The series is produced in English, Spanish and Vietnamese.

FOR GOODNESS SAKE, RICE! includes recipes for stir fry, chili and beans over rice, rice pudding, and rice salads -- showing families how to use rice as the basis of a meal. Results indicate a 50 percent increase in monthly rice servings, from 8 to 12 per person. Says Joy, "We try to get people back to the kitchen."

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Another program reaches rural families through the mail. County extension offices send six basic nutrition lessons and recipes one week apart. Joan Wright, a CE specialist emeritus in human and community development, and Joy studied the impact and found that at a program cost of \$64 per family, the payoff included \$17 off the monthly grocery bill, more beans, fruits and vegetables eaten, and fewer high-fat foods consumed.

A Garden in Every School. Sheri Zidenberg-Cherr, a CE associate specialist and Agricultural Experiment Station researcher in nutrition developed “Nutrition to Grow On”, nine lessons with complementary activities and take-home family newsletters that teach K-12 children good eating habits. While playing with seeds, worms, dirt, bugs and butterflies, kids learn about edible plant parts, healthy snacks, plant survival and mini greenhouses.

Last year, Youth FSNEP planted 67 new gardens to add to the 71 continuing gardens. Zidenberg-Cherr designed the curriculum to meet several science, language arts and mathematics content standards. The most exciting news was that students exposed to this curriculum improved their attitudes about fruits and vegetables. Now they actually ask their parents to buy them.

Tailoring diabetes prevention. Diabetes in California has increased by 67 percent in the past 10 years. It affects 1.4 million adults, with costs in the billions. CE nutrition researchers Lucia Kaiser and Amy Block Joy developed and piloted two programs targeting Latino and African-American audiences to address

different tastes, family pressures and social support. Both groups are high risk for type 2 diabetes, which accounts for over 90 percent of new diabetes cases. The study resulted in additional family members being screened for diabetes, as well as increased physical activity on the part of participants.

Changing cognitive thought. Francene Steinberg, assistant professor in nutrition, wants to change people’s thinking from “I’ve heard about eating more fruits” to “Yes, every day I can eat a piece of fruit as my workday snack.” According to Steinberg, moving people from pre-contemplation to action and maintenance integrates new habits into people’s eating behavior. FSNEP classes have succeeded in increasing fruit and vegetable consumption by 40 to 50 percent.

More specifically, Steinberg wants to measure flavonoids and food phytochemicals, as higher levels are associated with reduced cancer and chronic health problems such as heart disease. She is pursuing testing blood to track biochemical markers to measure how levels vary with fruit and vegetable consumption.

Establishing an anemia baseline. Fatigue, pallor, irritability and hyperactivity are symptoms of iron-deficiency anemia, the most common nutrition deficiency in infancy and childhood. Zidenberg-Cherr along with Cooperative Extension advisors Cathi Lamp and Mary Fuji in Tulare and Contra Costa Counties, respectively, found iron deficiency present in 20 percent of low-income children studied when testing children’s blood pre-program participation.

Factors associated with low-iron stores, maternal

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