

BEHAVIORAL NUTRITION & PHYSICAL ACTIVITY LABORATORY
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER



We wanted to share some of the findings with you.

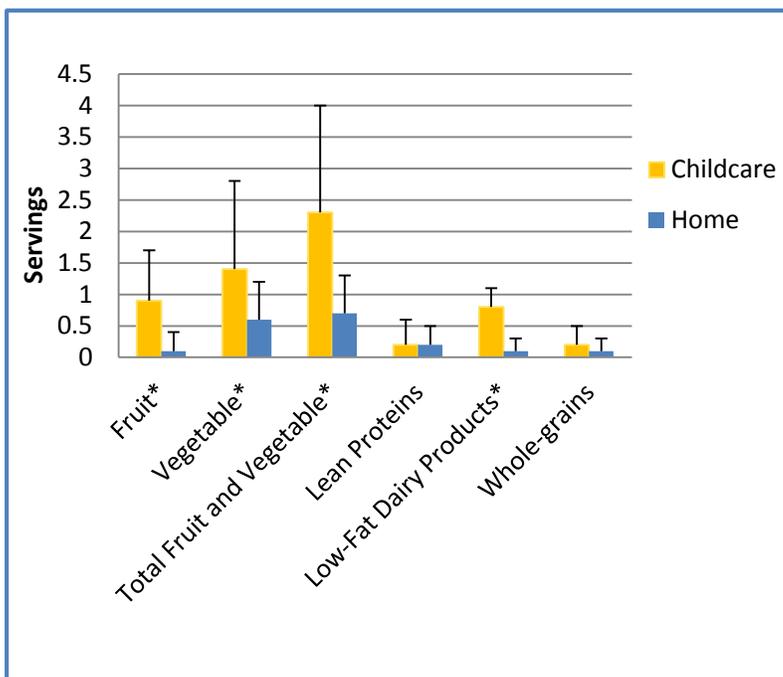
The purpose of this project is to determine if there is a difference in food and nutrient intake between meals consumed by young children at childcare and home. The project was conducted with 16 childcare centers which cared for children ages 3-5 years. Researchers used visual plate waste to observe children’s food consumption during lunch at childcare. Telephone interviews were conducted with a parents to determine children’s food consumption during dinner at home. Because volume for serving sizes vary dramatically between the different food groups, each different food was counted as one serving rather than using actual serving sizes. This project was conducted by the Behavioral Nutrition and Physical Activity Laboratory at the University of Oklahoma Health Sciences Center.

Project Participants		
16 Childcare centers from across Oklahoma	87 children and their parents/guardians 54% female	46% Caucasian 32% American Indian

Background

- ❖ For many children, the development of dietary habits are greatly influenced by the childcare and home environments¹
- ❖ Dietary habits developed as a child provide a foundation for future consumption²
- ❖ In order to support normal growth and development, age-appropriate energy and nutrient intakes are essential³
- ❖ MyPlate was created by the United States Department of Agriculture (USDA) as a way to guide consumers in healthy eating⁴.
- ❖ Based off the 2010 Dietary Guidelines for Americans, MyPlate emphasizes the balanced consumption of five food groups: fruits, vegetables, grains, protein, and dairy (Figure 1.).

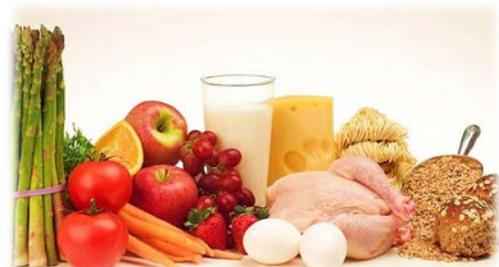
Figure 1.



Nutrient Dense Foods

The average servings of fruits, vegetables, and nutrient dense foods consumed by children during lunch at childcare and dinner at home are shown in the graph to the left.

