

Research shows that Brighter Bites helps children, families eat healthier

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Credit: University of Texas Health Science Center at Houston

Brighter Bites, a school-based program that combines the distribution of donated produce with nutritional education and a fun food experience for low-income families in food desert areas, was successful in improving the intake of fruits and vegetables in first-grade children and their parents, according to a new study by The University of Texas Health Science Center at Houston (UTHealth). Food desert areas are defined as neighborhoods with limited access to fresh produce.

Results showed that Brighter Bites also significantly reduced the intake of [added sugars](#) among the children and improved the home environments of the families, including increased frequency of cooking at home, serving more fruits and vegetables and eating more meals as a

family. Parents also showed improvements in understanding nutrition fact labels and using them to make grocery purchasing decisions.

The research was published online July 25 in *Preventive Medicine*.

"This study is important because it shows the feasibility, acceptability and impact of implementing a unique, school-based food co-op model to improve dietary behaviors and the home nutrition environment among low-income, underserved children and their parents," said Shreela V. Sharma, Ph.D., associate professor of Epidemiology, Human Genetics & Environmental Sciences at UTHHealth School of Public Health and co-founder of Brighter Bites. "While food co-ops are becoming popular, there is little published literature to show their benefit and impact."

The visionary behind Brighter Bites, a non-profit organization, is Lisa Helfman, who in 2012 created the formula of combining the distribution of fresh produce plus nutrition education and a fun food experience of food sampling and health promotion, after participating in a local fruits and vegetables co-op. Sharma operationalized the formula, created the nutrition education materials and developed the research infrastructure around the program.

"I hatched the idea of Brighter Bites because my two boys changed their eating habits as a result of consistent exposure to more fruits and vegetables over the course of several months, and I thought if I could have these results in my house, could we replicate them in underserved neighborhoods too. Now it's been scientifically proven that it works for many other children too. With this conclusive research, I know we can have a significant impact on countless more families. I am thrilled for my cofounder Dr. Sharma and for the dynamic research team behind this project," said Helfman.

For the study, Brighter Bites' 16-week study program combined access

to fruits and vegetables with nutrition education and a fun food experience. It included weekly distribution of fresh, primarily reclaimed produce sourced and delivered from the Houston Food Bank that was sent home with the family for eight weeks each in the fall and spring. The program featured weekly healthy recipe tastings featuring produce from that week and health education in the schools and for parents.

As part of Brighter Bites, schools were trained in the Coordinated Approach To Child Health (CATCH) program, an evidence-based coordinated school health program developed by researchers at the Michael & Susan Dell Center for Healthy Living at UTHealth School of Public Health. Parent-child nutrition education included a set of two bilingual handbooks and weekly recipe cards sent home with parents.

In the controlled, comparative effectiveness trial, six schools in the Houston area received Brighter Bites and six received CATCH alone. At baseline, 71 percent of the first-grade children were Hispanic, 24 percent were African American and 43 percent were overweight or obese.

Study results showed impact on both, children and parents:

- A 9 percent increase in the intake of fruits among children receiving Brighter Bites. Those in the CATCH-only group stayed the same.
- A 20 percent increase in the intake of vegetables among children receiving Brighter Bites versus a 7 percent increase among those receiving CATCH only.
- A 13 percent decrease in intake of added sugars among children receiving Brighter Bites versus a 2 percent decrease among those receiving CATCH only.
- A 13 percent increase in the intake of fruits among parents receiving Brighter Bites versus a 15 percent decrease among

those in the CATCH-only group

- A 6 percent increase in vegetable intake among parents in the Brighter Bites group versus a 3 percent increase in the CATCH-only group

On average each week, Brighter Bites families received 57 servings of fruits and vegetables (which cost the program \$2.65 per family per week). Eighty-seven percent of parents reported their family ate all or most of the vegetables and 94 percent said their family ate all or most of the fruits provided. There was also a two-fold increase in frequency of cooking from scratch at home among parents in the Brighter Bites group, compared to those in the CATCH-only group, which stayed the same.

There were increases in both groups of parents understanding and using nutrition facts to make grocery purchases. But the increases were greater among those in the Brighter Bites group. There was also an increase in the number of parents reportedly setting rules such as limited portion sizes among the Brighter Bites parents but no such increase in the CATCH-only group.

"Brighter Bites links the school and the home, the two environments that a child spends a majority of their time in, to create opportunities to practice healthy eating behaviors for children and parents alike," Sharma said. "The produce, channeled through local food banks, is primarily donated fruits and vegetables that would otherwise be thrown away. This is important because it means less food waste, which is a huge problem in this country."

Provided by University of Texas Health Science Center at Houston

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