

# IMPACT

CA&ES DEAN'S OFFICE • UNIVERSITY OF CALIFORNIA • ONE SHIELDS AVENUE, DAVIS, CA 95616 • FAX (530) 752-9369

*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.*

## NUTRITION EDUCATION FOR CHILDREN

### THE ISSUE

The prevalence of overweight children and adolescents has tripled over the last 30 years, according to the Centers for Disease Control. As a result, American schoolchildren are experiencing health problems normally associated with adults, such as Type 2 diabetes, high blood pressure, and high cholesterol. In California, more than 25 percent of K-12 students are overweight or obese, and nearly 40 percent are considered physically unfit.

Children are a critical audience for learning about diet and nutrition because they are establishing eating habits that will affect their health throughout their lives. A healthy diet also contributes to cognitive development and academic success.

Schools are excellent settings for nutrition education because large numbers of children can be reached in a systematic fashion. Children eat at least one or two meals daily on school grounds, and the food available on campus can strongly influence their eating habits. Since new legislation took effect in 2006, the federal government requires schools that receive funding for the school breakfast or lunch programs to establish a local wellness policy that includes goals for nutrition education and physical activity.

### WHAT WE'RE DOING

To address these issues, scientists in the College of Agricultural and Environmental Sciences at



Robin DeRieux / UC Davis

UC Davis are conducting research and developing outreach programs on nutrition education for youth.

The medical difficulties faced by overweight children in California, particularly as they mature into adulthood, will burden the state with extraordinarily high health care costs. One team of researchers headed by Cooperative Extension nutrition specialist Amy Block Joy did a cost-benefit analysis to quantify the impact of nutrition education on health care spending. Joy found that for every \$1 spent on nutrition education for low-income families enrolled in California's Expanded Food and Nutrition Education Program (EFNEP), between \$3.67 and \$8.34 is saved in health care costs.

Sheri Zidenberg-Cherr, a nutrition specialist in Cooperative Extension, has done several studies centering on the use of school gardens in academic

instruction to improve nutrition knowledge and promote better eating habits. Moving beyond school gardens, Zidenberg-Cherr has begun research on comprehensive nutrition services in schools. Her group is measuring the impact of a multi-faceted approach to nutrition education on changes in eating behavior. The program offers a science-based classroom curriculum, reinforced with hands-on experiences in instructional gardens, kitchen classrooms, and composting programs. Whenever possible, fresh fruits and vegetables from local growers are used to improve food selection in school cafeterias.

“We want to give children the tools to make changes for life,” says Zidenberg-Cherr. “We want them to realize that it feels better to eat well and to exercise. Simply changing the food selection at schools and forcing kids to eat it is not enough.”

Zidenberg-Cherr and others recently established the UC Davis Center for Integrative Nutrition Environments in School Communities (CNS) to serve as a resource for schools and nutrition educators. The center also works with the California Department of Education to offer training for teachers and food service professionals.

A research group led by Marilyn Townsend, Cooperative Extension specialist in nutrition, developed guided goal setting in the EatFit program to help adolescents change eating behaviors and increase activity levels. Each teen sets one eating and one activity goal. The award-winning EatFit curriculum includes a Web-based dietary assessment. (<http://www.eatfit.net/>)

According to Townsend, one of the main barriers to teaching nutrition to schoolchildren is a shortage of instructional time. California teachers are required to address the mathematics and language arts curriculum standards for each grade level, and they need lesson plans that integrate nutrition into the core subjects. Townsend’s group conducted a study in Tulare County that demonstrated an improvement on student standardized achievement tests after completion of the EatFit program. “Nutrition educators are always interested in behavior change,” says Townsend. “But the selling point for schools right now is educational standards.”

The UC Davis Children’s Garden, as part of the California School Garden Network ([www.csgn.org](http://www.csgn.org)), helps K-12 schools link garden-based learning activities to California state academic standards and offers training to parents and educators.

## A SHARED VISION

Faculty at UC Davis are doing research on nutrition education to help California’s youth adopt healthy life-long eating habits. Among the new trends is a comprehensive approach to wellness that helps students make connections between food, health, and the environment. UC Davis is also a resource for schools seeking information about instructional gardens. Extension specialists have developed nutrition curricula that link nutrition learning to California state academic standards.

That’s impact — UC Davis researchers helping schools educate California youth on nutrition.

---

## CONTACTS

Marilyn Townsend, UCCE Specialist  
Department of Nutrition  
(530) 754-9222  
[mstownsend@ucdavis.edu](mailto:mstownsend@ucdavis.edu)

Sheri Zidenberg-Cherr, UCCE Specialist  
Department of Nutrition  
(530) 752-3817  
[sazidenbergcherr@ucdavis.edu](mailto:sazidenbergcherr@ucdavis.edu)

## College of Agricultural and Environmental Sciences

Neal Van Alfen, Dean  
(530) 752-1605  
[nkvanalfen@ucdavis.edu](mailto:nkvanalfen@ucdavis.edu)

Robin DeRieux, Writer  
(530) 752-8244  
[rderieux@ucdavis.edu](mailto:rderieux@ucdavis.edu)

[www.caes.ucdavis.edu](http://www.caes.ucdavis.edu)

*The University of California does not discriminate in any of its policies, procedures, or practices. The university is an affirmative action/equal opportunity employer.*