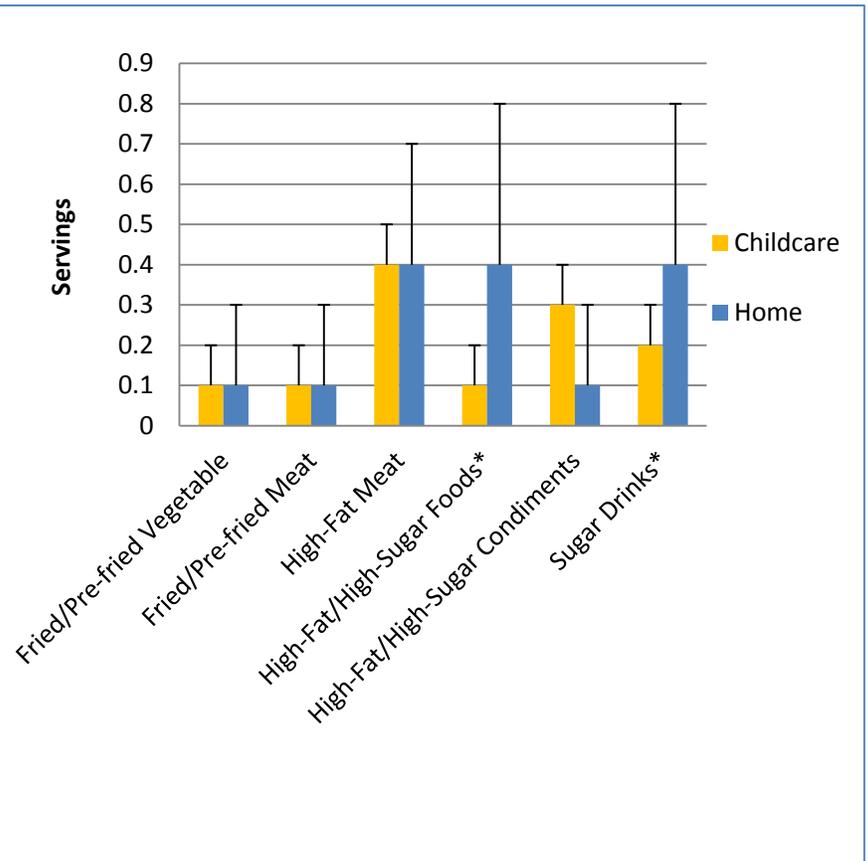
Significantly more fruits, vegetables, and low-fat dairy products were consumed at childcare than at home. There was no difference in lean proteins and whole-grains consumed between childcare and home.



Energy Dense Foods

The average servings of energy dense foods consumed by children during lunch at childcare and dinner at home are shown in the graph to the right.

Significantly more high fat high sugar foods and sugar drinks were consumed at home than at childcare. There was no difference in fried/pre-fried vegetables and meat, high-fat meat, and high-fat/high-sugar condiments consumed at childcare and at home.



Take Away Message:

- ❖ Preschool-aged children are not consuming enough nutrient dense foods
- ❖ Early and repeated exposure to a variety of nutrient dense foods, such as fruits and vegetables, will aid in the acceptance and familiarity⁵.
- ❖ Parents can rest assured knowing that children are consuming nutrient dense foods while at childcare.
- ❖ Childcare centers need to continue to strive towards providing meals that are full of nutrient dense foods.
- ❖ In order to provide an optimal diet for children that provide nutrient dense food and meets nutrient guidelines, parents and caregivers can provide complementary foods and work together.
- ❖ It is important for childcares and parents to provide less energy dense foods to avoid excess energy intake.

References:

1. Ziegler P, Briefel R, Ponza M, Novak T, Hendricks K. Nutrient intakes and food patterns of toddlers' lunches and snacks: influence of location. *Journal of the American Dietetic Association*. 2006;106(1 Suppl 1):S124-134.
2. Savage JS, Fisher JO, Birch LL. Parental Influence on Eating Behavior: Conception to Adolescence. *The Journal of law, medicine & ethics : a journal of the American Society of Law, Medicine & Ethics*. 2007;35(1):22-34.
3. Ogata BN, Hayes D. Position of the Academy of Nutrition and Dietetics: nutrition guidance for healthy children ages 2 to 11 years. *Journal of the Academy of Nutrition and Dietetics*. 2014;114(8):1257-1276.
4. USDA. ChooseMyPlate. 2013; <http://www.choosemyplate.gov/>. Accessed November 2013, 2013.
5. Birch LL, McPhee L, Shoba BC, Pirok E, Steinberg L. What kind of exposure reduces children's food neophobia?: Looking vs. tasting. *Appetite*. 1987;9(3):171-178.

This Report was prepared by Alicia C. Kiger, MS on behalf of the Behavioral Nutrition and Physical Activity Laboratory directed by Dr. Susan B. Sisson. If you have questions or comments, please contact us at nutritionandactivitylab@ouhsc.edu or 405.271.8001 x 41173.