



WIC Nutrition Education Supports Behavior Change

Nutrition Education Is a Core Function—But Does It Really Work?

Significant federal dollars are expended, as part of WIC Nutrition Services and Administration (NSA) funding, to provide high-quality health education on the topics of healthy eating, physical activity and breastfeeding to every WIC participant. Frontline WIC employees are required and trained to routinely deliver relevant WIC nutrition messages in a variety of ways, including individual and group education, peer support groups, and culturally sensitive materials and messages in print or electronic formats.

Given the substantial investment of WIC time and resources dedicated to intensive nutrition education, it is imperative to document its impact on participants. Although education is well designed and culturally relevant, the majority of education in the WIC setting is BRIEF (often less than 20 minutes) and TARGETED at specific behavior change.

- Do our efforts improve nutrition knowledge, skills and attitudes among the families we serve?
- Most important, does WIC nutrition education in itself support positive behavior change, or are the healthy foods that WIC provides responsible for this change?

The historic changes on October 1, 2009, which aligned WIC foods with the U.S. Dietary Guidelines, gave California WIC a chance to answer these important questions.

Food Package Changes—A Natural Experiment

Almost a year before the new food packages were implemented, all local agencies in California began intensive nutrition education planning efforts to prepare all California WIC families for the changes. From April to September 2009, using the popular *Sesame Street* characters, California WIC delivered a 6-month curriculum (the Healthy Habits Every Day¹ campaign) to 1.3 million participants in three 2-month blocks. For the first time, all local WIC agencies in California were trained and supported to simultaneously deliver similar key messages to WIC participants about consumption of fruits and vegetables, whole grains, and lower-fat milk.

A rigorous evaluation plan was designed and conducted by a collaborative research team from UC Berkeley's Dr. Robert C. and Veronica Atkins Center for Weight and Health, the state WIC Program and the PHFE-WIC Program. Random-sample telephone surveys of more than 3,000 California WIC families were conducted before (March 2009) and after (September 2009) the nutrition education intervention—but prior to the October rollout of the new WIC food vouchers. This sequence enabled California WIC to be able to evaluate the unique impact of nutrition education alone.

WIC Nutrition Education Worked!

The study outcomes, now in press in the peer-reviewed *Journal of Nutrition Education and Behavior*,² tell a compelling story. Compared to baseline, after receiving nutrition education about fruits and vegetables, whole grains, and lower-fat milk, WIC families:

- Recognized the key messages from the nutrition education classes, including:
 - Eat a rainbow of different-colored fruits and vegetables. (Participants showed an increase of 26% over baseline in recognizing this key message from the WIC education.)
 - Eat more “anytime” foods and fewer “sometimes” foods. (Increase of 13%)
 - Eat more whole grains. (Increase of 4%)
 - Lose the fat, keep the vitamins. Drink lower-fat milk. (Increase of 18%)
- Demonstrated positive movement in their readiness to consume the targeted foods.
 - Participants reported that they were thinking about making a change to eat more fruits, vegetables, whole grains, and lower-fat milk at rates 10-18% above baseline.
- Significantly increased family consumption of fruits, whole grains and lower-fat milk, from just one 20-minute education on each topic, as measured 1-5 months post-education.
 - Eating more fruit: Increase of 17%
 - Eating more whole grains: Increase of 13%
 - Drinking more lower-fat milk instead of whole milk: Increase of 10% for caregivers, increase of 20% for their children.

Since these outcomes occurred even though WIC was not yet providing many of the healthier food choices that were targeted by the nutrition education, the results clearly demonstrate the powerful impact of WIC nutrition education.

A third survey of 3,000 WIC families is currently underway (March 2010) to evaluate the additional impact of the new WIC foods. Current observational data show very high acceptance and support of the new foods, and the third wave of data collection is expected to quantify these observations.

¹www.wicworks.ca.gov.

²Ritchie L, Whaley S.E., Spector P, Gomez J, Crawford P. Favorable Impact of Nutrition Education on California WIC Families. *Journal of Nutrition Education and Behavior* (forthcoming).