FPIN’s Help Desk Answers

Food Consumption by Children and Adults

KIMBERLY L. COLLINS, MD, University of Washington Family Medicine Residency, Seattle, Washington
GREG SANDERS, MD, Sea Mar Family Medicine Residency, Marysville, Washington

Help Desk Answers provides answers to questions submitted by practicing family physicians to the Family Physicians Inquiries Network (FPIN). Members of the network select questions based on their relevance to family medicine. Answers are drawn from an approved set of evidence-based resources and undergo peer review. The strength of recommendations and the level of evidence for individual studies are rated using criteria developed by the Evidence-Based Medicine Working Group (http://www.cebm.net).

The complete database of evidence-based questions and answers is copyrighted by FPIN. If interested in submitting questions or writing answers for this series, go to http://www.fpin.org or e-mail: questions@fpin.org.

This series is coordinated by John E. Delzell Jr., MD, MSPH, Assistant Medical Editor.


Clinical Question
Do children and adults eat more when offered larger quantities of food?

Evidence-Based Answer
Children and adults consume larger amounts of food when offered larger portions, packages, and individual units. (Strength of Recommendation: B, based on a systematic review of randomized controlled trials.) There is conflicting evidence about whether food offered with larger dishware affects food consumption.

Evidence Summary
A 2015 systematic review of 86 independent comparisons from 58 randomized controlled trials with 6,603 adults and children evaluated whether participants consumed more food when it was offered in various sized portions (measured in volume, weight, or both), packages (e.g., one large bag vs. multiple smaller bags), or individual units, or with different sized dishware (larger vs. smaller dishes or cutlery).1 Most of the studies looked at consumption based on a single meal. Exposure to larger vs. smaller portions, packages, or dishware increased the quantity of food consumed (standardized mean difference [SMD] = 0.38; 95% confidence interval [CI], 0.29 to 0.46; I² = 61%). Overall, daily energy intake would be 11% higher with larger portions, packages, individual units, or dishware (mean difference = 189 kcal; 95% CI, 144 to 228). The increased consumption of food with exposure to larger portions, packages, individual units, or dishware occurred in both adults (70 independent comparisons, N = 5,182; SMD = 0.44; 95% CI, 0.33 to 0.54) and children (22 independent comparisons, N = 1,421; SMD = 0.21; 95% CI, 0.10 to 0.31).

A 2014 meta-analysis of eight trials (three randomized controlled trials; five trials not specified; N = 254), including 15 comparisons, evaluated whether changes in the size of dishware had an effect on food consumption.2 Larger dishes did not increase the amount of food intake (SMD = –0.18; 95% CI, –0.35 to 0.00). This was true regardless of age or sex.

REFERENCES

Copyright Family Physicians Inquiries Network. Used with permission.

Address correspondence to Greg Sanders, MD, at sandersletters@gmail.com. Reprints are not available from the authors.

Author disclosure: No relevant financial affiliations.