

Cardiovascular Health and the Relationship of Food Access and Dietary Intake of Children at Home and Early Care and Education Centers

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Introduction

One-fifth (21%) of children and adolescents have an abnormal serum cholesterol measure. Diets higher in plant-based foods (i.e. fruit, vegetables) are higher in fiber and important for reducing or controlling cholesterol for cardiovascular disease protection.

Purpose

The purpose of this study is to describe cardiovascular risk of children's dietary intake at home and early care and education centers (ECE) and describe home food access.

Methods

This cross-sectional study involved children (3-5-year-old, n=78) and their primary caregivers from 15 licensed ECEs across Oklahoma. Parents reported food access in the home using the Healthy Home Survey and the child's dietary intake at dinner for three previous days using the 3-Dinner Dietary Recall (3DDR). Foods and beverages served and consumed at the ECE during lunch were recorded using the Dietary Observation for Child Care (DOCC) method for visual plate waste. The cardiac health (CVD) score was composed of six variables, each with a single point to be summed: consumption of fish, fruits, vegetables, sodium, fiber, and sugary drinks (max score of 6). Outcome variables were analyzed by using means, standard deviations, median, and frequencies. Analyses were conducted using SAS (Statistical Analysis Software, 9.4).

Results

Total fruit and vegetables outnumbered salty and sweet snacks, candy and soda by about a 3:1 ratio. A majority of children in both environments met guidelines for vegetables (71.8%), fruit (35.9%), and SSB (55.1 at home and 76.9%at ECE). The majority of children did not meet recommendations for other variables (fish [5.1-7.7%], fiber [1.2%], sodium [21.8-39.7%]).

Conclusion

There is room for improving child dietary intake for the primary prevention of CVD within home and ECE, specifically regarding intake of fish, fiber, and sodium. Future interventional research might include educating family and ECE caregivers on the importance of healthy food access to meet CVD dietary recommendations.