

Exposure to a variety of fruits and vegetable changes eating behavior

AT A GLANCE

Eat Smart Idaho offers repeated exposure of fruits and vegetables at two schools in north Idaho with great success and writes implementation protocol.

The Situation

Low-income children in Idaho are affected with high rates of food insecurity and obesity placing them at risk for poor health outcomes. Diets that are rich in fruit and vegetable intake are associated with many health benefits and reduced obesity rates. However, Idaho youth do not consume the nationally recommended amounts of fruits or vegetables each day. Research shows that consumption is low because children often will not try foods they are unfamiliar with, in particular vegetables. Additionally, low-income families will not spend their limited food dollars on foods they are unsure their children will eat.

Our Response

One way to decrease neophobia and increase fruit and vegetable purchases by low-income households is to introduce fruits and vegetables to youth during the school day with fruit and vegetable taste testing. UI Extension's Eat Smart Idaho program in the northern district adopted a preschool curriculum from Portland State University called Harvest for Healthy Kids and morphed it into a successful program at two schools in the Coeur d'Alene School District in 2022. Eat Smart Idaho used repeated exposures to a variety of fruits and vegetables, provided morning announcements to



Fernan Elementary students are excited to learn about and try purple cauliflower as part of a weekly fruit and veggie exposure.

each school site, emailed newsletters to families about the fruit or vegetable highlight and shared educational materials about the produce for teachers to use in the classroom. Cafeteria tables were decorated with pop up art, showing how the fruit or vegetable grows and the different varieties of each fruit and vegetable during the day of offer. Youth were then enticed with samples during school lunch along with nutrition education, visuals on the varieties of specific produce items and descriptive words enticing them to try the samples.

Program Outcomes

At the elementary school, the entire student body (339 youth) received 12 repeated exposures in 12 weeks to four different fruits and nine different vegetables.

Participation rate was collected through a simple survey asking youth to evaluate if they liked the produce sample or if they were “not sure about it yet.” The number of students (n=339) who tried the sample was documented.

Produce Highlight	Food Offered	% of students who tried
Tomatoes	Fresh local salsa	88
Winter Squash	Pumpkin bread	83
Carrots	Rainbow carrots with greens and 100% carrot juice	100
Cabbage	Coleslaw	83
Sweet Potatoes	Baked fries	88
Beans	Hummus and bean chips	83
Apples	Cosmic crisp apples, 100% apple juice, apple muffins	100
Cucumber	Mini cucumbers	88
Cauliflower	Purple variety	88
Watermelon	Watermelon cubes	88
Pineapple	Fresh pineapple chunk and 100% pineapple juice	100
Berries	Blueberry muffins	83

At the middle school, over 700 youth were offered four repeated exposures in four weeks. Infused waters, pomegranates and pomegranate juice, berry and mango smoothies, and 100% fruit juices were shared. A change in behavior among students was evident with each exposure. Students compared the different infused water choices and chose their favorite flavor while sharing they would try infused waters on their

own in the future. Fresh pomegranates were cut in front of students demonstrating the procedure then offered a section. The majority of students sampling had never tried fresh pomegranates before and were amazed at their beauty and taste. Students compared the fresh pomegranate sample with the pomegranate juice and enjoyed both. During the smoothie offer day, blenders were brought into the cafeteria and “made to order.” Students sampled both the berry and mango smoothies, discussed their own smoothie recipes and commented on how easy the recipes were to make.

Additionally, Eat Smart Idaho was one of four community partners that assisted the Coeur d’Alene School District elementary school become STEM certified. Ten years in the making, in November 2022 Cognia, a global nonprofit that offers accreditation and certification awarded Fernan Elementary STEM certification which was approved by the State Board of Education in February 2023 and finally the Idaho Legislature in March 2023. The Harvest for Healthy Kids project was highlighted in the school’s 100-page document of evidence of best practices and the Eat Smart Idaho administration team was interviewed by the Cognia reviewers.

The Future

In 2023, Eat Smart Idaho in the northern district along with the Eat Smart Idaho administrative team wrote a Harvest for Healthy Kids protocol targeting primary through secondary schools and submitted it for publication through UI Extension publishing. The protocol outlines why and how to offer the healthy harvest concept and the team will be developing an assessment to capture the benefit to repeated exposure in these age groups. Eat Smart Idaho will also be offering this program in the 2023-2024 school year.

Cooperators and Co-Sponsors

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FOR MORE INFORMATION

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